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Pollution turning Taj Mahal yellow: Study

Date 2nd January, 2015 Source: The Times of India

NEW DELHI: India's white marvel, the Taj Mahal, is slowly turning brownish-yellow because of air pollution, says an Indo-US study which also identifies the pollutants responsible for the effect. It says Taj is changing colour due to deposition of dust and carbon-containing particles emitted in the burning of fossil fuels, biomass and garbage. The study confirms what has been suspected for long - that Agra's poor air quality is impacting India's most celebrated monument. The research was conducted by experts from US universities — Georgia Institute of Technology and University of Wisconsin — as well as Indian Institute of Technology, Kanpur and Archaeological Survey of India. The paper was published in the Environmental Science & Technology journal in December.

The findings can lead to targeted strategies to curb air pollution in and around Agra and more effective ways to cleanse the marble surface of the 366-year-old mausoleum, which remains by far the most visited man-made structure in the country with footfalls of more than 6 million in 2013. The researchers first analysed air samples at the site for roughly a year using filters and found high concentrations of suspended particles that could potentially discolour Taj's surface. Clean marble samples were then placed at various points on the monument accessible only to ASI staff. After two months of exposure, the samples were analysed using electron microscope and X-ray spectroscope.The pollutants deposited on the marble were identified through these investigations. Researchers found 3% of the deposits to be black carbon, around 30% organic carbon (or brown carbon) and most of the rest dust. Black carbon is emitted by vehicles and other machines that burn fossil fuels. Brown carbon is typically released through burning of biomass and garbage, a common practice in the region. S N Tripathi of IIT Kanpur, one of the authors, said the team then used a novel approach to estimate how these deposited particles would impact light reflecting off the marble surface. "We found that black carbon gives a greyish colour to the surface while the presence of brown carbon and dust results in yellowish-brown hues," he said. "Results indicate that deposited light absorbing dust and carbonaceous particles are responsible for the surface discolouration of the Taj Mahal," the study concludes. Since 2008, ASI has been trying to fight the yellowing of the monument by giving it a clay pack treatment using the lime-rich Fuller's earth (Multani mitti) to clean the marble surface. Researchers are now keen on studying the efficacy of this method and finding ways of improving it. "Now that we know what's causing the yellowing, the focus should now shift to undoing the effect," Tripathi said.

Pollution Turning India’s Famed Taj Mahal Yellow

Date: 2nd January, 2015 Source: Voice of America

A new study has identified the pollutants that are causing the marble of India’s iconic Taj Mahal to turn yellow. The discoloration of the white marble has long been a concern, but the latest study could help in drawing up more targeted measures to protect the 360-year old famed monument of love.

Researchers say years of burning fossil fuels, biomass and garbage as well as dust has left behind carbon deposits which are turning the white marble dome and minarets of the Taj Mahal brownissh yellow. The 17th century monument is located in the busy, industrial city of Agra in northern India. Many have long blamed air pollution for discoloring the famed monument, but the year-long study by two American universities - the Georgia Institute of Technology and the University of Wisconsin - the Indian Institute of Technology at Kanpur, and the Archeological Survey of India have identified the specific causes. Researchers placed small samples of pristine marble on the Taj Mahal, left them there for two months, and then analyzed the particles deposited on their surfaces. Fossil

fuels, biomass burning to blame: One of the study authors, Professor S.N. Tripathi at the Indian Institute of Technology at Kanpur, said the particles come from multiple sources.

"We have *an+ increasing fleet of diesel vehicles nowadays in cities, large vehicles, trucks, that's number one," he said. "And that is a major emission source for black carbon and organic carbon. But biomass burning - particularly the season now - we are seeing people, when they feel cold, they burn any kind of stuff. People, maybe in houses, they are burning just wood etc., but outside the people are burning cow dung and different kinds of trash. Burning is also a major source of organic carbon."
Activists have warned for several years that Agra's air pollution is making the Taj lose its sheen. Over the last decade authorities have banned vehicles within 500 meters of the monument. Efforts have also been made to supply clean fuel to industries and improve the power supply to lessen the impact of diesel generators.

But despite these measures, a 2010 study found that the relentless growth of industry, population and traffic have only worsened air pollution in Agra. Targeted protection needed : Preservationists are stressing the need for more targeted protection of the monument. Conservationist Ratish Nanda in New Delhi said some weathering is to be expected in a monument that is over 360 years old. He believes that the single issue of discoloration should not be blown out of proportion.

Nanda stressed, however, the need for more far more intensive monitoring and greater involvement of the scientific community, and more funding to protect the Taj."There are lot of studies which are saying that is the discoloration happening and how it is happening, but there is absolutely no real work on what to do to prevent it," he said. "The whole preservation mechanism of the Taj Mahal needs to change… Absolutely the one thing that is absolutely essential is to put in a regime of conservation, that whatever cleaning is done, should be sensitive and have no long term impact." Since 1994, authorities have been giving the monument mud pack treatments to remove the pollution stains. Modelled on a centuries-old beauty treatment used by women, it involves plastering the Taj's surface with lime-rich clay and then peeling it off. The monument received the treatment for the fourth time in June last year, but experts warn this too could have unwanted side effects. In 2013, nearly 6 million people visited the monument, which is considered one of the finest examples of Mughal art and architecture in India.

Cleared 650 Projects in 7 months, Environment Minister Prakash Javadekar Tells NDTV

Date: 2nd January, 2015 Source: NDTV

NEW DELHI: Environment Minister Prakash Javadekar says his ministry has handed out 650 green clearances since the new government came to power in May, and this will fast-track projects worth thousands of crores. "We are giving clearances without even looking at the faces of project promoters," Mr Javadekar said in an interview to NDTV. There is a "drastic shift" from the policies of the previous Congress-led government when the environment ministry was seen as roadblock to proojects, he said, adding, ""The entire functioning of the ministry has changed."

The previous government battled criticism for projects blocked over environmental approvals; Jayanthi Natrajan had stepped down as Environment Minister amid allegations that she had held back clearances. Taking digs at her while campaigning for the national election, Prime Minister Narendra Modi had repeatedly alleged that a "Jayanthi Tax" had to be paid to push files.

Prakash Javadekar said under him, the ministry was working faster as there is no agenda. "We have been able to fast track clearances as we have no personal agenda and we are no longer putting up impractical conditions," the minister said, adding that he was personally monitoring all the files. "We have cleared projects that had been stuck for many years," he told NDTV. Taking the example of the National Wildlife Board, he

said, "The Board met after many years. But we took 130 decisions in a single day."

Mr Javadekar's ministry has recently been criticized for giving out too many clearances at the cost of the environment. "No compromise has been made in a single case. We are protecting the environment. Our philosophy is development without destruction," the minister said. He shared that the government is preparing to put in place a new green architecture this year by making changes to environment laws and making the system of clearances transparent.

Regulating Air Pollution from Coal-Fired Power Plants in India

Date: 3rd January, 2015 Source: Economic & Political Weekly

Coal remains the main fossil fuel for power generation in India. The health impacts of air pollution from these coal-fired power plants include numerous premature deaths and frequent asthma attacks. In the future, the amount of power generated from coal will remain high, at least through 2030, and unless we fi nd a better way to manage these power plants, the environmental effects of growing air pollution, greenhouse gas emissions and the cost to human health will all be high.

Pollution challenge for India, China grows as oil price sinks

Date: 6th January, 2015 Source: Today

MUMBAI — A brisk walk in India's capital New Delhi on Christmas Eve was rated hazardous to health, while a similar stroll in the Chinese city of Shanghai was ranked unhealthy. Two of Asia's biggest cities have the same problem: Air pollution. This year, it could get worse. As the plunge in oil prices filters through to lower costs at the petrol and diesel pump, more cars, buses and trucks will be on the roads adding to the smog, warned researcher Anumita Roy Chowdhury, executive director of the Centre for Science and Environment in New Delhi. The lower oil price brings the problem, but also holds a solution, she said.

"The need of the hour is not to fully pass on the benefits of falling crude-oil prices to consumers, but to create a fund that can be used in building infrastructure to produce cleaner fuel and also implement better emissions norms."

Brent crude, a benchmark for more than half of the world's oil, dropped 48 per cent last year, causing pump prices to fall by as much as 14 per cent in India and 23 per cent in China. In November, both countries acted to try to slow the price decline by raising taxes on transportation fuels. India increased taxes on petrol and diesel, the fuel blamed for the worst of New Delhi's air pollution, twice again since November. Chin raised taxes on a range of fuels, including petrol and diesel. "Too low a price in gasoline and diesel will only spur demand and consumption and may cause some direct setbacks to our goal to cut emissions," Mr Yin Zhongqing of the National People's Congress said in Beijing last month. "I think people may live with higher taxes in exchange for better air quality." China's Ministry of Finance echoed this view in a statement in November, adding that a suitable price will not only curb pollution, but also help develop renewable energy industries. So far, the fuel taxes do not seem high enough to achieve those goals. China's petrol sales in November grew 16 per cent on year. Diesel rose 3 per cent. In India, consumption of diesel, which outsells petrol by four times, rose 3.4 per cent to six million tonnes in November from a year earlier. Part of the difficulty for India is that it freed diesel prices from state control in

mid-October. Refiners cut retail prices by 3.37 rupees a litre immediately after that. Indian Oil, the nation's biggest refiner, has cut prices another three times since then and the government has raised taxes on diesel by 4.5 rupees a litre. The preference for diesel in India makes the health issue more acute. Vehicles running on the fuel are not required to use equipment mandated in Europe to scrub exhaust gases of lethal particle emissions. Diesel engines emit a pollutant known as PM2.5, or airborne particles and liquid droplets measuring less than 2.5 micrometres, or one-thirtieth the width of a strand of hair. Because of their size, they penetrate deep into the lungs and pass into the blood stream, said the United States Environmental Protection Agency. In October 2013, the World Health Organization classified PM2.5 as a Group 1 carcinogen, similar to asbestos and tobacco. Short-term spikes can kill, triggering strokes, heart failure and asthma attacks, said the American Lung Association.

"Diesel consumption has only increased in the past year and as more bigger vehicles are being sold today, we think the fuel efficiency of the system will go down causing more pollution," said Mr Sumit Sharma, a fellow at The Energy and Resources Institute in New Delhi. "More vehicles and the absence of any stringent measure by the government in the past year mean the pollution levels will only increase." BLOOMBERG

Oil slump heightens pollution challenge from Delhi to Shanghai

Date: 7th January, 2015 Source: Live Mint

Hong Kong/Mumbai/New Delhi: A brisk walk in India's capital New Delhi on Christmas Eve was rated 'hazardous' to health, while a similar stroll in the Chinese city of Shanghai was ranked 'unhealthy.' Two of Asia's biggest cities with the same problem: air pollution. This year, it could get worse. As the plunge in oil prices filters through to lower costs at the gasoline and diesel pump, more cars, buses and trucks will be on the roads adding to the smog, warns researcher Anumita Roy Chowdhury, executive director at the Centre for Science and Environment in New Delhi. The lower oil price brings the problem, but also holds a solution, she says. "The need of the hour is not to fully pass on the benefits of falling crude oil prices to the consumers, but to create a fund that can be used in building infrastructure to produce cleaner fuel and also implement better emission norms." Brent crude, a benchmark for more than half of the world's oil, dropped 48% last year causing pump prices to fall by as much as 14% in India and 23% in China.

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For Obama, Indian parade may be a bit too breathtaking

Date: 8th January, 2015 Source: Reuters

(Reuters) - It may not rain on President Barack Obama's parade when he comes to New Delhi this month for India's Republic Day celebrations at the invitation of Prime Minister Narendra Modi. But, judging by the smog cloaking the Indian capital on Thursday as motorcycle stunt men rehearsed for the Jan. 26 event, the city's notorious air pollution could be a problem. The U.S. embassy denied media reports that the outdoor program for Obama's visit, his second after a trip in 2010, would be curtailed if the bad air persisted.

The embassy's monitoring station recorded an Air Quality Index reading of 252 on Thursday, making the city's air "very unhealthy", according to a scale devised by the Environmental Protection Agency. That's enough, the EPA says, to cause "significant aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly," and a "significant increase in respiratory effects in the general population."

Weather forecasters expect the index reading to be around 200 when Obama visits, in line with recent years, although accurate predictions will not be available until three or four days before. Indian defense and foreign ministry officials say there are no plans to change the parade, a military-dominated affair which stretches from the president's palace to India Gate, a memorial to unknown soldiers.

"We are importing special masks for all," joked one. "We can give you one too." Obama's attendance will be a first for a U.S. president at an event more closely associated with India's non-aligned past and friendship with the Soviet Union. In 2010, the event was wreathed in thick fog that obscured the view for the guest of honor, the then president of South Korea.

Shifting industries out of state capital

Date: 8th January, 2015 Source: The Hans India

Like previous governments of the united Andhra Pradesh, the TRS government has also come up with a plan to relocate industries from Hyderabad city limits to the outskirts. It is surely a welcome decision, but whether it can implement the decision in letter and sprit is to be seen. Addressing industrialists at a meet, Telangana Industries Minister J Krishna Rao said that the government was seriously thinking of moving industries from the city, but quickly added that it would not apply the rule to all in haste.

In fact, earlier governments resorted to such actions, albeit under pressure from NGOs and pollution control agencies, but the end result was no relief to common man. For instance, about a decade ago, the then Telugu Desam government tried to shift VST Ltd owing to air pollution. However, the company implemented precautionary measures ordered by the pollution control board and secured permissions to continue to operate its cigarette factory with full capacity.

Interestingly, this time the government may follow the carrot and stick policy. It is contemplating to permit the industry to use the land for other purposes and relocate the factory to the outskirts of the city. As the city has been rapidly expanding in the last one decade, there is a need for relocating industries - whether they are polluting or not. Most of the industrial estates within the city were enveloped by residential and commercial areas. The government could not find enough land in the city for expansion, and hence the decision to move out the industrial estates. TRS government claims that it has identified enough land parcels around city, which may be offered to the industry to relocate factory with an option to expand. As an industrialist puts it, it will benefit industry to unlock the value of land, while the residents will be relieved of pollution and hardships due to the factories. The government also gets sizable revenue in the process. In some cases, even the earlier governments successfully implemented this plan. In fact, the earlier government indentified as many as 45 locations outside the outer ring road (ORR) for relocating industrial parks. It planned to partially or fully relocate about 13 industrial estates. It relocated about 150 electroplating units in Balanagar industrial estate to Automotive Industrial Park in Toopran. About 50 per cent of the industries in Sanathnagar have already moved to Adibatla and other localities. Similarly, oil and steel factories in Kattedan are being moved to Zaheerabad. Moreover, as per the new master plan of Hyderabad Municipal Development Authority, no new industries are allowed along the ORR. It has identified about 210 locations where such industries can be shifted. Thus, one should welcome the move as it will help people live in industrial pollution-free city. This will also boost property values on the city outskirts, facilitating more investments.

Houses, vehicles pollute as much as factories: Scientists

Date: 8th January, 2015 Source: DNA

An IIT-Bombay professor has debunked the myth that industrial effluents are the chief cause of air pollution. Environment science professor Virendra Sethi, in his paper 'Air Quality: Status and Management' cites pollution generated from homes and vehicles as an equally worrisome factor. What the research reveals. Citing his research work in Chandrapur district of the state, Sethi told the Indian Science Congress, "Chandrapur was the fourth most polluted city in thhe state, and despite all efforts to curb industrial pollution, in three years it became the second most polluted city. Our survey found that a large number of households

are using coal as fuel since it is being collected illegally from the trucks which go to the Chandrapur thermal power station. The coal chulha pours huge amounts of polluted air in the area." What makes houses a source of pollution The IIT-B study found air quality to be poor even when the thermal power station - mainly thought to contribute to pollution - was shut during April-June. "As compared to the thermal plant, only 0.1% coal is being used in homes, but the release of hazardous smoke is very high compared to the plant, which has systems to restrict the pollution."

Additional factors that contaminate air Sethi also pointed to vehicular growth and poor road conditions as factors for pollution. He said the government must look into these aspects, besides nailing industries that don't follow environmental norms.

Domestic units generate 70% sewage too Environment consultant Deepak Kantawala also highlighted that 70% of sewage in India comes from domestic sources and involves a huge amount of water waste. "Out of 150 litre of water supplied to each citizen, 120 litre goes into sewage, which is a misuse of both water and resources. We must look at the dry toilets developed by DRDO, instead of the flushing ones, besides trying out decentralized treatment plants using bio-cultures and solar power to reduce the sewage collection and transport cost, which takes up 70% of the sewage treatment budget."

Sewage also affects water bodies. Scientists also said that due to insufficient resources, over 24,000 MLD (million liters a day) of untreated water is dumped into water bodies every year, which is worsening the quality of water in the country by the day. Scientists also urged the government to use the satellite to monitor the air quality rather than establishing the costly monitoring systems at every place. "Satellites, especially the geostationary PSLV launched recently, are automated and give a correct comparative picture of air pollution across cities, urban areas or regions," said professor Sethi.

Pollution mislead slur on govt

Date: 9th January, 2015 Source: The Telegraph

New Delhi: A non-government environmental organisation has accused the Union environment and forests ministry of misleading the Supreme Court by claiming that vehicles contribute only a small proportion of air pollution in the capital. The ministry had filed an affidavit this week that claimed that vehicles contribute only 6.6 per cent of particulate matter (PM), tiny soot-like particles that can penetrate the lungs and at excess levels cause respiratory distress. The environmment ministry affidavit has attributed air pollution to dust from roads and construction activities, claiming that industry and power plants are responsible for 78 per cent of nitrogen oxides and 95 per cent of sulphur dioxide in the capital's air. The Centre for Science and Environment (CSE) has questioned these claims. "We are deeply shocked at the callous and indifferent attitude of the ministry towards one of the most serious health crises looming in Delhi and other cities of India," Sunita Narain, the CSE director general, said in a media release.

The environmental NGO that has long been campaigning for government measures to curb the growth of vehicular traffic, particularly private vehicles, has said the ministry's affidavit appears intended to play down the role of vehicles. "This (affidavit) protects the automobile industry and car users as combating vehicular pollution requires tough measures to restrain cars, encourage public transport and leapfrog vehicle technology," said Anumita Roychowdhury, the CSE executive director and head of the air pollution campaign. The CSE says there is abundant evidence, including Central Pollution Control Board observations, to link traffic with air pollution. The CSE has said the ministry has assessed only the inventory of PM10 (particles less than 10 micrometres in size) and ignored PM2.5 (particles less than 2.5 micrometres in size) that can penetrate deep into the lungs and are a greater danger to human health.The ministry filed the affidavit in response to a notice issued by the Supreme Court asking for government action to curb air pollution. An analysis by the CSE has shown that pollution levels are lower when traffic density on the roads

is lower.
The CSE has pointed out that the ministry had in 2009 conducted its own study carried out by the School of Environmental Sciences at the Jawaharlal Nehru University, New Delhi, which had said vehicles contributed at least 60 per cent of PM at at least five busy sites in the capital. The ministry has used another study by the National Environmental Engineering Research Institute, Nagpur, to claim vehicles do not contribute much to air pollution. But Roychowdhury claims that study was based on a flawed methodology. The CSE has cited air pollution data from Delhi and Bangalore as evidence to support its argument that pollution levels drop on holidays when traffic density is lower than on working days. The PM2.5 levels, for example, on January 26, 2013, was 140 microgrammes per cubic metre, but jumped to 187 on January 27 and 216 on January 29.

New report looks into India's water and air purifier industry competition and market share report to 2019

Date: 13th January, 2015 Source: Whatech

India water and air purifier market report provides statistics on market size, volume sales, segmentation and market share analysis of RO purifier, UV purifier, Inline Purifier, Offline Purifier Market. Eureka Forbes is expected to maintain focus on Emerging Markets in small towns and villages to compete with other players in the industry such as Hindustan Unilever Limited and Tata Swach which has performed well in the rural areas and small towns. The air purifier market in India is still at its nascent stages with revenues expected to register an astonishing CAGR of 40.1% during FY'2014-FY'2019 Air purifier market in India is expected to rise in the forthcoming years due to increasing awareness level and rising air pollution. Eureka Forbes followed by Daikin India are the market leaders in the air purifier industry in India.

Ken Research announced its latest publication on "India Water and Air Purifier Market Outlook to 2019" which provides a comprehensive analysis of the water and air purifier industry in India. The report covers various aspects such as market size of water and air purifier market in terms of revenue, segmentation on the basis of region wise demand, by end users in water and air purifier market; by types of water and air purifiers; by types of distribution channel and by organizational structure in water purifier market. This report will help industry consultants, water and air purifier startup companies and other stakeholders to align their market centric strategies according to ongoing and expected trends in the future. Water and Air Purifier Market IndiaThe water purifier market in India has witnessed a growth in recent years on account of rising awareness and the increasing water pollution in the country. The surge in growth of the industry is majorly originated from growth in the organized sector and the availability of affordable purifiers. The growth in the water purifier market has been largely led by the increase in water pollution and the lack of fresh water supply by municipalities. India water purifier market is comprised of large companies such as Eureka Forbes, Kent RO, Hindustan Unilever and Tata which posses the maximum market share in the organized sector. The water purifier market in terms of revenues has grown at a CAGR of 25.4% from FY'2010-FY'2014. The air purifier industry has been in nascent stages due to lack of awareness among people about the harmful effects of breathing polluted air and the lack of intensive marketing from the companies. The CAGR for the period FY'2010-FY'2014 for air purifiers was evaluated at 33.4%. According to the research report, the air and water purifier market in India will grow at a considerable rate due to the increasing awareness among people and the rising spending power of people.

"While rising disposable incomes, increase in water pollution and the growth of the organized sector will result in tightening of water supply standards from the municipal authorities; increase in the standardization of products manufactured by the companies and the strengthening of the weak distribution channels adopted by the companies which are some of the few major challenges will affect the growth of this industry in the future. The air purifier market on the other hand is still developing from the early stages and is expected to boom in the coming 5-10 years due to rising air pollution and increase in

awareness among people" according to the Research Associate, Ken Research.

Key Topics Covered in the Water Purifier Report:
-Water Purifier Industry
-Market Size by Revenue and Volume sold
-Market Segmentation by Region Wise Demand End Users
Types of Water Purifiers
Types of Distribution Channel Organized and Unorganized Market
-Trends and Development
-Export and Import of Water Purifiers
-SWOT, Porter's Five Forces
-Major Challenges
-Government Regulations
-Growth Drivers
-Competitive landscape
-Competition and Market Share
-Future Outlook
-Macro Economic Parameters

State maintains low-grade campaign to end Indian Point

Date: 14th January, 2015 Source: Capital Newyork

ALBANY—Andrew Cuomo once called Westchester's Indian Point nuclear facility a "catastrophe waiting to happen," and included a section on why it should be closed in his 2010 campaign literature. In 2011, the Times reported that one of Cuomo's top advisers told officials of the company that owns Indian Point that the governor was determined to close it.

And that turned out to be something of a high-water mark, in terms of the administration's public campaign against Indian Point. Since then, the administration's efforts have become less dramatic and more incremental, pursuing talks with the facility's owners while waging a slow-moving legal battle seemingly designed to achieve leverage ahead of an eventual deal with the company and federal regulatory authorities.

This week, in a move that typifies the administration's recent approach, the state appealed an appellate court ruling that Indian Point is grandfathered into the state's Coastal Management Plan, which protects the wildlife habitat and recreational activities on the river. The ruling prevents the state from imposing an additional environmental review on the plant, removing one of its only bits of leverage in its negotiations with Indian Point's owner, Entergy. (Only federal authorities have the power to license or unlicense nuclear facilities, but states can make it difficult for plants to operate profitably through aggressive regulation.) The appeal could send the case to the state's highest court. At the same time, Cuomo administration officials have had ongoing meetings with Entergy officials, including as recently as last month, public schedules show. And the state's Public Service Commission has for the past year explored contingency energy plans that don't include Indian Point. While Entergy's C.E.O. Leo Denault recently said the company could agree to an early closure of the plant if state officials could guarantee the "proper compensation," the two sides have failed to reach an agreement.

The coastal contingency plan is a potentially powerful chit for New York officials to use in bargaining with Indian Point over its closure, since the federal Clean Water Act gives states control over water quality issues. The licenses for the plant's reactors have expired and it applied for a 20-year re-licensing in 2007. Last year, state officials floated the possibility of protecting wildlife species by shutting Indian Point during the summer months—which would essentially erase its profitability—during the separate ongoing negotiations over its water withdrawal certificate required as part of its re-licensing. The state also wants Indian Point to install cooling towers that would cost hundreds of millions of dollars to mitigate harm to wildlife when the plant sucks in billions of gallons of Hudson River water to cool its turbines.

But aside from the possibility of additional regulation, pending a possible Court of Appeals' hearing of the state's case, it's not clear what the administration's options are for the near term. Notwithstanding the state's ongoing studies of alternatives to Indian Point, in meetings between state officials and Entergy representatives early last month, P.S.C. chairwoman Audrey Zibelman offered no other significant alternatives and indicated that the state was waiting for someone from the Cuomo administration to make a decision, according to multiple sources with knowledge of the talks.

And tough new rules from the federal Environmental Protection Agency on power plant emissions will make closing Indian Point that much harder, if the state is to do so and still meet its other environmental goals. New York must reduce its greenhouse gas emissions 38 percent by 2030 and the emissions-free power produced by Indian Point won't easily be replaced by plants that burn coal, natural gas or oil. Indian Point produces 2,000 megawatts of power, about a quarter of the demand of New York City and Westchester County. A state Department of Environmental Conservation spokesman did not respond to request for comment. A state Public Service Commission spokesman said the Indian Point contingency plan was on track.

The Nuclear Regulatory Commission is not expected to make a final decision on the relicensing until 2018. The license for Indian Point's reactor 2 expired in 2013 and the license for reactor 3 expires at the end of this year. Entergy vice president Mike Twomey said the state appeal of the appellate court ruling on the Coastal Management Plan was expected. He acknowledged that Entergy faced more challenges in its bid for a new license, but was confident a renewal would eventually be granted.

"We believe that we share the governor's objectives on a number of issues such as ensuring a reliable electric system in New York, protecting the environment and ensuring that people can afford their electric bills," he said. "The only disagreement we have is whether Indian Point should be part of that electric grid that is affordable reliable and sustainable."

Back to nature: Turn your home into a healthy zone

Date: 14th January, 2015 Source: Hindustan Times

Air pollution is a big killer in India. Just like outdoor pollution, indoor air pollution can be deadly too, with a wide variety of toxic chemicals lurking in your home!

According to a survey by World Health Organisation, indoor pollution in India caused 34% stroke, 26% heart disease, 22% COPD, 12% acute lower respiratory infections in children and 6% lung cancer fatalities which eventually lead to death.Woman protecting herself from the hazards of air pollution (Photo: Shutterstock)It's time you stopped living in fear. Here are a few DIY ideas to turn your home into a healthy zone.Make an herb garden. In 2014, a study by University of California warned that air pollution in India had a direct, negative impact on grain production. Analysing three decades of

data, scientists found that in densely populated states wheat yields were 50% lower than what they could have been in 2010. You may argue that you are not into crop cultivation, and therefore, by extension, you need not bother about this figure. Right? Wrong. Air pollution impacts all, and you'll do yourself a world of good by giving yourself a protective shield with an herb garden. How to do it? First things first! Keep in mind what kind of light comes into your home and its intensity. The best way to make a herb garden at home is to take one rectangular pot and fill the base with 1 inch of gravel. Then, cover the pot with 5 inches of well-drained soil/vermi compost. What to plant Suggests Shaan Lalwani, director of Vriksha Nursery in Mumbai: "If you have 2-3 hours of light indoors, then you can grow rosemary, oregano and curry leaves. For areas that have natural sunlight for around 3-5 hours, plants like thyme, tarragon and chives are the best." Mamta Bargale, founder of Bengaluru's Orchid Tree, adds Italian basil, mint and cilantro to the list. "These three plants are easy to grow and are pretty useful in the kitchen too. You can use them for their strong aromatic properties garnish your food with them, mix them with juices/cocktails or simply use them whole," she says.

Another favourite with horticulturists is Stevia Rebaudiana.Says Ashish Lakhanpal, founder of The Plant Studio in Delhi: "Stevia works as a natural sweetener and is very good if you have diabetes running in the family. It can also help you control your blood pressure level."

Why is it helpful

* Basil contains high quantitites of (E)-beta-caryophyllene which is useful in treating arthritis and inflammatory bowel diseases.
* Oregano that contains high amounts of omega-3, iron, manganese and antioxidants can help treat respiratory tract disorders, gastrointestinal disorders, menstrual cramps, urinary tract disorders and a number of skin conditions.
* Rich in antioxidant properties, curry leaves can control diarrhea, indigestion, excessive acid secretion, peptic ulcers, and diabetes.
* Mint helps with digestion, nausea and headaches, asthma, depression and fatigue, cough and respiratory problem.
* The antimicrobial properties of cilantro can help you detoxify. These days a lot of diets have juices and drinks that include cilantro.
* Rich in Vitamin A and antioxidants, thyme protects from colon cancer, breast cancer, food-borne bacteria, hypertension, stomach ache and arthritis.
* Rich in potassium and the Vitamin A, tarragon is good for overall eye health and heart health. It also acts as an effective remedy against toothache.
*This nutrient dense food can help fight prostate, esophageal and stomach cancer.

Keep your rooms purified

Did you know that formaldehyde, a volatile organic compound emitted in low levels by a variety of household products and furniture, may trigger asthma attacks and allergic reactions when present in high levels? The good news is, you can get rid of it easily. You have a green tool at your disposal! Sansevieria Trifasciata, commonly known as Snakeplant (Photo: Shutterstock).Though all plants are good air purifiers, there are some which do it more effectively. Plants like peace lily (spathiphyllum), weeping wig (ficus bengemina), fall guy (dracaena magenta), philodendron oxycardium are recommended.

Says Lalwani: "We have set up some of these air-purifying plants in several hospitals, offices and homes across Mumbai and we have got positive feedbacks. Many people say that plants like peace lily and ficus bengemina have helped them reduce stress levels. In fact, people with asthma have noted a decrease in attacks around these plants." Adds Lakhanpal: "Sansevieria Trifasciata, also known as Snakeplant, is my first choice. Mostly because this plant thrives on its own and is very effective in reducing levels of vehicular pollution. The Best part is that it emits oxygen at night".

Other air-purifying plants

* Dwarf Umbrella Tree (Schefflera) * Moth Orchid (Phalaenopsis)
* Chinese Evergreen (Aglaonema) * Areca Palm (Dypsis lutescens)
* ZZ plant (Zamioculcas)

Plants you should keep handy"Ashwagandha, or indian gooseberry, is a must have. It has multiple benefits and is good for arthritis, anxiety, insomnia, tumours, tuberculosis, asthma, leukoderma, bronchitis, backache, fibromyalgia, menstrual problems, hiccups, and chronic liver disease," says Lalwani. Ashwagandha is known for its medicinal properties- it's good for arthritis, anxiety, insomnia.

Here are a few other good options you could consider.

* Aloe vera is a good first aid for burns and skin infections. It is also effective against dandruff.
* Adusol can help you keep your cough and cold in check.
* Basil (Tulsi) can cure respiratory problem, help fight cancer, diabetes and protect the heart.
* Rosemary can boost your memory and can also as a strong anti-oxidant.

However, Bargale swears by Dendrobium (a huge genus of orchids). "It is good for destressing and can also be used to treat stomach pain, heatstroke, dry mouth and sores in the mouth," the orchid enthusiast says.
Keep pests at bay Make worry a thing of the past! Roam around stress and insect free in your house with these plants around:

Euphorbia Thiruchilii: Commonly known as pencil euphorbia, this plant has been used by the Portuguese for centuries to ward off rats. The sap in the plant is highly alkaloid that causes the rats to die. Citronella grass is one of the best mosquito repellants (Photo: Shutterstock)Pityopsis ruthi: Pityopsis ruthii commonly known as rutha, a small olive green shrub with pretty yellow flowers works like a dream in keeping cockroaches, lizards and fleas away.Citronella grass: It is one of the best mosquito repellants. Just plant them in your garden and you will notice a drop in the number of mosquitoes. Note: Children living in polluted cities have higher chances of developing brain inflammation and neurodegenerative changes that raise the risk of diseases such as Alzheimer's or Parkinson's. Pledge to keep your surroundings and indoors healthy.

Tax diesel vehicles in Delhi to check pollution: Sunita Narain

Date: 14th January, 2015 Source: Zee News

New Delhi: With diesel vehicles being biggest source of air pollution in Delhi, noted environmentalist Sunita Narain Wednesday said there was a need to heavily tax such vehicles in the national capital. With crude oil prices fallen below USD 50 per barrel, now is the right time for the government to implement second generation reforms to control pollution, she said, adding that pollution in

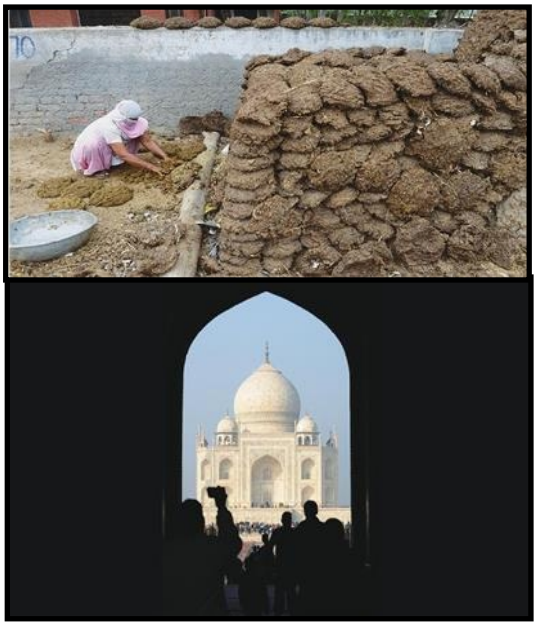
Delhi was growing and road speeds were also down because private cars take up 90 per cent of road space. "Even after introduction of CNG vehicles in 1999, the pollution levels have increased due to unabated rise in number of vehicles in the city. So, second generation measures are required to address the problem of pollution," Narain said while speaking on the topic 'Smart cities need clean air'. Suggesting four steps to fix air pollution in Delhi, she said the government should ban use of diesel vehicles by taxing heavily and stop use of such vehicles during smog. "Diesel and petrol differential remains because of tax. Diesel is classified class 1 carcinogen by the WHO same class as tobacco. We allow its use without restraints. We need to stop dieselisation of vehicles," said Narain, Director General at the Centre for Science and Environment. Stating other countries are already taking steps to curb use of diesel vehicles, she said France has decided to phase out diesel cars, Chinese cities like Beijing and Shanghai as well as Brazil do not allow diesel cars. That apart, neighbouring Sri Lanka has discouraged diesel cars with tax measures, she added. Besides, Narain said there was a need to build public awareness about health impacts as diesel fuel contains fine particles associated with negative health effects. Quoting the 2012 epidemiological study conducted on children in Delhi, she said, "Every third child has reduced lung function. Sputum of Delhi's children contains four times more iron-laden macrophages than those from cleaner environments, indicating pulmonary hemorrhage."

She also suggested "drastic and urgent improvement in quality of fuel/vehicle technology" and giving "push for public transport, mobility transition and right to walk for clean air" to address the problem of air pollution.

India bans burning cow dung near yellowing Taj Mahal

Date: 14th January, 2015 Source: DAWN

NEW DELHI: India has banned the burning of cow dung near the Taj Mahal amid fears the famed white-marbled mausoleum was turning yellow from air pollution, an official said on Tuesday.



Authorities have long struggled to control the impact of pollution on the stunning 17th-century monument to love in the northern city of Agra, which attracts millions of tourists each year. The ban on Agra residents burning cow dung, a common fuel source, is aimed at reducing carbon deposits on the Taj's walls, spires and domes, said Pradeep Bhatnagar, chairman of the area known as the Taj Zone. "From time to time there are concerns that the colour of the Taj is changing," said Bhatnagar said. "So at a recent meeting it was decided that there should be a ban on burning cow dung fuel within the city limits. "There is an aesthetic aspect to it as well. We don't want the city's walls to be plastered with cow dung," he said. Dried cow dung is commonly used in rural areas as a cheap source of fuel for heating and cooking. Women knead fresh dung into melon-size balls before flattening them against walls to dry — a common sight throughout India. A recent study into the discolouration of the monument by experts from United States and Indian universities and the Archaeological Survey of India, found that dust was to blame for the majority of the yellowing, with carbon deposits were responsible for the rest.

We couldn't have done much about the dust but we decided to plug the source for the carbon prticulate matter which as the burning of organic matter," Bhatnagar said. Bhatnagar said Agra residents would now be encouraged to use cleaner fuel, adding that they would be given gas connections. Trucks using diesel will also be asked to switch to compressed natural gas by July, local media reported.

The ban comes after an air quality monitoring system was set up near the Taj. In 1996 the Supreme Court banned use of coal by industries located within a 10,400-square kilometre zone around the monument. The Unesco world heritage site was built by Mughal emperor Shah Jahan as a tomb for his beloved empress, Mumtaz Mahal, who died during childbirth in 1631.

Pollution soars in Beijing amid winter smog

Date: 15th January, 2015 Source: The Times of India

BEIJING: Pollution levels soared in Beijing on Thursday to readings more than 20 times WHO recommended limits, as an annual bout of intense smog returned to haunt the Chinese capital despite government vows to address the plague. Levels of PM2.5 particulates, the smallest and most dangerous, with a diameter smallenough to deeply penetrate the lungs, were recorded at 568 micrograms per cubic metre by the US embassy during the afternoon. An even worse reading of 631 was recorded at a municipal monitoring station in the east of the city. The World Health Organization's recommended maximum is 25 micrograms per cubic metre. China has for years been hit by heavy air pollution, caused by enormous use of coal to generate electricity to power a booming economy, the world's second largest, and more vehicles on the roads. Beijing is periodically hit by choking, acrid haze, with particulate levels jumping far beyond recommended limits. The phenomenon tends to be at its worst in winter, when demand for electricity rises for heating. Authorities warned earlier this week of smoggy weather blanketing northern China, blaming calm weather as windy conditions tend to disperse pollution. Thursday's spike, levels were beginning to reduce in the late afternoon, came almost exactly two years after an extreme bout of bad air in January 2013, dubbed the "airpocalypse", when state media reported readings at nearly 1,000 micrograms per cubic metre, almost 40 times the WHO's limit. Public discontent about the environment has grown, with pollution a popular discussion topic on social media.

The official news agency Xinhua reported Thursday that Rao Bing, a local environmental official in Dazhou, in the southwestern province of Sichuan, had been excoriated online after blaming smog in the area on residents smoking bacon. "The people who discovered this should win a Nobel," sneered one poster on Sina Weibo, a Chinese equivalent of Twitter. Preserved pork and sausages are traditional Sichuanese foods, with many households smoking their own ahead of the lunar new year. The central government has declared a "war on pollution" and vowed to cut coal use in some areas, although it has only pledged a goal of greenhouse gas emissions peaking "around 2030", suggesting they will rise for more than a decade. China last year passed the first amendment to its environment protection law in 25 years, imposing tougher penalties on polluters. Air pollution in the capital dropped slightly last year, the Beijing Municipal Environmental Protection Bureau announced earlier this month, although they still averaged 85.9 micrograms per cubic metre, more than three times the internationally recommended limit.

Pollution a top concern for Delhiites in Assembly elections

Date: 15th January, 2015 Source: IBN LIVE

New Delhi: With elections around the corner, one of the biggest concern of Delhiites is pollution in the city. The air pollution is skyrocketing, noise pollution is on the rise and the Yamuna remains filthy despite thousands of crores being spent to clean it. A WHO study released in May 2014 also quoted Delhi to be the most polluted city in the world when it comes to air quality. The national capital has the highest concentration of PM 2.5, which is considered the most dangerous at 1533 micrograms as compared to Beijing's 56 micrograms. The pollution level at all parameters is way above permissible

limits in the city, causing a serious health hazards to Delhiites. In fact, air pollution is the fifth largest killer in India, affecting 6.2 lakh million Indians prematurely, a six-fold increase since the year 2000 according to a study in the Lancet. Air pollution is also causing more than 25 per cent of all stroke cases. A whopping 48.6 per cent heart disease cases, more than 17 per cent of chronic OPD cases and more than 6 per cent of all lower respiratory infections are due to air pollution in the city. "High level of pollution can cause lung cancer, chest infections. People get more prone to H1n1 due to high levels of air pollution," say doctors. According to a study by CSE, air pollution exceeded between 3 and 11 times the recommended safe exposure to PM 2.5 and PM 10. Data from the CSE shows that between October 1, 2013 and January 31, 2014, Delhi met the bare minimum for breatheable air for just three days. On all other days in the 4-month period, Delhi's air quality in terms of Particulate Matter 2.5 was hazardous. Not just air pollution, pollution in Yamuna is also a major concern. Till now, the state government has spent over Rs 3,500 crore under the Yamuna Action Plans but the river still remains filthy. "The problem is that Yamuna has lost it's flow. If recycled water is used, river will get it's flow back," member Yamuna Jiye Abhiyan Manoj Mishra said. While the Congress is claiming credit for introducing CNG autos to reduce pollution, the Bharatiya Janata Party (BJP) and the Aam Aadmi Party (AAP) are also promising to work on this mostly ignored issue.
Noise pollution, too, is on the rise. According to a survey by the Center for Science and Research, noise levels go up to 90 decibels in residential zones during traffic time as against the acceptable limit of 50 decibels and given the ground realities, it won't be easy for any political party to fulfill their promise easily.

TNPCB Advice Up in Smoke as Bhogi Propels Pollution

Date: 15th January, 2015 Source: Bloomberg Business

CHENNAI: Air pollution levels in the city increased manifold on Bhogi days residents chose to discard the advisory from the Tamil Nadu Pollution Control Board (TNPCB) and burned unused items in the name of tradition. Perungudi topped the list of most polluted localities, followed by Royapuram, Alandur, Kodambakkam, Anna Nagar, and Tondiarpet. According to ambient air quality statistics released by the TNPCB, except Ambattur, all 14 zones of the Chennai Corporation recorded presence of Respirable Suspended Particulate Matter (RSPM) much higher than the permissible standard limit. This led to formation of thick fog over much of the city in the early hours of Wednesday.Perungudi recorded the highest RSPM level with 262 µg/m3 while pre-Bhogi, the area recorded 113, still exceeding the limit. Royapuram with 231, Alandur with 228, Kodambakkam with 216, Anna Nagar with 213 and Tondiarpet with 206 all exceeded the standard permissible limit of 100 µg/m3.Ambattur was the only zone to have recorded RSPM level below the permissible limit at 93. A release from TNPCB, however, attributed the smog also to high humidity and foggy conditions which made the local stable atmospheric conditions poor resulting in vertical mixing and low wind speed. Thick smog affected flight movement at the Chennai airport. As many as 34 flights were affected on Wednesday. Flights were affected from 7.15 am. The after effects lingered till after 9 am. Air India and Jet Airways had the most number of flights operating during that window.

Yak dung polluting indoor air in Tibetan households

Date: 16th January, 2015 Source: Zee News

Washington: Burning of Yak dung is leading to pollution of indoor air in Tibetan households, filling the atmosphere inside with dangerous levels of fine particulate matter including black carbon, a new study finds.
"In a cold place like Tibet, the impact on individuals could be even greater because they spend so much time indoors and try to keep their homes as air-tight as possible," said Eri Saikawa, assistant professor in the department of environmental sciences at the Georgiabased Emory University in the US.

In 2013, team member Qingyang Xiao, a graduate student at the Emory University's Rollins School of Public

Health, travelled to the Nam Co region in Tibet to gather the data. About 4,500 residents live in the region located at an altitude of 4,730 metres. Xiao used battery-powered aerosol monitors to measure indoor concentrations of fine particulate matter, which consists mainly of black carbon and organic carbon. She recorded the measurements in six households with different living conditions and stove types.

Yak dung was the main fuel for cooking and the only fuel for heating. The results showed that the average concentrations for black carbon and fine particulate matter were nearly double those reported by some similar studies of households in areas located at lower altitudes and consequent warmer climates such as India and Mexico. The moisture content of the yak dung is a key factor in the emission levels. "After rain or snowfall, the piles of uncovered dung are moist, leading to incomplete combustion and more emissions of fine particulate matter," Saikawa added. She hopes to work with Georgia Tech engineer Jonathan Colton to develop gasifier cooking stoves that would burn yak dung in a more efficient matter, thereby producing fewer emissions. The findings were detailed in the journal Atmospheric Environment.

Pollution clearance: GSPCB rules out exemption for shacks

Date: 16th January, 2015 Source: GOACOM

In a blow to the shack operators, Goa State Pollution Control Board (GSPCB) has turned down their request for exemption from the provisions of Air and Water Pollution (control) Act. It has however decided to hold special camps to assist shack operators to apply for consent to operate. GSPCB will hold three-day special camp from Friday to Sunday for the entire North Goa belt at Calangute community hall whereas for South Goa belt, two-day camp will be held on Monday and Tuesday next week the venue for which is yet to be finalised. Members of Shack Owners' Welfare Society of Goa along with Calangute MLA Michael Lobo made a representation to the GSPCB chairman Jose Noronha on Thursday afternoon and proposed to exempt shack business from the ambit of pollution control board on the grounds that their's is a seasonal business.

Speaking to this daily, GSPCB chairman Jose Noronha said that the issue is consequent to NGT order. Though some have obliged to the norms but there are large number of applicants who need assistance in filling up forms hence we will hold special camps in both the coastal belts with our team comprising of technical, accounts and IT. GSPCB had in its 115th board meeting made 'consent to operate' compulsory for shack owners to be valid for two years. It was said that the shack owners will be allowed to operate soon after applying for the consent to operate and NOC granted within six months.

Responding to a question, Noronha said that the application for consent to operate will be accepted on the spot and a team of engineers will subsequently carry out an inspection. However, he said that the consent to operate will be granted only after a compliance report is filed. Under Water Act and Air Act, Noronha said that shacks should have proper oil and grease trap, make provision of soak pits or arrange storage system for sewage collection and maintain detailed log books showing daily collection and transportation of sewage to night soil tankers. Moreover, adequate facilities for garbage collection and disposal have to be in place. Meanwhile, owners of eleven shacks along Majorda-Utorda beach belt that were shut down by the tourism department for violation of green norms have approached the GSPCB and filed applications for consent to operate.

Javadekar to hold chintan shivirs across India to explain govt's environmental stance

Date:17th January, 2015 Source: Hindustan Times

Environment minister Prakash Javadekar will start nationwide consultations — called chintan shivirs — where he will meet forest officials and talk about the government's move to change environmental laws and

the need to adopt traditional ways of conserving nature. This will be Javadekar's first nationwide consultation since taking charge as minister in June 2014 after which the NDA government made more than 40 changes in environmental regulations.

"The idea is to have an opeen house with 150-200 forest officers in different age groups and take their feedback on what they think is wrong with the country's environment management and ways to improve it," said a Javadekar aide. "The minister will also emphasise that foresters should propagate the traditional Indian way of living has been environment friendly." The chintan shivirs come at a time when the environment ministry is pushing a new environmental regime by amending five environmental laws to boost ease of doing business in India, a move activists say will reduce environment protection measures. "The amendments proposed would be disastrous for our environment and should not be pursued at all," environmental lawyer Ritwik Dutta told a Parliamentary Standing Committee last week. Javadekar said he wanted to hold the chintan shivirs to change the ministry's negative image its policies has given it as well as to make environment regulation transparent and accountable. "My idea was opposed by some officers but I have decided to go ahead with it," he said.

The minister spoke about a broad-based consultative process at the Indian Science Congress in Mumbai this month, saying that ancient Indian scientific theories were based on centuries of observations. "We should draw upon the knowledge of ancient Indian science concepts and explore possibilities of their application in the modern world," he said. The minister also directed officials to hold an exhibition at the ministry's headquarters on conserving environment using Vedic methods. "We are in touch with some Rashtriya Swayamsewak Sangh affiliate organisations to put up demonstrative models on Vedic ways of conserving nature," a ministry official said. The first chintan shivir will be held at Bengaluru on February 8-9, where a motivational speaker will address forest officials and other issues will be discussed, including cleaning rivers, social forestry and air pollution. The minister plans to hold four such sessions in different parts of the country.

MoEF guided by bad science, EPCA tells SC

Date: 18th January, 2015 Source: The Times of India

NEW DELHI: Environment Pollution Control Authority (EPCA) has submitted its rebuttal to Supreme Court on MoEF's recent affidavit that downplayed the role of vehicles in air pollution. The ministry's original affidavit had claimed vehicles contribute only 6.6% of particulate matter (PM) pollution. However, faced with criticism on the issue, it filed another affidavit on Friday stating vehicles contribute between 8.7% and 20.5% of PM emissions. Rebutting the ministry's first claim, EPCAA, which also submitted its rejoinder on Friday, said MoEF's stand against upgrading fuel quality to Euro IV standards across the country by end-2015 is also "unacceptable" as there has been "inordinate delay" in taking action against air pollution.

EPCA, a body notified by the Centre in 1997 to deal with all environmental issues in the NCR and ensure compliance with air quality standards, said upgrading fuel standards immediately is important because truck traffic is a major source of air pollution. Euro IV standards for trucks are 81% cleaner than the current Euro III standards.SC was hearing a petition by MC Mehta, Supreme Court lawyer and environment activist. EPCA pointed out the government is depending on "bad science", referring to National Environmental Engineering Research Institute's source apportionment study that concluded vehicles are responsible for only 6.6% PM pollution in Delhi. EPCA quoted another government study by Ministry of Earth Sciences, done before the 2010 Commonwealth Games, that found vehicles contribute 29% of PM 10 (coarse particles of less than 10 micrometre size) and 45% of PM 2.5 (fine, respirable particles of less than 2.5

micrometre size). The MoES study conducted by IITM was also published in Atmospheric Environment, a journal. EPCA sought directions from SC on creating a clean fuel fund from the Rs 2 per litre excise duty on fuels and an additional excise duty of Rs 81,000 on diesel cars, proposed by the government-appointed Kirit Parekh committee.

Pay hefty fine for parking car on Delhi roads

Date: 20th January, 2015 Source: India Today

Advocating more coercive measures to regulate traffic and bring down pollution, the National Green Tribunal on Monday ordered Rs.1,000 as fine on any car parked on a metalled road. Refusing to accede to the requests of residents and shopkeepers of some local markets to allow them to park their cars on roads due to lack of parking space, Justice Swatanter Kumar, said: "If you use ground floor for commercial purpose, then you must pay for parking." In pursuance of this case, NGTT had also passed the important order that all vehicles above 15 years of age in Delhi be banned.
On Monday, the committee on air pollution set up by NGT informed it that almost all prescribed parameters of air pollution were found to be in excess of the National Ambient Air Quality Standards. "There will be complete prohibition of parking of any cars on the metalled roads and the corporation would take strict action against a person who violates it." Justice Kumar also said that in case of violation of its order, the area SHO and DCP will be held personally liable.

Why India Can't Stop at 100 Gigawatts of Solar

Date: 20th January, 2015 Source: Green Tech Media

India needs to reform its energy markets and broaden its scope of policies to make solar more impactful.The spotlight will turn to India next Monday when President Obama joins Prime Minister Narendra Modi at India's Republic Day celebrations -- a first for a U.S. president. The two leaders have a packed agenda for the president's three-day visit, which will include discussions about energy. But don't expect a climate deal similar to one crafted by China and U.S. Last year, India's new environment minister categorically stated that India, whose per capita emissions are lower than those of U.S. and China (1.7 tons CO2 per capita), has no intentions of reducing greenhouse gas emissions in the near future. Instead, the new government's priority is to meet its energy deficit by significantly increasing coal production, which already accounts for more than 60 percent of India's electricity generation. Further, the minister in charge of power and coal (who interestingly also heads the Ministry of New and Renewable Energy) plans to double India's coal output by 2019, to 1 billion metric tons, by approving several old and new coal projects. Meanwhile, the clean energy industry has been celebrating India's recent policies promoting solar development. The new government has set an ambitious target to procure 100 gigawatts of solar capacity by 2022. And just last week, SunEdison announced a $4 billion investment to build a factory for manufacturing lower-cost solar panels in India. These developments will boost India's nascent solar industry, which currently accounts for less than 1 percent of power generation in India. They may allow solar to meet as much as 10 percent of India's electricity demand by 2022. Solar could significantly change India's electricity mix. But a pro-solar policy in isolation will not translate to a drop in emissions -- not when India still has no cohesive plan to phase out fossil-fuel electricity generation and transition to a low-carbon economy.

Realizing the goal of 100 gigawatts of solar will also bring many challenges of its own. Power distribution companies in India, which are entirely state run, have set dismally low renewable purchase obligation targets of 3 percent by 2022, and most states have been failing to meet current targets year after year. These

obligations are not enforced or regulated, increasing uncertainty around new large solar projects. Moreover, Indian utilities rely on large industrial and commercial consumers to subsidize electricity for all other customers, and are wary of independent renewable power producers taking away large consumers and depriving them of their main source of profit. As a result, independent solar (and wind) projects are subject to restrictive open-access policies, as well as high wheeling and cross-subsidy charges that prevent renewable energy from being cost-competitive. Such prohibitive policies need to be eliminated and the electricity sector must be deregulated if India hopes to achieve its solar targets. There is hope for this given that the parliament is debating changes to the Electricity Act of 2003 and the Ministry of New and Renewable Energy has proposed eliminating wheeling charges for upcoming solar parks. However, the electricity sector is not the only problem.

Manufacturing and transportation account for a major share of emissions and harmful air pollutants as well. The 2014 Environmental Performance Index ranked India 174th out of 178 countries for air quality, barely ahead of Pakistan, Nepal, China and Bangladesh. Meanwhile the government is reluctant to improve air quality and has even denied that vehicles are responsible for hazardous air quality in cities. As India's traffic problems worsen and fuel consumption increases, stricter measures will be needed in order to curb the respiratory illnesses that are growing at an alarming rate. It is clear that India's approach to development thus far has not been successful in achieving desirable health outcomes. If the country's preferred strategies include doubling down on coal production and increasing oil consumption, the future looks rather bleak. Simply increasing the amount of solar power without drawing up specific timelines and targets for emission reductions will not help India deal with climate change and lower the health impact of pollution. It's time for India's new government that came to power with the promise of "achhe din aayenge" -- meaning "better days are ahead" -- to lead the way to a cleaner, secure future without repeating mistakes that we now know can be avoided. In order to have a meaningful impact, India's 100-gigawatt solar target needs to be part of a larger suite of policies designed to reform the country's energy market and promote a low-carbon economy.

Where there's smoke: the mystery of Asia's pollution haze

Date: January 20, 2015 Source: City Metric

A haze has periodically wafted over South-east Asia for 20 years. But despite rising public health concern, the problem remains as opaque as the smoke itself. At the age of 13, Tan Yi Han could not see the edge of his schoolyard. It was 1998 in Singapore, the wealthy city-state known for its tidy streets and clean, green image. But for much of that particular school year, clouds of smoke shrouded the skyline. The record-setting air pollution, which had begun in 1997 and lasted for months, caused a 30 per cent spike in hospital visits. It would later be remembered as one of south-east Asia's worst-ever "haze episodes". Haze episodes have occurred in south-east Asia nearly every year since. Back in 1998, and for years afterwards, Tan didn't think too deeply about them. Yet at some point in his late 20s, he began to wonder: where did the haze come from? And why did it keep coming back?

Air pollution kills around 7m people every year, according to the World Health Organization (WHO), accounting for one in eight deaths worldwide in 2012. It's especially bad in the Asia-Pacific region, which has a population of over 4.2bn and a high population density. China and India alone, with a combined population of around 2.7bn, are both enormous sources and victims of air pollution. In 2010, 40 per cent of the world's premature deaths caused by air pollution were in China, the world's largest emitter of carbon dioxide, according to a survey published in the Lancet. The University of Hong Kong's School of Public Health reported more than 3,000 premature deaths in the city in 2013, and the situation in many mainland

Chinese cities is reckoned to be far worse. Similar health concerns are building in India, where air pollution is now the fifth-leading cause of death. A 2014 study has linked a significant drop in India's wheat and rice crop yields to rising levels of two air pollutants – black carbon from rural cooking stoves, and ground-level ozone formed from motor vehicle exhausts, industrial emissions, and chemical solvents – between 1980 and 2010. In both China and India, air pollution is one consequence of a massive exodus from farm to city that has occurred in recent decades. The change has contributed to rising emissions from both vehicles and factories, especially coal-fired power plants, and an emerging middle class that increasingly desires a range of consumer goods that are common in Europe and the United States. South-east Asia has encountered similar problems in recent decades as its economies and populations have boomed. In fact, according to the WHO, nearly 1m of the 3.7m people who died from ambient air pollution in 2012 lived in south-east Asia. But on top of smokestacks and tailpipes, the region faces an added burden: smoke haze produced in Indonesia that is a by-product of the world's US$50 billion palm-oil industry. In the summer of 2013, a plane carried Tan Yi Han over the Straits of Malacca to Pekanbaru, the capital of Riau province, the largest palm-oil production region in Indonesia. Tan, then a 28-year-old financial consultant, was volunteering with the Global Environment Centre, a Malaysian group that has worked for years to prevent and mitigate haze. He travelled to the heart of neighbouring Indonesia, just after a record-breaking haze episode hit peninsular Malaysia.

Pollution up as Obama arrives in Delhi

Date: January 26, 2015 Source: DNA

NEW DELHI: Air quality during the Republic Day parade may turn out to be slightly better than the bleak smoggy mornings the city has seen this winter, but it will continue to be in the "poor" and "very poor" categories. In fact, for president Barack Obama and guests from the US, the early morning air at Rajpath on Monday may seem nearly choking as PM2.5 levels here are several times the levels in Washington in the last couple of days. The air quality index (AQI) for Metropolitan Washington was "good" on Sunday evening, but in the "unhealthy" range at the US Embassy in Chanakyapuri which has a real time PM2.5 monitoring system. Obama's brief comment on partnering with India on providing clean air to Indian cities was not surprising as alarmingly high air pollution in Delhi grabbed headlines quite frequently in national and international media. A forecast based on the System of Air Quality Weather Forecasting and Research (SAFAR) model found that the hourly PM2.5 concentration on January 26 (5am to 10pm) will range from 90 to 118 microgram per cubic metre, which is about 2-3 times the US Environment Protection Authority (EPA) standard. "The impact of sporadic rain, which improved the air quality significantly by washing out pollution during the past three days, is almost gone now. Cooler temperature and calm conditions are likely to enhance the concentration of overall particulate pollution from moderate to poor range on January 26," said Gufran Beig, project director, SAFAR. The SAFAR model offers two scenarios: One in which traffic is like on any other day, or second where traffic is less due to diversions. Going by the latter, the air quality will be marginally above the Indian safe standard. The US has extremely stringent air quality standards compared to India. Their annual safe standard for PM2.5 is 15 microgram per cubic metre and for 24 hours it's only 35 microgram per cubic metre. They also make sure that industries, vehicles and each city conforms to these standards. It's legally binding for each city administration (civil penalty provisions) to meet these standards. If they are not able to meet the clean air standard they are penalized with a cut on the development grant. On Sunday evening at 7.30, PM2.5 levels at Mandir Marg hovered between 138 and 160 microgram per cubic metre. The visibility is also likely to be poor on early Monday morning. "There is no forecast for rain in the morning, but it may be foggy or partly cloudy. There is a 20% chance of very light rain in the afternoon. The temperature is likely to be 9-10 degrees," said BP Yadav, director of National Weather Forecasting Centre, IMD.

Mr. President, World's Worst Air Is Taking 6 Hours Off Your Life

Date: January 26, 2015 Source: Bloomberg Business

(Bloomberg) -- U.S. President Barack Obama could lose roughly 6 hours from his expected lifespan after spending three days in India's capital inhaling the world's most toxic air. Air Force One descended through an acrid smog when it landed in New Delhi on Sunday. A day later, haze obscured the visibility of fighter jets flying over Obama and Prime Minister Narendra Modi as they watched the Republic Day parade, the ceremonial centerpiece of his visit.Delhi has the world's highest levels of PM2.5 -- tiny, toxic particles that lead to respiratory diseases, lung cancer and heart attacks. The Indian capital averaged 153 micrograms per cubic meter in 2013, the World Health Organization said in May, citing government data. That's 15 times more than the average annual exposure recommended by the WHO.India as a whole is home to 11 of the top 20 cities on the planet with the worst air quality, according to data from the WHO, which collected pollution levels from 1,600 metropolitan areas between 2008 to 2013. The worst U.S. city was Fresno, California, which came 162nd on the list. During Obama's three-day visit, PM2.5 levels in Delhi have averaged between 76 to 84 micrograms per cubic meter, according to data collected by India's Ministry of Earth Sciences. The U.S. leader departed on Tuesday for Saudi Arabia.Those levels translate roughly into an estimated loss of 2 hours a day in life expectancy, said David Spiegelhalter, a statistician at the University of Cambridge, who specializes in quantifying risk in a way that is understandable to the public.

Eight Cigarettes"That's roughly 8 cigarettes a day," Spiegelhalter said in an e-mailed response to questions. "I think Delhi is a wonderful city, but this pollution is harming its residents."

India says this week's levels aren't that bad. The government classifies any reading from 60 to 90 micrograms over a 24-year period as "satisfactory," which means they "may cause minor breathing discomfort to sensitive people."

"We weren't concerned about bringing the president here for these meetings," John Podesta, Obama's climate counselor, told reporters Monday at a briefing in New Delhi. "The president has traveled to many places where the air is bad for one reason or other," including Beijing, he said.The U.S. Embassy in New Delhi recently purchased more than 1,800 Swedish air purifiers ahead of Obama's visit, according to Stockholm-based Blueair AB, which makes them. In recent years, India has seen readings exceed 500 micrograms, a level that doesn't even make it on U.S. charts, according to data from India's Central Pollution Control Board.

Action Plan Back in Washington, the 24-hour average was 15 micrograms, classified as "moderate" by the U.S. government's AirNow system. Beijing, by comparison, has had a good week. The latest 24-hour average in China's capital was 13 micrograms, according to the Beijing Municipal Environmental Monitoring Center.

Obama, who said he stopped smoking about eight years ago, said Sunday that India and the U.S. will start "new joint projects to improve air quality in Indian cities." In a briefing with Modi, both leaders pledged to cooperate more closely on clean energy and climate change. The U.S. is the world's second-biggest carbon dioxide emitter, while India is third.

"America wants to be your partner as you protect the health of your people and the beauty of this land," Obama said in a speech to about 1,500 people at a Delhi auditorium earlier Tuesday, calling for cleaner

energy, vehicles and water. “Because every child should be able to drink clean water; every child should be able to breathe clean air.”

Diesel Engines Podesta said that the clean-energy agreements reached between Obama and Modi will have the added benefit of helping public health by improving air quality.

Despite the talk, there’s little Washington or even Delhi officials can do until India’s oil refiners are able to start producing cleaner fuels in 2020.

Vehicles with diesel engines, which proliferated as successive governments subsidized the cost of the fuel, aren’t able to install filters to scrub exhaust gases because local fuels carry too much sulfur. As a result, those cars can pump out exhaust gases with 10 times the carcinogenic particles found in gasoline exhaust. While Modi ended state control on diesel pricing in October, the ratio of diesel to gasoline vehicles running on Indian roads is far greater than in China or the U.S. India expects its refiners to be able to supply high-quality Euro-VI fuels nationwide by 2020, according to Saurabh Chandra, the oil ministry’s top bureaucrat.

Pressure Building PM2.5 refers to tiny airborne particles and liquid droplets measuring less than 2.5 micrometers or one-thirtieth the width of a strand of hair. Because they’re so small, they penetrate deep into the lungs and pass into the blood stream, according to the U.S. Environmental Protection Agency. The World Health Organization classifies PM2.5 as a Group 1 carcinogen, similar to asbestos and tobacco.

Short-term spikes can kill, triggering strokes, heart failure and asthma attacks, according to the American Lung Association. Shortened life spans of the urban population because of air pollution cost India $18 billion annually, according to a World Bank report in June. Whether that spurs Modi to take more action remains to be seen. The Indian leader was asked Jan. 25 if his country felt pressure to act more aggressively on environmental issues. “When we think about the future generations and what kind of a world we are going to give them, then there is pressure,” he replied. “India is an independent country and there is no pressure on us from any country or any person.”

What Delhi’s air pollution says about India and climate change

Date: January 26, 2015 Source: The Washington Post

NEW DELHI –The thick winter haze that settles over Delhi – a nasty mix of smog, vehicle exhaust and smoke from cooking fires – abated somewhat when President Obama arrived in India this week for talks. A bit of rain came and cleared the air. Even so, the air quality index hovered around 200 when the president arrived at the viewing stand to watch India’s Republic Day Parade on Monday. That’s approaching what’s deemed a “very unhealthy” level of the microscopic 2.5 particulate matter, which causes respiratory disease and other ailments. The Americans were prepared. Delhi police had kept traffic to a minimum around the parade route, and the Embassy ordered 1,800 Swedish air purifiers in the weeks preceding the American delegations’ arrival. (It’s not clear whether any of those air filters actually made it into Obama’s special bullet-proof parade enclosure, as the Indian media had reported.) Bloomberg published a story Monday titled “Mr. President, World’s Worst Air is Taking 6 Hours Off Your Life,” which argued that Delhi’s toxic air was so harmful that it could shorten the president’s longevity. “I think in Delhi, I think particularly at this time of the year, the air quality deteriorates,” John Podesta, counselor to the president, said to reporters in Delhi on Sunday. “But I think we weren’t concerned about bringing the president here for these meetings.” The air in New Delhi is the worst in the world, according to a World Health Organization report last year. Environmentalists say that efforts to control it – such as a

switch to clean-burning natural gas for auto rickshaws – have made little long-term impact as the city has sprawled, eight coal-fired power plants chugged out more power and more than 7 million cars clogged the roads. The situation is hardly better in in other parts of the country. Earlier this year, a report by a Yale University research team showed that India ranked 174th of 178 countries in air quality, somewhere close to China and Pakistan.

On Sunday, the president and Prime Minister Narendra Modi announced that the two countries would work to battle pollution in India's cities by implementing the Environmental Protection Agency's international air quality forecasting system AIRNow. It's part of an overall climate deal that includes a pledge for "concrete progress" on a pact to phase out a class of widely used refrigerants called hydrofluorocarbons, and support for solar energy initiatives to help India reach its goal of expanding its solar energy capacity to 100 gigawatts by 2022, an amount equal to the energy of about 100 nuclear power plants.

Administration officials acknowledged that Modi-Obama did not produce a breakthrough like the deal with China on emissions last fall. But they said that it represented significant progress from a still-developing country that has long balked at agreeing to significant curbs on its emissions. They say the rapport that seemed to develop between Obama and Modi during this trip – Modi served Obama's tea, and Obama kidded him about being attacked by a crocodile – may go a long way in helping the United States achieve a strong a global climate agreement in Paris with India's help later this year.

"This signals that India sees the Paris agreement as a priority, and establishes a direct channel that could prove absolutely essential to delivering the final deal," said Elliot Diringer, vice president of the Center for Climate and Energy Solutions, a Washington environmental group.At a meeting with chief executives Monday, Modi called for "global action on renewable energy," saying the world "should take a lesson from past efforts to tackle hunger and many diseases."

However, other environmentalists expressed disappointment that the agreement between the two countries did not specifically target carbon emissions, especially as India doubles its coal production to try to meet unrelenting power needs. India is the third largest emitter of greenhouse gases, behind the United States and China. Raymond T. Pierrehumbert, a professor of geophysical sciences at the University of Chicago, pointed to Modi's somewhat short response to a reporter's question about whether he felt pressured to agree to a China-style climate deal with the United States.

"The sad thing for India is that while in rejecting a China-type deal, Modi said, 'There is no pressure on us from any country or any person, but there is pressure when we think about the future generations and what kind of world we want to give them,' " Pierrehumbert said. "In attempting to provide adequate energy, if India goes with coal to the extent in current plans, Modi will be leaving future generations in India — already one of the hottest populous countries — to suffer under oppressive warming so severe that, according to some *projections*, mammals (and that includes people) will not be able to survive outdoors," he said.

Britain's ethnic minorities breathing most polluted air

Date:27th January, 2015 Source: The Times of India

LONDON: Britain's ethnic minorities are breathing the most polluted air. A first of its kind scientific analysis has found a big difference in air pollution across communities in England, with deprived and ethnic minority areas the worst affected. Air pollution levels are linked to many forms of ill health, including higher risk of respiratory and cardiovascular diseases, especially for more vulnerable groups such as children and the elderly. Researchers at Imperial College London and the National Institute for Public Health and the Environment in the Netherlands examined data on two types of air pollution: particulate matter (PM10) and nitrogen dioxide (NO_2). They compared air pollution exposures for small areas in

England and the Netherlands with population characteristics including deprivation, ethnic makeup, and proportions of children and elderly people. The EU Ambient Air Quality Directive set limits of 40 micrograms per cubic metre (g/m3) at monitoring stations for both PM10 and NO2 pollution. Concentration averages across all neighbourhoods in England and all but two neighbourhoods in the Netherlands were within this limit for PM10, but 11% of neighbourhoods in England and nine per cent in the Netherlands exceeded the NO2 limit, accounting for an affected population of 5.4 million and 2.7 million respectively.

In England, the most deprived 20% of neighbourhoods had higher air pollution levels than the least deprived neighbourhoods - 1.5 g/m3 higher PM10 and 4.4 g/m3 NO2 after adjusting for other factors - but this was not the case in the Netherlands. The biggest differences in air pollution levels according to socioeconomic status were in London.

The worst air pollution levels were seen in ethnically diverse neighbourhoods, defined as those where more than 20% of the population are non-white. Even after allowing for the fact that some of these neighbourhoods are more deprived, in England, this difference was 3.0 g/m3 for PM10 and 10.1 g/m3 for NO2. In the Netherlands, differences were lower, with 1.1 g/m3 higher PM10 and 4.5 g/m3 NO2. Lead researcher Dr Daniela Fecht from the School of Public Health at Imperial College London, said "The study highlights the fact that inequalities in exposure to air pollution are mainly an urban problem, suggesting that measures to reduce environmental air pollution inequality should focus on cutting vehicle emissions in deprived urban neighbourhoods".

The reasons for the associations between ethnic minorities and air pollution are unclear. "England and the Netherlands have a long history of immigration. It's possible that immigrants settled in particular areas may tolerate poorer air quality for the benefits of living close to friends and family, even when their communities become less deprived," said Dr Fecht.

Morning drizzle spares Delhi air quality blushes

Date:27th January, 2015 Source: The Times of India

NEW DELHI: The air on Monday around India Gate was relatively clean, thanks to unexpected rain during the Republic Day parade. Even though the PM2.5 (fine, respirable particle) level was high between 6 and 6.30am—at about 200 micrograms per cubic metre, it had begun to fall by 9.30am, at 11am it was 107 micrograms—less than twice the Indian safe standard of 60 micrograms. Only a cloudy sky and the drizzle partially affected the experience.

Favourable meteorology thus helped the government avoid the embarrassment of severe air pollution during US President Barack Obama's visit with an assessment by Gufran Beig, project director, System of Air quality Weather Forecasting and Research, claiming the 24-hour average on 26 January was only at 80 micrograms per cubic metre. Delhi Pollution Control Committee's real time air quality monitoring, however, suggested that the levels, measured at the station closest to central Delhi, were just over 100 micrograms per cubic metre. Traffic volume, too, was low today.

Short-term exposure to pollution levels such as those in Delhi today cannot do significant harm to health, say experts, and so the US delegation may not be affected. But air pollution is considered an issue of international debate owing to its impact on the health of those who are consistently being exposed to very bad air. Experts, meanwhile, say air pollution this winter has been one of the worst seen so far. PM2.5 levels on some days in early December were as high as 400 micrograms per cubic metre, about six times the Indian standard, and 11 times the US safe standard of 35 micrograms per cubic metre. According to Global Burden of Disease's 2010 report, air pollution is the fifth largest killer in India. The report found that, in 2010, about 6,20,000 premature deaths occurred in India due to pollution-related

diseases. The World Health Organization urban air quality database last year showed Delhi to be having the highest PM2.5 levels among 1,600 global cities including Beijing.

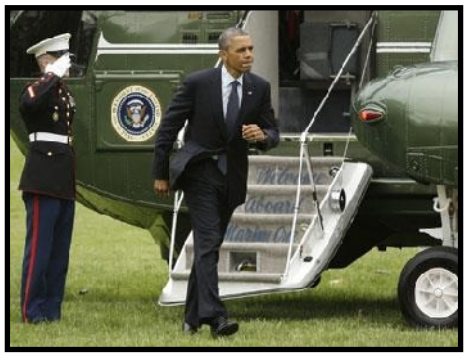
In fact, an indoor air purifier company even claimed in a statement on January 24 that the US Embassy in Delhi has purchased several air purifiers to tackle indoor air pollution. Last year Delhi and Beijing were embroiled in major debate about which city is more polluted.

Some Chinese cities have PM2.5 levels comparable to Delhi. Chinese authorities reportedly blocked air pollution data during the Asia-Pacific Economic Co-operation (Apec) summit in November last year which Obama and Vladimir Putin attended because the particulate matter levels were extremely high. In a joint statement with PM Narendra Modi, Obama said the US has agreed to provide data to track and reduce air pollution levels in India.

Even though the PM2.5 level was high between 6am and 6.30am—at about 200 micrograms per cubic metre—it fell by 9.30am. At 11am it was 107 micrograms— less than twice the Indian safe standard.

High pollution levels in Delhi may have cost Obama 6 hours of his life

Date: January 28, 2015 Source: First Post



India geared up and how for US President Barack Obama's arrival in New Delhi with no-fly zones and seven tier security rings. The city turned into a fortress with office buildings around Rajpath being shut because he would attend the Republic Day Parade. All this was done to protect the world's most powerful man from life threatening attacks, but if this Bloomberg report is anything to go by, Obama may have lost 6 hours from his life expectancy. That too because of the abysmal pollution levels in the national capital. The report says, "During Obama's three-day visit, PM2.5 levels in Delhi have averaged between 76 to 84 micrograms per cubic meter, according to data collected by India's Ministry of Earth Sciences."

Right before Obama landed in the city, Greenpeace India, citing the findings of its real-time check on the pollution levels in the capital, too had warned that Obama was likely to breathe "unhealthy and hazardous" air during his stay in Delhi.

Ahead of Obama's three-day state visit the NGO set out with an air-monitoring device called PDR 1500, to track pollution levels in six locations the president was expected to pass through.This device recorded particulate matter 2.5 levels at various locations, including Raj Ghat and Hyderabad House, that revealed unhealthy and hazardous quality of air, said a Greenpeace release.

Meanwhile Bloomberg quoted David Spiegelhalter, a statistician at the University of Cambridge, as saying that the PM2.5 levels recorded during Obama's visit could translate roughly into an estimated loss of 2 hours a day in life expectancy.

In December 2014 environment experts had demanded immediate pollution control action after researchers at Centre for Science and Environment (CSE) monitored people's level of exposure to pollution in the city and found the results to be posing a "serious risk to public health". Delhiites are "not safe" from polluted air even at home and workplaces, they had said.

Mr. Obama's trip to India leaves a clear deal on curbing emissions up in the air

Date: January 28, 2015 Source: The Washington Post

THE U.S.-India relationship has often seemed more attractive in theory than in practice. The world's two largest democracies share concerns about Chinese expansionism; throw in big economic potential and an active Indian immigrant population in the United States, and success seems guaranteed. Yet both sides have often felt disappointed in the results. So President Obama and Prime Minister Narendra Modi deserve credit for redoubling their efforts. In his second term, President George W. Bush made a strong effort to improve ties. It took Mr. Obama a while to pick up the baton, particularly as the previous Indian government flagged in energy. But with the energetic Mr. Modi in charge, Mr. Obama made his second state visit to New Delhi this week. There were some modest accomplishments — and, as usual, some hints of how much more might be done.

One obvious area of potential cooperation was suggested by the sooty air in and around the capital while Mr. Obama was in town for lavish Republic Day celebrations. In some very back-of-the-envelope calculations, Bloomberg News estimated that exposure to air pollution during Mr. Obama's short stay would shave six hours off his life. Unlike China, India doesn't go to great lengths to conceal the extent of its pollution problem from its people. But as in China, India's air pollution is harming health and contributing to climate change. The country recently became the third-largest emitter of greenhouse gases, behind China and the United States.

Mr. Obama and Mr. Modi made a bit of progress on this front. They agreed to proceed with an international treaty to phase out hydrofluorocarbons, short-lived but potent greenhouse gases in appliances such as refrigerators and air conditioning units. The leaders announced U.S. financing for Indian solar projects and new cooperation on air quality. They also trumpeted a "breakthrough" on a nuclear power deal Mr. Bush struck nearly a decade ago with a previous Indian government, ostensibly putting it back on track. However, it remains unclear whether the latest agreement will be enough to attract U.S. nuclear firms into the Indian market — or whether the Indian Parliament will have to act to convince them. U.S. companies reacted with caution. All of this falls far short of the clear emissions commitment and timetable that Mr. Obama struck with Chinese leaders last year. India has resisted calls to formally cap its carbon dioxide emissions, and that's not a sustainable position for the world's third-largest emitter. It needs to undertake a large-scale transformation of its chaotic energy sector. As new infrastructure goes in, it must be more sensitive to long-term environmental costs. But the small steps taken this week may lead to larger progress. As in the trade and security realms, the United States and India seem to have accepted that progress will be hard-won but worth the effort.

Experts bank on US air quality alert

Date:28th January, 2015 Source: The Times Of India

NEW DELHI: US and India haven't spelt out how their partnership on addressing air pollution will roll out, but scientists and advocacy groups are already excited about the possibilities. They say the partnership can help generate real-time, reliable air quality data for all cities, to begin with. Low-cost, innovative technology that can be deployed immediately in all major Indian cities can help clear the air, which is the main problem. Experts, like Sarath Guttikunda, associate research professor at the Desert Research Institute, Reno, suggested that establishing a national public health alert system on the lines of US Environment

Protection Agency (USEPA)'s AirNow programme, which issues real-time air quality index (AQI) data for 400 cities in US, will be beneficial.

The Central Pollution Control Board (CPCB), which has the mandate of monitoring air quality and issuing health alerts, has "failed miserably", according to scientists who are now resorting to other agencies to get reliable data. "They have no real-time data for most cities and do not follow any calibration protocol, which is why there is a huge difference in the results of air quality monitoring by different agencies," said a scientist.

MoEFCC had launched an air quality index (AQI) last year. But, according to some committee members who helped formulate the AQI, CPCB's real time monitoring system has too many glitches and doesn't have enough automatic monitoring stations —only 16 out of 246. Joshua Apte, assistant professor, University of Texas at Austin, who is running a unique research study in Delhi on monitoring exposure to air pollution in heavy traffic junctions, said he was excited that American scientists will have something to offer now. "The first step is just to expand the existing network of monitors. There are less than 50 real-time PM2.5 monitors that are reporting data to the web in India, as compared with nearly 2,000 in China. Other pollutants also need to be monitored," he said. This may also help point at the real sources by applying advanced 'source apportionment' techniques like 'vehicles versus biomass burning versus regional haze'. Anumita Roychowdhury of CSE's Clean Air programme said, "We need low cost technology to monitor air quality that can be immediately and easily deployed across cities. US is doing innovative things like roadside exposure monitoring. Moving as soon as possible to superior fuel norms —Euro 6 among others— should be done now." Since the collaboration will also cover the government's pet project of smart cities, she says it's time to set norms and guidelines to reduce dependence on personal vehicles.

COPD cases on rise due to pollution

Date: January 29, 2015 Source: The Times Of India

VISAKHAPATNAM: Instances of chronic respiratory illnesses such as COPD (Chronic Obstructive Pulmonary Disorder) are on the rise in key AP cities, exacerbated mainly by air pollution and aided by cold weather, early morning smog and the habit of smoking.

Medical experts point out that COPD cases are no longer just restricted to the elderly but are also being detected even in younger age groups and with wide scale industrialisation taking place in cities like Visakhapatnam and Vijayawada, such cases may go up further in the coming days.

According to doctors, the main symptoms of COPD are continuous cough with sputum and breathlessness. In a patient suffering from COPD, diffusion of carbon dioxide and oxygen in the blood do not take place properly. As a result, adequate oxygen doesn't reach the blood through lungs and more amount of carbon dioxide is retained in the body, causing difficulty in breathing. A chest x-ray and pulmonary function test can reveal the progression of the disease. Dr M Ravindranath, pulmonologist from Andhra Hospital, Vijayawada, said, "Two-three years ago, only 20-25% of the total patients suffering from various chest ailments had COPD and it was mainly in the elderly population. But nowadays, their number has gone up to 30-35% with even those in their 40s and 50s suffering from COPD mainly due to smoking and increase in air-pollution. Nowadays, out of 10 patients, we see at least 3-4 suffering from COPD." Agreeing, Dr Sambasiva Rao, medical superintendent of Government Chest Hospital, Visakhapatnam, said that cases of chronic respiratory diseases such as asthma and COPD have gone up due to increase in pollution levels as well as the presence of smog in the winter season. "We have been getting more cases of COPD due to the cold weather and pollution," he averred. What is also troublesome is the lack of awareness about non-invasive ventilation (NIV) treatment for COPD despite the fact that it reduces respiratory distress and risk of death considerably, point out doctors. "A patient in moderate or advanced stages of COPD

should be treated with an NIV machine, which assists in decreasing the carbon dioxide level in the blood and thus increases the positive pressure in the lungs, enabling the patients to breathe normally," added Dr Ravindranath. Prevention of COPD:

Stop smoking, Avoid staying in polluted environment, Adequate nutrition, Regular cardiac follow-up, Perform right breathing techniques through yoga and pranayama.

Centre wants to restrict car use as air pollution hits worrying levels

Date: January 29, 2015 Source: Mail Online India

With air pollution rising to alarming levels, especially in the National capital, the Environment Ministry has urged the Supreme Court to ask the Delhi government to consider drastic steps, which includes the plying of private cars only on alternate days and a complete ban on "visible" smoke-emitting vehicles. Other suggestions made by the ministry were making public transport free, and making the wearing of masks compulsory on highly polluted days. These suggestions were made in an affidavit filed before the court, which is monitoring various measures being taken to reduce pollution. "All these are crucial aspects in which the views of government of Delhi and Health Ministry may be sought", the ministry told the court. The report said the major source of air pollution in the Capital is dust particles and not vehicular emissions. "Road dust emerged as the most prominent source with contribution in the range of 14.5 per cent to 29 per cent, whereas the contribution of vehicles was in the range of 8.7 per cent to 20.5 per cent," it said. The affidavit came in response to various suggestions mooted by the Central Pollution Control Board and the Environment pollution (Prevention and Control) Authority in a report submitted to the Apex court in November. The panels said pollution was the fifth-biggest killer in India after high blood pressure, indoor air pollution from cooking fuels, tobacco smoking and poor nutrition.

As per the EPCA report, residents of Delhi and Ghaziabad in Uttar Pradesh have more reasons to worry as the two are among the five critically polluted cities.

Other measures suggested also include the closure of all schools and a ban on plying of private cars (only public transport to be allowed), and complete prohibition on the entry of commercial vehicles on days air pollution is very severe and toxic for human health.

How China's Filthy Air Is Screwing With Our Weather

Date: 30th January, 2015 Source: Mother Jones

As the snow began to fall earlier this week in the lead up to the season's first major blizzard, New York Governor Andrew Cuomo told reporters that the Northeast was witnessing "a pattern of extreme weather that we've never seen before." Climate change, Cuomo argues, is fueling bigger, badder weather events like this one—and like Hurricane Sandy.

While the science that links specific snowstorms to global warming is profoundly difficult to calculate, the Intergovernmental Panel on Climate Change says it's "very likely"—defined as greater than 90 percent probability—that "extreme precipitation events will become more intense and frequent" in North America as

the world warms. In New York City, actual snow days have decreased, but bigger blizzards have become more common, dumping more snow each time. Mashable reported that all of New York City's top 10 snowfalls have occurred in the past 15 years. Scientists can trace the cause to the enormous amount of energy we're pumping into the oceans. Kevin Trenberth, a senior scientist at the National Center for Atmospheric Research, told Wired this week that "the oceans are warmer, and the air above them is more moist"—giving storms more energy to unleash more precipitation. In short, the blizzard dubbed Juno was being fueled in part by the ocean's excess of climate change-related heat. But climate change may not be the only way that human activity is making storms worse. In an emerging body of work, NASA scientists have identified a surprising contributor to American storms and cold snaps: Asia's air pollution. Over the past few years, a team at NASA's Jet Propulsion Laboratory and the California Institute of Technology has found that aerosols—or airborne particles—emitted from the cities fueling Asia's booming economies are making storm activity stronger in the Northwest Pacific Ocean. These storms wreak havoc on the polar jet stream, a major driver of North America's weather. The result: US winters with heavier snowfall and more intense cold periods.

Pollution billowing from Asia's big cities, they found, is essentially "seeding" the clouds with sulfur, carbon grit, and metals. This leads to thicker, taller, and more energetic clouds, with heavier precipitation. These so-called "extratropical" cyclones in the Northwest Pacific have become about 10 percent stronger over the last 30 years, the scientists say.

Chinese cities, for example, are so toxic that 90 percent of them fail to meet the country's own pollution standards. But it's not just China. In terms of air quality, 13 of the 20 most polluted cities in the world are in India. And thirty-one of the world's 50 most polluted cities are found in China and Southeast Asia (including India), according to the World Health Organization. The NASA animation above shows how these aerosol emissions moved around the world, from September 1, 2006, to April 10, 2007. I've included two versions of it. The first shows the Earth as a globe, the second shows the planet laid out flat. Also seen in the video are locations of wildfires, indicated by red and yellow dots. At the start, fires burn over South America and Africa, emitting black carbon, while dust from the Sahara moves westwards, getting sucked into two Atlantic cyclones. Later, in February, fires burning in Thailand and Southeast Asia mix with sulfates from industry in China and are eventually pulled eastward into cyclones that cross the Pacific and reach North America. The work raises questions about proposals to "geoengineer" the globe by pumping aerosols into the atmosphere, which some argue could reduce the Earth's temperature by partially blocking out the sun. The NASA researchers found that sulfates are the most effective type of aerosol for deepening extratropical cyclones, which means that using them to fight global warming could bring about more stormy winter weather around the world.

There's some hope that China is attempting to stabilize and, eventually, curb its pollution through new emissions standards that would cut the level of dangerous particles, including sulfates. There are also signs that China's coal boom—the source of most of the country's air pollution—is finally slowing down. A new analysis released this week by Greenpeace showed that for the first time this century, China's coal consumption fell in 2014.

But India is another story. That country, which has the fifth-largest reserves of coal on Earth, is desperate to provide power to its millions of impoverished citizens. Sixty percent of the India's power currently comes from coal, and despite Prime Minister Narendra Modi's promises to ramp up solar energy, he is also planning to double India's coal production to more than 1 billion tons annually.

So stock up on non-perishable grocery items. Looks like those blizzards are only going to increase in size.

Air Pollution Hits Crops More Than Climate Change

Date: 30th January, 2015 Source: Asian Scientist

AsianScientist (Jan. 30, 2015) - By Sandhya Sekar - Atmospheric pollutants may impact India's major crops like wheat and rice more than temperature rise, says a new study based on a 'regression model' that predicts future events with information on past or present events. The study by Jennifer Burney and V. Ramanathan, scientists at the University of California, project that a one degree centigrade rise in temperature could lead to a crop decline of four percent for wheat and five percent for rice. But losses from pollution could be greater. "For context, the yield loss for wheat attributable to pollutants alone in 2010 corresponds to over 24 million tons of wheat: around four times India's wheat imports before the 2007—2008 food price crisis and a value greater than $5 billion," the authors write in a paper on the study published November in Proceedings of the National Academy of Sciences. Most pollutants impact temperature by absorbing incoming radiation from the sun and reflected heat from the earth. Black carbon aerosols and ozone are of special concern as they affect crops directly—black carbon changes the amount of radiation reaching the surface while ozone is toxic to plants. In 2010, wheat yields were 36 percent lower and the models show that 90 percent of that change was due to the pollutants. The impact was most drastic in the state of Uttaranchal and Uttar Pradesh. Wheat yields in Uttar Pradesh were 50 percent lower than they would have been without the current climate and pollutant trends with two-thirds of the decrease attributable to pollutant levels. In the case of rice, 15 percent of yield decrease in the Gangetic plains could be attributed to pollutants. The Gangetic plains seem to accumulate surface level ozone and aerosols before the monsoons. "Previous studies have shown that wheat is more sensitive to ozone than rice," Burney tells SciDev.Net. "Also, the dry season has more pollutants." "I am pretty sure, based on other evidence, that yield declines due to pollution and warming are real, but I think that they are unlikely to be as large as the headline results in this paper," says E Somanathan, professor at the Indian Statistical Institute, New Delhi. "Whether we believe the estimates of yield losses depends on whether we believe the regression model. Here, I am sceptical." The authors acknowledge limitations in the study, but insist that ozone and black carbon have had "significant impact on crop yields in India in recent decades".

Asthma: The Pollution Contagion

Date:31st January, 2015 Source: Indian Express

Asthma is a complex and chronic inflammatory disease of the lower airways with patients experiencing recurrent wheezing, breathlessness, tightness in the chest at night or early in the morning. It affects people regardless of age, and in some cases can prove to be fatal. Approximately 300 million people are asthma patients worldwide. According to the Indian Council of Medical Research, the number of asthmatics in the country is approximately 30 million. Asthma affects 3 to 38 per cent of children and 2 to 12 per cent of adults. The Global Initiative for Asthma's 'Global Strategy for Asthma Management and Prevention' records that asthma claims 250,000 lives annually and the majority of deaths occur in low- and middle-income countries, where symptoms are more severe. Experts say this is because of incorrect diagnoses, poor access to healthcare, costly treatment, exposure to environmental allergens, and genetic susceptibility.

Medical researchers use the socio-economic status (SES) to determine health and nutritional status, mortality

and morbidity. The accessibility, affordability, acceptability and utilisation of health facilities are directly related to SES. The Asthma Epidemiology Study Group discovered that the overall prevalence of the allergy in India is 2.38 per cent—2.28 per cent in Chandigarh, 1.69 per cent in Delhi, 2.05 per cent in Kanpur and 3.47 per cent in Bengaluru. According to a research paper 'General practitioners' knowledge of childhood asthma in Delhi, India', the diagnosis and treatment of asthma is "a sensitive issue". Medical investigation has been limited in India. Most such reports reveal "marked deficiencies in knowledge and inadequacies in treatment practices of asthma among general practitioners".

In the past decade, the number of children affected with various kinds of nasal blockage and sneezing has gone up. The proportion of Indian schoolchildren suffering from bronchial asthma had increased to more than double in the last 10 years and reached the highest-level ever. The Indian Journal of Community Medicine reports that while the rate of bronchial asthma was low (up to 3.3 per cent) in children surveyed in Lucknow, Ludhiana and Punjab, in Delhi it was 11.6 per cent. Youth and middle-aged Indians are prone to chest and lung infections. The most affected are patients above 40 years of age. A 2006 study conducted in a rural block of Haryana by the Department of Community Medicine of Pt B D Sharma PGIMS, Rohtak, records that smoke from tobacco or fuels become major asthma irritants. The report says, "Children (0-5 years) represent the largest subgroup of the population susceptible to the adverse health effects of air pollution. Air pollution causes irritation or inflammation that's more likely to obstruct narrower airways. Further more, exposure to a pollutant triggers an asthma attack due to the sensitivity of a child's developing respiratory system. In India, paediatricians face a common problem of bronchial asthma among children. Globally, many studies have been conducted but no epidemiological study defined the magnitude of the problem of asthma among children." The study shows that children of low SES families are the worst affected by indoor pollution. This causes a large rate of absence from school, affects families which require their assistance at work, and decreases the quality of their life. Air pollution is one of the primary causes of bronchial asthma cases and asthma aggravation anywhere in the world. In India, the effective treatment of bronchial asthma in children is dependent on by "cultural beliefs, poor socio-economic condition families, and use of alternate medicine". Reduction in the indoor smoke causes a significant decrease in bronchial asthma in children. Asthma is a complex and chronic inflammatory disease of the lower airways with patients experiencing recurrent wheezing, breathlessness, tightness in the chest at night or early in the morning. It affects people regardless of age, and in some cases can prove to be fatal. Approximately 300 million people are asthma patients worldwide. According to the Indian Council of Medical Research, the number of asthmatics in the country is approximately 30 million. Asthma affects 3 to 38 per cent of children and 2 to 12 per cent of adults. The Global Initiative for Asthma's 'Global Strategy for Asthma Management and Prevention' records that asthma claims 250,000 lives annually and the majority of deaths occur in low- and middle-income countries, where symptoms are more severe. Experts say this is because of incorrect diagnoses, poor access to healthcare, costly treatment, exposure to environmental allergens, and genetic susceptibility.Medical researchers use the socio-economic status (SES) to determine health and nutritional status, mortality and morbidity. The accessibility, affordability, acceptability and utilisation of health facilities are directly related to SES. The Asthma Epidemiology Study Group discovered that the overall prevalence of the allergy in India is 2.38 per cent—2.28 per cent in Chandigarh, 1.69 per cent in Delhi, 2.05 per cent in Kanpur and 3.47 per cent in Bengaluru. According to a research paper 'General practitioners' knowledge of childhood asthma in Delhi, India', the diagnosis and treatment of asthma is "a sensitive issue". Medical investigation has been limited in India. Most such reports reveal "marked deficiencies in knowledge and inadequacies in treatment practices of asthma among general practitioners".

FEBRUARY 2015

Delhi elections: Lack of importance given to air pollution appalling

Date: 01st February, 2015 Source: Hindustan Times

The election to the 70-member Delhi assembly is round the corner and the three main parties — the BJP, the Congress and AAP — are pulling out all the stops to woo voters.The last few weeks have been interesting yet chaotic: Defections, surprising choice of candidates by parties, trading of charges between candidates and a slew of promises ranging from free water to regularisation of illegal colonies. While the Congress and AAP have released their manifestos, the BJP is yet to release its, though the latter has cleverly said that it will not release a manifesto but a 'vision document'. Such delays in releasing manifestos only defeat the purpose of the exercise: The people have been left with little time for a debate on the merits or demerits of the promises that political parties make.

In the din many important issues have been overlooked, and one of the most important among them is the issue of air pollution in Delhi. In fact, none of the three parties spoke extensively on it or came up with solutions to improve the air quality. A study released by the World Health Organization (WHO) in 2014 had found New Delhi to have the dirtiest air among the 1,600 cities it surveyed, with an annual average of 153 micrograms of small particulates, known as PM2.5, per cubic metre. The issue again came up for discussion just before US President Barack Obama's visit when a study conducted by Greenpeace India at six locations, including Raj Ghat and Hyderabad House, which Mr Obama visited, revealed that the air quality was 'unhealthy and hazardous'. It also said that Delhi residents had been breathing extremely poor air this winter with PM2.5 averages peaking at 320 micrograms/cubic metre, which is six times the Indian safety limits and 14 times that of the WHO's. A report in Washington Post said that the US embassy ordered 1,800 air purifiers though it is not clear whether any of those air filters made it into Mr Obama's bullet-proof enclosure during the Republic Day Parade. Could anything have been more embarrassing than this? The Congress mentions air pollution in its manifesto and promises to bring it down, but does not give any concrete proposals. AAP's manifesto is mum on the issue. Prime Minister Narendra Modi and Congress president Sonia Gandhi hit the campaign trail on Sunday but neither spoke on this important issue. The effects of pollution on health do not need reiteration. Yet what is appalling is the lack of importance that is being given to it by the parties in this election. The key reason for air pollution in Delhi is the spurt in the number of vehicles and parties will need to tackle the auto lobby, which wields enormous clout, if it wants to clean the air. As things stand today, no party seems to be keen to bell the cat; hence the chances that we can breathe a little easier are negligible.

Cellphones fueling air pollution, global warming

Date: February 01, 2015 Source: Hindustan Times

You may not know it, but every time you use your cellphone, you are contributing to global warming. India's telecom network — the second-largest in the world, after the United States — is largely made up of cellphone connections and is releasing substantial amounts of harmful pollutants and greenhouse gases into the atmosphere. So say the first-ever emission estimates from this sector, released jointly by the Germany-based Institute of Energy and Climate Research – Troposphere and the Indian Institute of Tropical Meteorology (IITM), Pune. The study was published in the January issue of Atmospheric Environment, an international peer-reviewed journal.

Here's how it works. With erratic power supply across the country, base transceiver stations — the towers that facilitate wireless communication — are run partly on diesel generators, a source of highly toxic pollutants. These direct pollutants — and the pollution emitted by coal-fired power plants while generating power for the towers — are together spewing tonnes of particulate matter, nitrogen oxide, carbon dioxide,

sulphur dioxide, carbon monoxide, black carbon and hydrocarbons into the atmosphere every year. With the number of wireless phones in use spiralling upwards from 261.8 million in 2008 to 893.6 million in 2011 the number of wireless telecom towers in India has gone from 1.78 lakh to 8.60 lakh. And diesel consumption at these towers has shot up from 2 billion litres in 2007 to an estimated 7.5 billion litres a year in 2011. As a result, the study found, emissions from the generation of electricity consumed by wireless networks saw a nine-fold increase between 2008 and 2011.

"These emissions are directly linked to air quality pollution and associated health impacts," said Saroj Kumar Sahu, lead investigator at the Institute of Energy and Climate Research – Troposphere. "Our major concern is that these emissions are affecting the relatively clean atmosphere in rural India, and if no remedial measures are taken, future emissions could almost double by 2020." As more people buy wireless phones, researchers estimate that 3 lakh new towers will be needed by 2020, leading to further increases in harmful emissions.

If the impact on air quality is to be lessened, they say, the diesel generators will need to be replaced with renewable energy sources or at least more power supply from the grid."Investing in low-emission technology could therefore constitute an important element for improving air quality in rural areas, where most of the future telecom growth is expected," said Gufran Beig of IITM. The industry has been taking steps to reduce power consumption, says Rajan Mathews, director general of the Cellular Operators Association of India. "These measures include improved electronic equipment, using solar energy, running towers without air-conditioning and replacing old batteries with energy-efficient ones."

Delhi's polluted air takes a toll: How bad the situation is for asthmatic patients

Date:01st February, 2015 Source: The Economic Times

Delhi is now considered the most polluted city on earth. The lack of clean air has made the Capital more prone to illnesses and according to reports even forced officials who planned US president Barack Obama's visit to Delhi to cut down on his exposure outdoors. The sudden rise in air pollution levels has made life difficult for most but has affected one particular section more than others. These are the children and the elderly who suffer from asthma. ET Magazine asked Dr Vikram Jaggi of the Asthma Chest & Allergy Centre to offer his take on how bad the situation is for asthmatic patients in Delhi and to offer representative case studies of people who suffer on account of the pollution (see Pounded by Pollution). Here are the doctor's observations: The quality of the air in general and the levels of air pollution in particular affect the lungs of the people who breathe this air. Even generally healthy individuals are affected but the most badly hit are the very young and the very old asthma patients.

Obama visit: US Embassy purchased over 1800 purifiers to tackle pollution in Delhi

Date: February 02, 2015 Source: DNA

Delhi's increasing air pollution issues led to the US Embassy to purchase over 1800 air purifiers prior to US President Barack Obama's visit to India this year. The purifiers were installed in the Embassy. Blueair, the company that supplied the air purifiers, confirmed the purchase by the Embassy. The US regularly keeps a check on the pollution levels in the embassy buildings and makes a daily note of the high levels of pollution in the city. Around Obama's visit, the Air Quality Index recorded a reading of 222. Pollution at this level can cause serious heart or lung disease and a significant increase in

respiratory effects in the general population, according to the Environmental Protection Agency. Keeping in mind this and the increasing cases of swine flu deaths, the US Embassy decided to purchase air purifiers for the staff visiting India.

Taking Action on Air Pollution Will Save Lives

Date: February 03, 2015 Source: The Moscow Times

Today, on World Cancer Day, I am thinking of all those who are affected by cancer — people who are struggling with the disease, as well as their families and friends. In recent years I have been personally affected, as cancer struck members of my close family and some of my best friends. Cancer is a terrible disease, causing millions of deaths worldwide every year. We can do more to prevent people from getting sick. One way is to increase our efforts to reduce the amount of pollutants in the air we breathe. In 2013, the International Agency for Research on Cancer classified outdoor air pollution as a cause of cancer. Data from 2010 shows that 223,000 deaths from lung cancer worldwide were attributable to air pollution. Air pollution is thus a leading environmental cause of cancer deaths. This is highly disturbing.

Beyond cancer, recent research shows that air pollution is now by far the world's largest single environmental health risk. According to the World Health Organization, about 7 million people in the world died prematurely as a result of air pollution exposure in 2012. Some 600,000 alone in the European region. This makes it more deadly than malaria, tuberculosis and AIDS combined.

The majority of air pollutant-related deaths occur in developing countries. The western Pacific and Southeast Asian regions bear most of the burden with 2.8 and 2.3 million deaths per year, respectively. According to WHO studies, exposure to fine particulate matter — a major component of air pollution — in Asia is highest in countries like Pakistan, Afghanistan, Bangladesh, Mongolia, India, Nepal and China.

We must therefore take renewed action to improve air quality. The major sources of air pollution are well known: power stations and industrial installations emit sulphur dioxide and heavy metals; traffic is a source of nitrogen oxides; ammonia emissions from agriculture contribute to the formation of particulate matter. Likewise, wood-burning stoves in individual homes, if not equipped with appropriate filters, are also a major source of particulate matter and other pollutants. Reducing these emissions is possible.
I remember the debate about air pollution in the 1970s and 1980s vividly. The forests and lakes in northern Europe were dying from acid rain and stirred heated discussions. Realizing that air pollution does not halt at national borders but can affect communities and citizens thousands of kilometers away, the countries in Europe and North America decided to cooperate to solve the problem.

In 1979, 32 countries signed the Convention on Long-range Transboundary Air Pollution under the auspices of the United Nations Economic Commission for Europe (UNECE). This was the first legally-binding international treaty in the world imposing ceilings on the emission of air pollutants. Over the last 30 years, additional countries have joined, bringing the number of parties to 51 to date. The number of substances covered by the convention and its protocols has also been gradually extended, notably to ground-level ozone, persistent organic pollutants, heavy metals and particulate matter.

The result of this collective effort has been spectacular: emissions of a series of harmful substances have

been reduced by 40 to 70 percent since 1990 in Europe. In North America, reductions of 30 to 40 percent have been registered. The air we breathe today in Europe and North America is much cleaner than it was 30 years ago.

The Russian Federation, a party to the convention and three of its early protocols, has, over the years, managed to bring sulphur dioxide and nitrogen oxide emissions down. However, the fact that more needs to be done to reduce emissions has already been recognized by the Russian government. In July 2014, a new law on best available techniques was adopted, which will help reduce emissions, especially from heavy industries. I welcome this new legislation and I urge the Russian Federation to ratify the other five protocols to the convention — to which it is not yet a party — in particular the three most recent on heavy metals, Persistent Organic Pollutants (POPs) and the Gothenburg Protocol. The latter is the first international treaty in the world to include emission reduction targets for particulate matter.

But we must do more and we must take global action. Reducing air pollution must be a high priority on our health agenda to prevent cancer and other diseases. This is why air quality has been selected as one of the two main themes at the next Environment for Europe ministerial conference in Georgia in 2016. If governments renew their firm commitment to implement the legally binding emission reduction targets, and set further targets, they will send a strong message to the world and help save tens of thousands of lives. To respond to this challenge, we must share experiences and inspire global action.

Countries all over the world will need to take drastic, and sometimes unpopular, measures to significantly curb the emission of air pollutants across all sectors. This will require the active engagement of all industries, and also behavioral change by each and every one of us. But we have proven that we can get cleaner air, we can help to prevent cancer, if we work together.

The Air Pollution That's Choking Asia

Date: February 03, 2015 Source: Health AIM

The World Health Organization has reported that over 7 million people dies from air pollution every year. As the organization has reported, the leading cause of deaths were: stroke and heart disease, COPD (chronic obstructive pulmonary disease, lung cancer, and respiratory infections among children. Developing countries are amongst the top contributors to air pollution. China has been on top of the list of countries that most contributed to air pollution worldwide. China's environmental ministry just recently reported that out of the seven cities that are topmost contributors in the country's air pollution, they have a new topnotcher in the list, and this city is Baoding, last 2014, it was Xingtai. China is an industrial country. Their economy thrives of industrial plants, adding to air pollution. Though their air pollution management implemented policies and did some effects on the environment, it is still not enough to totally eradicate air pollution in the country. With billions of people living in China, WHO's numbers of 7 million might be 8 million in the years to come, or worst, more than that.

Air pollution carries numerous substances , and most of them have adverse effects on humans and the ecosystem. Some of the substance found were sulfur oxides, nitrogen oxides, carbon monoxide, free radicals, volatile organic compounds, and CFC's (chlorofluorocarbons) – which is harmful to the ozone layer. There is an ongoing talk on global warming, and advocates of anti-global warming have been persistent that China

should have new regulations on factories, especially traditional ones , to make their production environment friendly.

The University of Hong Kong's School of Public Health reported that 3,000 premature deaths happened last 2013, all caused by air pollution. the same report has been released by the Center for Science and Environment in India. Premature deaths have increased to 620, 000 caused by air pollution. WHO also reported, last May 2014, that New Delhi had the worst air of 1,600 cities surveyed worldwide, increasing deaths caused by stroke, cancers, and lung diseases. This is not happening in China and India alone. Other Southeast Asian countries have been suffering from the effects of air pollution. Though the numbers of deaths caused by air pollution may be higher in record from China and India, it is because of the number in population. Percentage-wise, the deaths are almost the same. Advocates who wants to eradicate or solve air pollution shave been asking for new policies in controlling emissions from vehicles and production plants , that are top contributors of the haze in these developing countries. Until such a time that these policies are fully studied and implemented properly – taking into consideration the political and socio-economic factors that may affect the proper implementation of these policies – people will continue to suffer the adverse effects of air pollution. Take note: graft and corruption is rampant in third world countries. Expect a long process, I am hoping that these policies would not be too late

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Household pollution – the killer behind your doors

Date: February 04, 2015 Source: The Times of India

Pollution, of any form, has always been a major concern for our society. Thanks to the list of mushrooming social organisation working for the conservation of the environment, we are now more aware about the various types of pollution and the effect on the society. But, how many of you really think that this pollution is present outside your doors, only?

For those of you who think staying indoor can save you from any form of pollution, let me share some insight on one of the lesser known yet equally harmful kind of pollution. I am talking about Household pollution. Yes, you read that right! We humans are not safe from the clutches of this devil in disguise even when we sit comfortably at home. To give you a better perspective on what I am referring to, let me site an excerpt from the WHO website.

There is consistent evidence that exposure to household air pollution can lead to acute lower respiratory infections in children under five, and ischaemic heart disease, stroke, chronic obstructive pulmonary disease and lung cancer in adults. In 2012, household air pollution was responsible for 7.7% of the global mortality. So what is this hullabaloo about Household pollution?

Well to make it simple, let's put it this say way; several countries all over the world are fast moving to an age of urbanization blessed with bio gas connections, modular kitchens and designer homes but there are still people (almost three billion) worldwide who continue to depend on solid fuels, including biomass fuels (wood, dung, agricultural residues) and coal, for their energy needs.

Such inefficient cooking and heating practices produce high levels of household (indoor) air pollution which includes a range of health damaging pollutants such as fine particles and carbon monoxide. Being an agricultural country, India has almost 70% of its total population dwelling in rural areas. And it's not hard to picture a typical country side home with a rural stove or a chullah, as we call it, which using biomass cakes as cooking fuel.

The biomass cakes when burnt, produces smoke and numerous indoor air pollutants at concentrations five times higher than coal! Now, you can imagine the health risk it causes to people living in rural India.

But that's not all. Before the urban dwellers, rejoice for being free from biomass cakes, coal or wood as fuel consumption, let me divulge details of other indoor air pollutants. I assume, all of us must have noticed some black- and dark-green slimy patches carrying a powerful musty odor below the kitchen sink that we so often pass over as nothing important. Well, those slimy patches are called Stachybotrys chartarum, or black mold, a fungus that can produce toxins and has been linked to illness and severe allergies. And what causes that is a large amount of moisture in an area. So, how can you deal with that? Simple. Regular use of kitchen exhaust ventilation systems can help control excess moisture in the home, hence reducing the risk of mold formation.A good exhaust system is also very important in every household to cut the risk of other harmful toxins arising out of cooking fuels. So, if you care about those lovely ladies, be it your mum, wife, sister, daughter or anybody for that matter who breathes in a kitchen to dish out delicious delicacies for you, you must assure they have proper ventilation.

And, can you avoid these contaminants in your daily life?

- Detergents, furniture polish, camphor, paints, stain removers, and even cosmetics
- Insecticides, pesticides, and fertilizers that are used for maintaining one's lawn and garden. Their entry into the house could occur through air movement or adsorption by shoes and toys, which are then brought inside the house
-Volatile Organic Compounds (VOCs). Sources include paint strippers and other solvents, wood preservatives, air fresheners, automotive products. Even your dry cleaned clothing
- Rug cleaners, and wet cell batteries
- New flooring, basement remodeling, hanging new cabinets, removing asbestos sheets, scraping off old paint (which might contain lead), and the removal or application of wallpaper
- The above list is long but not exhaustive and I am sure you know what that means. Indoor pollution surrounds us all, no matter which walk of life we come from. Now, I don't mean to scare you, but you must know some of the potential health effects of these indoor pollutants.

For e.g, furniture polishes which Irritates skin, eyes, throat, nose and lungs. Getting your house texture painted, consider this. Paints - irritates skin, eyes, nose and throat can even cause respiratory system damage. And what about the toilet bowl cleaner? That's toxic in nature; burns skin; causes digestive and respiratory system damage. And do you know Air fresheners & deodorizers can irritates eyes, nose, throat, skin, and damage nervous, digestive & respiratory system

Adopt alternatives to avoid exposure and go green!

There's plenty of green alternatives available for us that can helps us make our homes toxin free. Thanks to media, there's been plenty of buzz about nature friendly products and I already see the sudden inclination of people of all ages towards 'all things green'. What I suggest personally, is that we should inform and encourage everyone specially people from lower income houses like your maid or the driver, to start using proper gas connections, ventilation system and other natural options to save their lives from the risk of toxins and other carcinogenic chemicals. By Dr Arvind Kumar. Senior Consultant: General, Laparoscopic, Thoracic, Thoracoscopic and Robotic Surgeon

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Every Bengalurean smokes 6 cigarettes a day!

Date: 05th February, 2015 Source: The Times of India

BENGALURU: Air pollution is emerging as a grave concern. Putting it simply, the extent of ultra-fine particulate matter in the air in New Delhi, for instance, is equivalent to the harm caused to an individual smoking 20 cigarettes a day. The corresponding figure is less puffed up in Bengaluru: it is akin to every Bengalurean smoking six cigarettes daily.

This revelation was made by experts quoting data from UNEP (United Nations Environment Programme) at the 6th GRIHA Regional Conference hosted by TERI in their city campus on Wednesday.According to UNEP statistics, in Delhi, the ultra-fine particulate (less than 2.5 micrometres in diameter) presence in the air stood at an annual average of 153 microgram per cubic metre in 2012. Bengaluru's annual average was put at 45. Particulate matter present in the air is a composition of dust, fine and ultra-fine particles. Pointing out that the data pertained to 2012, experts said the situation could have only deteriorated further in two years.

According to the UNEP, between 2005 and 2010, death due to pollution rose by 4% worldwide, by 5% in China and 12% in India. Worldwide, 3.5 million people die each year from outdoor air pollution. A high 1.3 million Indians die every year of poor indoor air quality, the second biggest killer after high blood pressure. Outdoor air is the biggest indoor air pollution source, if it is not properly filtered and purified before being let indoors.Other indoor air pollution sources include tobacco smoking, copy machines and printers, cleaning products, mould growth, paints, solvents and other construction materials, new furniture and scents (perfumes, incense sticks) among others.

Among the sources of outdoor air pollution are vehicle emissions, coal power plants, chullahs and other open fire cooking, burning of waste, industrial emissions and open sewage systems. "We have zero immunity against particulate pollution. Contrary to popular belief, we should not sterilize our homes, offices and schools from all bacteria, as that reduces our immunity. Air cleaners that sterilize the air (including UV-light) or ozonisers (ozone is a lung irritant) should not be used in homes, schools and offices. They are only required in special areas like operating theatres," said Maija Virta, MD of a firm that focuses on sustainable buildings and system solutions.

On offer: Cost-effective measures to rid India of air pollution

Date: 05th February, 2015 Source: Hindustan Times

Delhi has the dubious distinction of being the world's most polluted city. In fact, the entire country, including the rural areas, is heavily polluted as anyone who has taken a flight in India knows. The fog that engulfs north India in winter is largely a consequence of the smoke particles in the air on which water condenses easily. Why have matters been allowed to reach this state? One reason is that people do not realise how cheap it is to get rid of much of the air pollution that plagues us.

Delhi HC wants city's dirty air cleaned somehow by somebody in animals-poisoned-by-pollution-petition

Date: February 05, 2015 Source: Legally India

Taking note of a report that said Delhi was the most polluted city in the world, the Delhi high court Wednesday said if nobody was looking into the issue, it will start giving directions and fix responsibility on the authorities. A division bench of Justice BD Ahmed and Justice Sanjeev Sachdeva asked the city government to check whether the Supreme Court was seized of the issue dealing with air pollution in the capital. "I came across a newspaper report saying that Delhi is the most polluted of all cities in the world. Which are the authorities concerned that is responsible for dealing with air pollution?" the bench asked. "Look at the ambient air pollution in Delhi. Is there any matter in the Supreme Court dealing with air pollution in Delhi?" the bench said, and asked the government to inform it about the status of the case. "I

had a talk with a paediatrician. He said 50 percent of children in Delhi are suffering from respiratory problems. It's not acceptable. If nobody is looking into the issue, it's high time we act into it," the bench said.The air in Delhi was the most polluted in the world, according to a report by the World Health Organization (WHO). The report contained results of outdoor air pollution monitored in almost 1,600 cities in 91 countries.

The bench also asked the Delhi Development Authority to explore the possibility of converting a polluted artificial lake and 200 acres of surrounding land behind the Tughlaqabad Fort into a biodiversity park on the lines of the Yamuna biodiversity park.

The bench directed the Delhi Jal Board and the Delhi Pollution Control Committee to take instructions on maintenance of the cleanliness of water in the lake within permissible limits.

The court sought a report from the authorities about the minutes of the meeting held Jan 29 as per the court's earlier order to chalk out remedial measures to clean the contaminated water in the Tughlakabad Ridge area.

The court was hearing a petition filed by Tughlakabad resident Manoj Kumar, who said there was a forest area in Tughlakabad and birds and animals were dying because of poisonous and polluted water released from illegal factories in the area.

The discharge has created an "artificial lake" and the polluted water "is spreading in the whole forest", it said. It said animals were dying on a large scale.

India among countries most vulnerable to climate change: Global Commission

Date: 06th February 2015 Source: Zee News

New Delhi: India is one of the countries most vulnerable to climate change and global action is needed to address that challenge, according to the Global Commission on the Economy and Climate. Future growth in both Indian cities as well as in the agricultural sector is at risk from climate change, said Felipe Calderon, former Mexican president and currently Chair of the Global Commission at the 8th India Climate Policy and Business Conclave here, industry chamber FICCI said in a statement Thursday. "India can create better growth, and at the same time ensure a safe climate for its citizens. Prime Minister (Narendra) Modi has set out a bold vision for India that will make it a leader in solar energy. We believe it is in India's economic self-interest to go even further," Calderon said at the conference co-organised by the environment ministries of India and Germany and the World Bank.

"The Global Commission highlights huge opportunities for India. It recommends practical steps to make renewable energy cheaper and available to more people, building smarter, better connected cities and harnessing the enormous potential of India's villages by investing in agricultural innovation," he added. The commission said that India's economic prospects hinge on its ability to meet fast rising demand for energy and securing access to the approximately 300 million people who currently lack it. "The research conducted for the Commission finds that while the cost of foreign coal is projected to increase, the cost of renewable energy is likely to substantially decrease," it added. According to the commission, urban sprawl, congestion and severe air pollution are reducing India's productivity. Half the world's most polluted cities are in India, including the top four in the world - Delhi, Patna, Gwalior and Raipur, it said. "The Commission recommends loosening building restrictions in order to contain urban sprawl and building better infrastructure including improving public transport," the release added.

Breathe uneasy

Date: February 07, 2015 Source: The Economist

IN THE early hours of a January morning, all lanes of a motorway into Delhi are crammed with hundreds of rumbling lorries. These are brightly painted, with signs imploring overtaking drivers to "Honk please". Every night immense convoys like this one snake their way into the Indian capital, belching sulphurous diesel smoke. The sinking winter air presses the resulting smog tight over the city.

The lorries are a chief reason why Delhi's air is now more toxic than any other city's on earth. Admittedly Beijing has a worse reputation, with its visible smog from particulates of 10 microns or smaller, known as PM10. Delhi's grim distinction is that it has even higher levels of PM10, as well as of the smaller particulates, PM2.5, that are more likely to kill because they go deeper into the lungs. Levels of PM2.5 in Delhi are routinely 15 times above levels considered safe by the World Health Organisation. New data suggest that, on this score, Delhi's air has been 45% more polluted than that of the Chinese capital for the past couple of years. Last year the WHO assessed 1,622 cities worldwide for PM2.5 and found India home to 13 of the 20 cities with the most polluted air. More cities in India than in China see extremely high levels of such pollution. Especially to blame are low standards for vehicle emissions and fuel. Nor, for different reasons, are rural people better off. Indoor pollution inhaled from dung-fuelled fires, and paraffin stoves and lights, may kill more than 1m Indians a year. The WHO says the vast majority of Indians breathe unsafe air. The human cost is seen in soaring asthma rates, including among children. PM2.5 contributes to cancer and it kills by triggering heart attacks and strokes. Air pollution is likely to cause vastly more deaths as Indians grow older and more obese. Indoor and outdoor pollution combined is the biggest cause of death, claiming over 1.6m lives a year. Michael Greenstone of Chicago University has led research into pollution-affected lifespans in China that has implications for India. The lives of northern Chinese, he found, are 5.5 years shorter on average because of air pollution. In a forthcoming article, he applies the same methods to assess the 660m Indians most exposed to toxic air. He concludes that they would each live over three years longer, on average, if their air met national standards. A former UN chief negotiator on climate change, Yvo de Boer, suggests that air pollution costs China the equivalent of a tenth or more of GDP and he warns India to avoid that fate. He urges India to "industrialise in a cleaner way". And a study of agriculture in India from 1980 to 2010 found soaring levels of ozone and other air pollution, which has led to wheat yields a third lower than would otherwise have been expected.

India's leaders are starting to act, pressed by anti-smog campaigns such as the one by the Times of India to "let Delhi breathe". Prakash Javedekar, the environment minister, says that monitors have been installed on thousands of industrial chimneys to gather data on emissions. Now officials have identified the country's 17 most polluting industries.

In theory, at least, every Indian city is now supposed continuously to measure air quality. But state governments are slow to enforce national orders, while the Central Pollution Control Board, India's main environmental agency, does little. Mr Javedekar promises "aggressive action" to improve fuel standards, which would cover those belching lorries coming into Delhi. In March the Supreme Court may anyway order standards to be tightened, by reducing sulphur, as well as instructing carmakers to cut vehicle emissions.

Some good initiatives to improve air quality are under way. A research project near Patna in Bihar proposes retrofitting the chimneys of brick kilns in ways that reduce smoke. The scrapping of subsidies on petrol and diesel in recent years has had the welcome effect of raising the costs of running especially noxious generators, which may account for nearly a third of all installed electricity capacity. Given that most people, even in the city, still commute by foot, bus or bicycle—and that only 5% of households own cars—India

still has time to set up systems for mass public transport before the car becomes king. Already 14 cities have or are building metros. As for farmers, Sunita Narain, a green activist, says they should be pressed to use modern harvesting machinery that renders it unnecessary to burn stubble in fields, a big cause of air pollution.

One experiment could prove particularly welcome. Three industrialised states—Gujarat, Maharashtra and Tamil Nadu—are about to launch the world's first market for trading permits in emissions of particulate matter. In the town of Surat, in Gujarat, 300 textile plants, which typically burn coal to produce steam, are likely to be the first to trade such permits. Monitoring equipment has already gathered emissions data from these and other plants.

Factories could quickly cut emissions by a lot once they have incentives to do so. They could, for example, clean their equipment better or burn fuel more efficiently. The market can function once India's central government gives the order. That is likely to happen, however, only once the law allows financial rather than criminal penalties for owners whose plants breach legal standards. No one knows how long the change will take. Lots of bright ideas exist for tackling air pollution. Their widespread implementation, however, depends to a great degree on how much the public makes a fuss about inaction. As lorry drivers might say, honk please.

Spanish Conquest of the Incas Caused Air Pollution to Spike

Date: 08th February, 2015 Source: Inews 880

A new air quality study in Edmonton is showing that our pollution levels are getting way out of hand. The latest report from Alberta Environment shows that pollutants that effect your lungs and heart, are spiking at level that exceed government standards. Chris Severson-Baker, from the Environmental think-tank known as the Pembina Institute, tells 630CHED's Ryan Jespersen Show, the alarming levels need to to decline. "There is no safe level of exposure to some of these compounds," says Severson-Baker. "What the limits tell you is that overall there's to much pollution in the airshed, so you're getting spikes that go above the line." Severson-Baker says government levels for some of those dangerous emissions will continue to decline – - so to keep up, Edmonton needs to start lowering pollution levels now.

Man-made air pollution reduces Central America rainfall: study

Date: 09th February, 2015 Source: Reuters

(Reuters) - Air pollution tied to industrialization in the northern hemisphere almost certainly reduced rainfall over Central America in new evidence that human activity can disrupt the climate, a study suggested on Monday. "We identify an unprecedented drying trend since 1850," the scientists wrote in the journal Nature Geoscience after studying the rate of growth since 1550 of a stalagmite found in a cave in the tiny nation of Belize.

Stalagmites are pointed rocks formed by mineral-rich water dripping from the cavern roof. The experts, from Britain, the United States, Switzerland and Germany, said the drying in Belize "coincides with increasing aerosol emissions in the northern hemisphere" as the Industrial Revolution pushed up fossil fuel use.

The findings indicate that growing air pollution in countries such as China and India may cause further disruption, especially in Asia, to a band of tropical rains that encircles the globe around the equator and is vital to farming.

The scientists linked the drying to sun-dimming pollution because the nine biggest volcanic eruptions in the northern hemisphere since 1550, spewing out ash that veiled sunshine, also showed up as dry periods in the stalagmite's growth.

For example, an eruption of the Laki volcano in Iceland in 1783, which has also been associated with lower water flows in the Nile, coincided with drought in Belize, they wrote.

Sun-masking pollution cools the northern hemisphere, where most industry is based. That tends to push the Intertropical Convergence Zone, a band of rain encircling the globe, south because it moves towards the warmer hemisphere, they said.

However, the scientists wrote that some unknown natural variations might also provide an explanation for the drying. In a report published in 2013, a U.N. scientific panel said it was 95 percent likely that greenhouse gases were the main cause of recent global warming.

Many industrialized nations have introduced clean air acts since the 1970s, meaning the world has seen a shift in pollution towards fast-growing emerging nations led by China and India. "Geographic changes in aerosol emissions should be considered when assessing potential future rainfall shifts in the tropics," they wrote. Lead author Harriet Ridley of Durham University told Reuters that colleagues had being examining Belize stalagmites for signs of drought about 1,000 years ago, often suggested as the cause of the collapse of the Mayan civilization. That study is still continuing.

Baitoushan volcano, on China's border with North Korea, had one of the biggest eruptions in history around the year 1000, according to NASA.

Man-Made Air Pollution Started With the Incas

Date: February 10, 2015 Source: Nature World News

Man-made air pollution is a global phenomenon that we are currently dealing with today, but this has long been an issue, starting way back when with the Incas.

During the 16th century, when the Spanish Empire conquered South America, Inca inhabitants were forced to refine silver in mines atop the Potosí mountain, in what is now present-day Bolivia. And thanks to the Spanish introducing new technology to boost silver production, clouds of metal-rich dust were carried into Peru, remnants of this pollution later to be discovered in an Andean ice cap. "There is a long pre-industrial history of mining in Peru and Bolivia," study author Paolo Gabrielli from Ohio State University, who made the discovery in 2003, told Live Science.

"Our study demonstrates that since the colonial time, mining and metallurgic activities performed by the Spanish did also have an impact on very distant areas," he added.

The majority of people might have assumed that the Industrial Revolution sparked the dawn of man-made emissions and global warming; however, this new study shows that anthropogenic effects on the world date back long before then.

According to new research published in the journal Proceedings of the National Academy of Sciences, Gabrielli and his colleagues were studying climatic changes in South America when they pulled a long ice core from the Quelccaya Ice Cap. To their surprise, they found bits of lead with a chemical signature that traced back to the silver mines of Potosí. The core provided the first detailed record of widespread man-made air pollution in South America before the Industrial Revolution.

"Until now, what we knew about pre-industrial atmospheric pollution was limited to the Northern Hemisphere," Gabrielli said.

The success of the mines and subsequent pollution can be attributed to the greed of the Spanish. In 1572, they introduced the refining process called amalgamation to speed up silver production. The technology involved grinding lead-rich silver ore into a powder and mixing it with mercury. Consequentially, clouds of dust were released into the atmosphere, traveling as far as 500 miles away into Peru. Potosí later became known as the largest source of silver in the world. By the 17th century, about 13,500 indigenous people were working the mines under a system of mandatory labor. "The fact that we can detect pollution in ice from a pristine high altitude location is indicative of the continental significance of this deposition," Gabrielli explained in a news release. "Only a significant source of pollution could travel so far, and affect the chemistry of the snow on a remote place like Quelccaya."

And this pollution problem has since become worldwide. For instance, Asia's air pollution is so bad that it's changing weather and climate around the globe. In addition, air pollution is reportedly linked to irregular heartbeat and blood clots.

While the level of pollution in the colonial era, during which the Incas lived, was indeed significant, it still is no match for levels that we saw in the 20th century.

Some scientists think humans have left such a lasting mark on the planet - via fossil fuel production, deforestation and agricultural practices - that we are now technically living in a new epoch, dubbed the Anthropocene.

The starting point for this new age, however, is fiercely debated. Some insist it began with the Industrial Revolution, while others argue the detonation of the first atomic bomb kicked off the Anthropocene. Regardless, there's no doubt that humans are drastically altering the Earth, and it all started - at least in South America - with the Incas and some silver.

Air pollution in Delhi alarming, HC calls for pollution map

Date: February 11, 2015 Source: IBN Live

New Delhi: Taking note of "alarming" levels of air pollution in the national capital, Delhi High Court on Wednesday directed the city government's geospatial authority to provide a detailed pollution map of the city since 2010. The bench also directed DPCC to furnish data with regard to air quality being monitored by the authority at six different locations in Delhi. It said the data has to be provided from each monitoring station on the levels of pollution recorded during various times of the day over a period of one week, and said "we want to see results." "We will judge your (authorities) performance as per the air quality index of the capital," it said. The court had taken up the issue on its own after it came across news reports that Delhi was one of the most polluted

cities in the world. The bench had also come across information that over 50 per cent of children in Delhi suffered from respiratory trouble caused by poor ambient air quality.

Terming pollution situation in the city as "unacceptable", the court had earlier asked DPCC to inform it whether the Supreme Court was looking into the matter of air pollution.
DPCC on February 6 had informed the court that one matter regarding environment pollution was pending before the apex court, while another petition on air pollution in Delhi and surrounding states was before the National Green Tribunal. DPCC had also informed the court that several comprehensive orders have been issued by NGT in this regard. "We have nothing to do with NGT. Can't leave it to them," the bench had remarked. A bench of justices Badar Durrez Ahmed and Sanjeev Sachdeva said that air pollution in certain areas of Delhi like Anand Vihar, was at "hazardous levels" and directed the Delhi Pollution Control Committee (DPCC) to give "standards of air quality as prescribed by statute and notification". The court issued the directions while hearing a PIL on the problem of poor ambient air quality in Delhi, an issue which it has taken up suo motu and in which it has also appointed an amicus curiae. It directed the Delhi Geospatial Authority to provide the pollution map on the suggestion of the amicus.

HC notice to Centre over 'unacceptable' air pollution

Date: February 11, 2015 Source: The Times of India

NEW DELHI: The Delhi high court on Monday sought responses of the Centre, Delhi Pollution Control Committee and civic agencies on rising levels of air pollution in the city. The court has taken suo motu cognizance of the issue and is treating it as public interest litigation (PIL). DPCC had also informed the court that several comprehensive orders have been issued by NGT. "We have nothing to do with NGT. Can't leave it to them," the bench had remarked.

A bench of Justices Badar Durrez Ahmed and Sanjeev Sachdeva also issued notice to the Centre and listed the matter for hearing on Feb 11. The court took up the issue suo motu after it came across news reports that Delhi's air was one of the most polluted in the world. The court took a serious view that over 50 per cent of children in Delhi suffered from respiratory problems caused due to poor ambient air quality. Terming such a situation as "unacceptable" the court had earlier asked DPCC to inform it if the Supreme Court was looking into the matter of air pollution. DPCC on February 6 had informed the court that one case relating to environment pollution, titled M C Mehta, is pending before the apex court, while another petition on air pollution in Delhi and surrounding states is before the National Green Tribunal.

Air pollution risk for drivers waiting at red lights

Date: 12th February, 2015 Source: Medical News Today

Researchers from the University of Surrey in the UK have found that 25% of a driver's total exposure to pollutant nanoparticles can come from passing through intersections controlled by traffic lights. This level of exposure occurs is the amount of time spent at traffic lights comprises as little as 2% of the total journey.

"Our time spent traveling in cars has remained fairly constant during the past decade despite the efforts to reduce it," says lead author Dr. Prashant Kumar. "[With] more cars than ever joining the roads, we are being exposed to increasing levels of air pollution as we undertake our daily commutes."

Nanoparticles emitted by the exhausts of cars have been associated with several health problems, including

asthma, cardiovascular disease and childhood leukemia. People who live, work or travel near major roads have been linked with increased incidence and severity of these problems. The US Environmental Protection Agency (EPA) state that previous research has indicated stopping very close to a vehicle at an intersection can increase the level of air pollution within the following vehicle. "Air pollution was recently placed in the top 10 health risks faced by human beings globally, with the World Health Organization linking air pollution to 7 million premature deaths every year," states Dr. Kumar. Despite this, the study authors write that the contribution to commuter exposure to pollutant nanoparticles made by stopping at light-controlled intersections is largely unknown.

Air pollution affects children's memory, IQ

Date: February 12, 2015 Source: Deccan Herald

Children living in cities with significant air pollution are at an increased risk for detrimental impacts to the brain, including short-term memory loss and lower IQ, a new study has found. Researchers show that children with lifetime exposures to concentrations of air pollutants above the current US standards, including fine particulate matter, are at an increased risk for brain inflammation and neurodegenerative changes, including Alzheimer's and Parkinson's diseases. The study found that clinically healthy children who live in a polluted environment and who also carry a gene - the apolipoprotein e4 allele, already known to increase a person's risk of developing Alzheimer's disease - demonstrated compromised cognitive responses when compared with children carrying a gene with apolipoprotein e3 allele. Metropolitan Mexico City is an example of extreme urban growth and serious environmental pollution, where 8 million children are involuntarily exposed to harmful concentrations of fine particulate matter in the air every day beginning at conception, researchers said. The study matched two groups of children living in Mexico City by multiple variables, including age, gender, socioeconomic status and education, among others. Researchers then compared children carrying the e4 allele to children carrying the e3 allele and found that those with the e4 allele had three significant alterations.

They had short-term memory shortfalls, an IQ that while within the normal limits measured 10 points less, and changes in key metabolites in the brain that mirror those of people with Alzheimer's disease. "The results add to growing data suggesting e4 carriers could have a higher risk of developing early Alzheimer's disease if they reside in a polluted urban environment," said Dr Lilian Calderon-Garciduenas from the University of Montana. She said the study also raises concerns about important educational issues. Since Mexico City children mostly attend underprovided public schools, children do not build cognitive reserves that serve as a defence to pollution impacts. "An IQ difference of 10 points will likely have a negative impact on academic and social issues, including bullying and teen delinquency," she said.The authors argue that sustained exposures to urban air pollution result in cognitive underperformance and metabolic brain changes that could lead to an acceleration of neurodegenerative changes. Air pollution is a serious public health issue, and exposures to concentrations of air pollutants at or above the current standards have been linked to neuroinflammation and neuropathology. The study was published in the Journal of Alzheimer's Disease.

Conquistadors caused Toxic Air Pollution 500 years ago by changing Incan Mining

Date: February 12, 2015 Source: Ancient Origines

Scientists studying ice core samples from Peru have discovered a variety of trace elements, indicating that Spanish colonial mining caused toxic air pollution over South America approximately 240 years before the Industrial Revolution.

The ice core samples, taken from the Quelccaya ice cap in Peru in 2003 were analyzed to create records of the regional climate and environmental data. Paolo Gabrielli of Ohio State University and his colleagues used these samples to trace ancient metallurgy and mining in South America from 798 to 1989. Early fluctuations in amounts of trace elements in the Quelccaya ice cores are attributed to volcanic eruptions in the Andes, according to Smithsonian, especially previous to the Spanish conquest of South America.

New Republic reports that the sprawling Inca Empire, largest of pre-Columbian America, possessed a mining technology which involved smelting metals in small clay furnaces called huyara. This was a largely inefficient process, but only impacted the local environment.

After the Spanish invasion in the 16th century, the Conquistadors changed mining and smelting methods, increasing efficiency and enabling them to mine more of the coveted silver at a faster rate. However, the new process of extracting silver used toxic liquid mercury. The resulting metallic dust from mining and smelting was carried by winds and fell around the South American continent.

The study, published in Proceedings of the National Academy of Sciences, finds that "metallurgic activities performed during the Inca Empire (A.D. 1438−1532) had a negligible impact on the South American atmosphere. In contrast, atmospheric emissions of a variety of toxic trace elements in South America started to have a widespread environmental impact around A.D. 1540.

Wandering Eye: Hogan ignores science that air pollution causes deaths, Harbor East gets an even bigger Whole Foods, and more

Date: 12th February, 2015 Source: City Paper

Despite science that says Maryland leads the nation in premature deaths due to air pollution, one of new Maryland Gov. Larry Hogan's first moves in office was to block regulations to lower pollution from coal-fired power plants. Now comes more science, saying that "children with lifetime exposures to concentrations of air pollutants above the current U.S. standards, including fine particulate matter, are at an increased risk for brain inflammation and neurodegenerative changes, including Alzheimer's and Parkinson's diseases," and the impacts include short-term memory loss and lower IQ. Early deaths and more illness chewing up health care dollars, less productivity in school and at work thwarting economic performance—it seems that smart policy would work toward limiting air pollution, not removing barriers to its creation. Oh well. (Van Smith).

In a free and just society, do you get what you deserve? Do you earn your just rewards? Or is it more a matter of luck, with those born in more prosperous and egalitarian places and times predictably richer? Turns out we know the answer, and it is the latter: Research by Roxana Gutierrez-Romero and Luciana Mendez Errico shows that societies with more inequality have fewer entrepreneurs and less jobs over time. The implications of that are profound. If it is really true that "you didn't build that," then never mind the "death tax," why should the law allow inheritance at all? Nobel laureate economist Herbert A. Simon, writing in the Boston Review in 2000 (shortly before his death), took that ball to the end zone, asserting that a flat 90-percent tax on all income and wealth should be instituted alongside redistributionist policies. "[E]ven a flat tax of 70 percent would support all governmental programs (about half the total tax) and

allow payment, with the remainder, of a patrimony of about $8,000 per annum per inhabitant, or $25,000 for a family of three," he wrote. You may or may not agree with the premise, but surely we can all agree that this is great stuff to troll libertarians with. (Hat tip to Mark Thoma.) (Edward Ericson Jr.)

The Baltimore Business Journal reports that Whole Foods will be opening a 50,000-square-foot "flagship" store on Central Avenue in Harbor East, which would make it almost four times as big as the one a block away, on Fleet Street, which it will replace. The new store will be the ground floors (yes, floors—it'll have a mezzanine) of a planned 335-unit apartment/condo tower that was announced for the site back in October, as the full-on luxury real-estate gold rush in Harbor East continues apace. The latest announcement comes days after Luke Broadwater's excellent Sun story, which explained how a development boom, and the increase in property wealth it entails, contributed to the $35 million in cuts to state education funding for the city, "in part due to a funding formula that now assumes the city is rich enough to pay more toward its schools." The mayor on WYPR's "Midday with Dan Rodricks" yesterday suggested that waterfront development, which would include the new Central Avenue tower, does not count toward the formula Broadwater referenced and described the effect of development on education funding as a "blip" that would reverse itself next year.

Fitness-wave floods China as air pollution forces indoor exercise

Date: 13th February, 2015 Source: Channel News Asia

BEIJING: It took Joseph Lo half a century to start exercising. The 58-year-old said he only did it because his physical condition started to deteriorate. Eight years ago, when age finally caught up to him, he decided to sign up for a gym package that came with a fitness trainer. "In the past, if you wanted to find places to exercise in Beijing, for instance, if you wanted to play basketball, or jog, it's a bit difficult as there aren't many sports venues in Beijing," said Mr Lo, who is working as a sales director in the capital. "Also, for working professionals like us, at night, we can only exercise in the indoor gyms," he added. It is urban professionals such as Mr Lo who have fuelled the rise in number of gyms across China, according to the founder of Migrant Bird Fitness Studio Mao Nan.

"Especially in the past one to two years, there have been a lot of new gyms opening up. Some are good and some are not, because the barrier to entry is rather low. You can open one with just US$128,000 to US$144,000. Some people think there is potential in this market because the number of gym-goers are increasing, so they invest money and enter the market," he explained. AIR POLLUTION FUELS FITNESS INDUSTRY.

Experts have attributed the rise in health awareness in China to ballooning incomes. "I think in the more developed cities, people are living faster lives, and there is higher pressure, and also there is more information available talking about health," said Rachel Ma, Vice President, Consumer Research, FMCG, Nielsen China.

Besides the high earnings, however, the serious air pollution in many Chinese cities has also driven many to exercise indoors. "There was once I was exercising outdoors and I had pneumonia, either because of the pollution or the cold air, so since then I've not jogged outdoors," said a gym user. "When it's smoggy, then I'll come to the gym to exercise, because it's uncomfortable exercising outdoors when the weather is bad," explained another.

According to an industry report, the number of gyms increased four-fold to some 5,800 between 2004 and

2012. It also projected that China's fitness industry will be worth US$6.8 billion by 2018. As more gyms are opening across the country, membership prices have remained low, even in a first-tier city like Beijing. At the lower end, a gym membership could cost less than US$200 per year. At the other end of the spectrum, a one-year gym package could exceed US$1,200, but offers better facilities.

LACK OF FITNESS PROFESSIONALS STUNTS GROWTH Still, industry players said a lack of trained fitness professionals could stunt growth.

"The gym industry in China has not developed for very long, and you need five to 10 years to train someone," said Dong Shaowen, Director of Business Development at Hosa Fitness". "China's gym industry really started in 2000, and it's only been 15 years, so we only have one generation of professionals, but we need more of such people," he added.

German highway traffic exceeds EU air pollution threshold

Date: 13th February, 2015 Source: Eur Activ

Emissions from car exhausts exceeded EU thresholds for nitrogen oxide at half of Germany's monitoring stations. While 2014 is among the lowest years for particulates levels, the Federal Environment Agency sees no reason for relief. EurActiv Germany reports.
Nitrogen oxide, primarily originating from motor vehicle exhausts, is quickly becoming a top pollutant in Germany, according to a preliminary analysis conducted by the Federal Environment Agency (UBA).
Data collected at over 500 monitoring stations indicates that, once again, the annual mean value of more than half of the monitoring stations near high-traffic roads exceeded the threshold of 40 µg per cubic metre (m3).

This share is likely to increase considerably when more data is added in May 2015 from 124 monitoring stations to be included in the statistic. These could not yet be evaluated due to technical reasons.
"To contain threshold exceedances in nitrogen oxide, it is vital that the new exhaust norm EURO 6 also lead to lower emissions in real traffic. So far many automobile manufacturers were only able to guarantee this in the laboratory," said UBA president Maria Krautzberger. Although no ozone peaks were observed in the summer of 2014, there were target value exceedances in around 6% of all monitoring stations. But the maximum 8 hour mean ozone concentration should not exceed 120 µg/m3 on more than 25 days per calendar year. At the same time, 2014 showed some the lowest levels of particulates in the air. But Krautzberger sees no room for satisfaction. "Despite low particulates values, health risks still exist. For particulates, there is no minimum effect threshold – health effects can also occur when the concentration levels of particulates is relatively low. The World Health Organization (WHO) has confirmed this again."
The EU-wide threshold value on particulates (PM10) was only exceeded at 10% of air monitoring stations located near traffic. This means the PM10 mean daily value was over the permitted value of 50 µg/m3 on more than 35 days. But the WHO recommends a considerably stricter particulate threshold value, at 20 µg/m3 in the yearly average. If this is applied, 48% of all monitoring stations exceeded the threshold value.
"The growing number of wood-burning heating systems has an especially negative effect on particulate pollution," said Krautzberger. In the winter months in particular, the share of wood-fired heating can comprise up to 25% of overall particulate pollution. As a result, emissions from wood-fired heating systems have begun to generate more particulate than exhausts in highway traffic."

Refinery neighbors hope to breathe easier after air pollution study

Date: 13th February, 2015 Source: Houston Chronicle

Light beams, mirrors will be used for first time to collect air quality data.

Researcher Matt Erickson monitors real-time levels of air pollutants from a mobile lab in the Manchester, Galena Park and Milby Park areas on Tuesday. The vans also will be used in the new air quality study. Across Avenue R from Valero Energy Corp.'s Houston refinery sits Hartman Park, a tree-lined island roughly as long and as wide as a city block. There are swing sets, two tennis courts and an infield scratched out of its expanse.

Delhi Wakes Up to an Air Pollution Problem It Cannot Ignore

Date: February 14, 2015 Source: The New York Times

NEW DELHI — For years, this sprawling city on the Yamuna River had the dirtiest air in the world, but few who lived here seemed conscious of the problem or worried about its consequences.

Now, suddenly, that has begun to change. Some among New Delhi's Indian and foreign elites have started to wear the white surgical masks so common in Beijing. The United States Embassy purchased 1,800 high-end air purifiers in recent months for staff members' homes, with many other major embassies following suit. Some embassies, including Norway's, have begun telling diplomats with children to reconsider moving to the city, and officials have quietly reported a surge in diplomats choosing to curtail their tours. Indian companies have begun ordering filtration systems for their office buildings.

"My business has just taken off," said Barun Aggarwal, director of BreatheEasy, a Delhi-based air filtration company. "It started in the diplomatic community, but it's spread to the high-level Indian community, too."

The increased awareness of the depth of India's air problems even led Indian diplomats, who had long expressed little interest in climate and pollution discussions with United States officials, to suddenly ask the Americans for help in cleaning India's air late last year, according to participants in the talks. So when President Obama left Delhi after a visit last month, he could point to a series of pollution agreements, including one to bring the United States system for measuring pollution levels to many Indian cities and another to help study ways to reduce exhaust from trucks, a major source of urban pollution.

One driver for the change is a deluge of stories in Indian and international news outlets over the last year about Delhi's air problems. Those articles, once rare, now appear almost daily, reporting such news as spikes in hospital visits for asthma and related illnesses. One article about Mr. Obama's visit focused on how, by one scientist's account, he might have lost six hours from his expected life span after spending three days in Delhi. "We felt this was an issue we should take up, and we have taken it up," said Arindam Sengupta, executive editor of The Times of India, whose campaign against air pollution has helped give prominence to the problem.

But Nicholas Dawes, a top editor at The Hindustan Times, said the media coverage was just one reason for the attitude shift. "I think the people of Delhi are increasingly unwilling to tolerate tough circumstances," he said. At least so far, that has not translated into much meaningful action by the government. In fact, the problem is likely to get worse as the government of Prime Minister Narendra Modi works to reboot the

economy. His government recently promised to double its use of coal over the next five years. But Dr. Joshua S. Apte, an assistant professor of environmental engineering at the University of Texas at Austin, who has studied Delhi's air pollution since 2007, said recognition was a start. "The thing that gives me greatest hope is the huge increase in awareness that I've seen in Delhi just in the past year," he said. Delhi's air is the world's most toxic in part because of high concentrations of PM2.5, particulate matter less than 2.5 micrometers in diameter that is believed to pose the greatest health risk because it penetrates deeply into lungs. While Beijing's air quality has generated more headlines worldwide, scientists say New Delhi's air is often significantly worse, especially during the winter, when choking smog often settles over the sprawling city.

Four city monitors found an average PM2.5 level of 226 micrograms per cubic meter between Dec. 1 and Jan. 30 — a level the United States Environmental Protection Agency calls "very unhealthy" and during which children should avoid outdoor activity. The average in Beijing for the period was 95, according to the United States Embassy monitor there.

Indeed, there has not been a single 30-day period in Beijing over the past two years during which the average PM2.5 level was as bad as it was in December and January in Delhi.

Worse yet, the numbers tell only half the story because Delhi's PM2.5 particles are far more dangerous than those from many other locales because of the widespread burning of garbage, coal and diesel fuel that results in high quantities of toxins such as sulfur, dioxins and other carcinogenic compounds, said Dr. Sarath Guttikunda, director of Urban Emissions, an independent research group based in Delhi. "Delhi's air is just incredibly toxic," said Dr. Guttikunda, who recently moved to Goa to protect his two young children from Delhi's air. "People in Delhi are increasingly aware that the air is bad, but they have no idea just how catastrophically bad it really is."

Already, an estimated 1.5 million people die annually in India, about one-sixth of all Indian deaths, as a result of both outdoor and the indoor air pollution, a problem caused in part by the widespread use of cow dung as cooking fuel. The country has the world's highest death rate from chronic respiratory diseases, and more deaths from asthma than any other nation, according to the World Health Organization. Air pollution also contributes to both chronic and acute heart disease, the leading cause of death in India. Delhi residents attribute their longtime stoicism about the city's pollution to a combination of fatalism, loyalty to their city and a sense of immunity.

Veena Dogra, 65, notices that family members who visit from abroad snuffle and sneeze, and she is aware that her usual black nasal discharge stops when she leaves India, and returns when she does. But she said she eventually forgets the contrast between Delhi and everywhere else, which is why she resists her daughters' suggestions that she buy air purifiers or wear masks. "Am I going to shut myself into just one room in my house?" Ms. Dogra asked. "You have to be tough to live in Delhi. If you're not, you should leave. And I have too much family here to think about doing that."

Dr. Anupama Hooda Nehra, director of medical oncology at Max Cancer Center in New Delhi, said she joined a morning cancer fund-raising walk this month even though she ended her own morning walks last year because she decided they were doing more harm than good and could encourage a cancer's growth. "But I had to go to the fund-raiser because it was supported by my hospital," she said. "And I worried that if I wore a mask, I would scare everyone since I'm an oncologist. It's hard to know what to do." Dr. Nehra said her greatest worry is that her daughters, ages 14 and 8, will suffer lifelong effects from living in Delhi, a concern that has increasingly spooked Delhi's expatriate community. After Dr. Apte gave a presentation about Delhi's air pollution to a hall packed with anxious parents recently at the American Embassy School, the administration invested in indoor air filters and increasingly restricts children's outdoor activities when pollution levels are especially high. Even so, the sidelines during school soccer games are lined with players' medicinal inhalers.

"I'm surprised kids there can even play soccer," said Dr. James Gauderman, a professor of preventive medicine at the University of Southern California and an author of a landmark 2004 study on the effects of air pollution on children's lungs.

In his study, Dr. Gauderman found that children raised in towns with PM2.5 levels of 30 had substantial reductions in lung function compared with those raised in towns with levels of 5. In the decade since his study was published, "we don't see any evidence that functional loss is reversed," Dr. Gauderman said. "The deficit appears to be permanent. I can't imagine what that deficit would be with pollution levels almost 10 times higher. No one has studied that."

'Traffic jams one of the many reasons for air, noise pollution'

Date: 14th February, 2015 Source: The Times of India

Thane: Traffic jams is one of the reasons for an increase in noise and air pollution in the city. Environment activists feel that the crawling traffic leads to unnecessary honking by motorists. Also, the fumes emitted by vehicles are more at this time.

A study carried out by the Maharashtra Pollution Control Board reveals a high level of Respirable Suspended Particulate Matter in the air since the last few months. While Naupada registered an average of 123 mg/m3 against the normal level of 100 mg/m3, Balkum recorded 141 mg/m3 and Kopri 136.57 mg/m3.

Vidyadhar Walawalkar of Paryavaran Dakshata Manch, an NGO, said "Vehicles that move at high speed emit less amount of toxins in the air. But due to lack of space, bad roads and narrow lanes, traffic jams have become the order of the day. Due to this, toxics are emitted at a higher level from vehicles as most motorists leave their vehicle engines on even when they are stuck in traffic," said Walawalkar. Even in the case of noise pollution, the reason is the same, claim activists. Dr Mahesh Bedekar, who has been measuring noise levels in the city, said that Gokhale Road and Alok hotel junction recorded 85 db noise levels in the morning, while at Jambhli Naka is was 75-85 db in the afternoon. Ambedkar chowk recorded 80 db even at 9:45pm, his study shows. Meanwhile, the traffic police claim that they are doing their best to ensure smooth movement of vehicles.

AAP government's to do list: Address Delhi's air pollution

Date:14th February, 2015 Source: The Economic Times

Arvind Kejriwal will only take oath as chief minister on Saturday but Delhi's most urgent problem--air pollution--is already staked its priority place on the new government's to do list, thanks to a proactive judiciary and the National Green Tribunal. Even though air quality in Delhi is poor, and the national capital has been found by the World Health Organization to be the most polluted in the world, the issue never made it to the election agenda.

But whether Kejriwal and the AAP like it or not, Delhi's poor air quality is something he will need to address. The Delhi High Court has asked the government, the capital's pollution control body and the city's civic bodies about efforts being taken to address air pollution. The new government will also need to implement the order issued by the National Green Tribunal in November on addressing air pollution. The Delhi High Court has taken up the issue of air pollution suo motu as a public interest litigation. A bench comprising Justice Badar

Durrez Ahd ad Sanjeev Sachdeva took up the issue after it came across news reports that Delhi was one of the most polluted cities in the world with regard to air pollution. The bench had also come across information that over 50 per cent of children in Delhi suffered from respiratory problem caused due to poor ambient air quality. The high court has directed the state government's geospatial unit to provide a detailed pollution map of the city since 2010.

Drawing attention to Delhi's air quality, Justice Badar Durrez Ahmed and Justice Sanjeev Sachdeva said pollution in certain areas of Delhi, such as Anand Vihar, is at "hazardous levels". The bench has directed the Delhi Pollution Control Committee to give "standards of air quality as prescribed by statute and notification".

The state's pollution control unit has been asked to furnish data with regard to air quality being monitored by the authority at six different locations in Delhi. It said the data has to be provided from each monitoring station on the levels of pollution recorded during various times of the day over a period of one week, and said "we want to see results."

"We will judge your (authorities) performance as per the air quality index of the capital," the bench observed. The court took up the issue on its own after it came across news reports that Delhi is one of the most polluted cities in the world. The bench had also come across information that over 50% of children in Delhi suffered from respiratory trouble caused by poor ambient air quality.

While the Delhi High Court's intervention brings renewed focus on the city's poor air quality, the Kejriwal government will need to get its act together to implement the 14-point clean up order issued by the National Green Tribunal to the Delhi government in late November.

In its ruling, the green tribunal noted that air pollution in the capital city is 'getting worse with each passing day," and identified vehicular pollution and burning of plastic as the main culprits. It had ordered all vehicles older than 15 years be taken off Delhi's roads. It also called for a ban on burning plastic or any other material in the open.

In May last year, a report by the World Health Organization found Delhi to have the most polluted air among the 1,600 cities across 91 countries that it assessed. Delhi had the highest concentration of particulate matters which are known to cause serious respiratory problems. Despite such reports, there has been little tangible action by the authorities to curb the city's worsening air quality.

Iran MPs wear medical face masks to protest air pollution

Date: 15th February 15, 2015 Source: The Guardian

Iranian lawmakers wore medical face masks in parliament on Sunday in a show of solidarity with residents of their areas battling pollution from strong sandstorms.

Sixteen MPs from the western provinces of Khuzestan, Ilam and Kermanshah donned the masks to draw awareness to the plight of their constituents, said official news agency IRNA.

Media reports said many Khuzestan residents have been hospitalised suffering respiratory problems, while schools have been closed for the past week.

Iran is among the worst polluted countries in the world, and a 2011 report by the World Health Organisation listed Khuzestan city of Ahvaz as the most polluted in the world.

Tehran is also known for its poor air quality, because of an altitude ranging from 1,100-1,700 metres (3,600-5,600 feet) above sea level in a basin surrounded by mountains and also due to exhaust fumes from more than four million cars plying the roads of the city.

On Sunday, authorities urged children and the elderly not to venture outdoors as pollution levels peaked in Tehran. The latest peaks come as sandstorms have lashed the region over the past week. In 2012, pollution contributed to the premature deaths of 4,500 people in Tehran and about 80,000 across Iran, according to the health ministry.

Ohio State researchers find earliest proof of man-made air pollution

Date: 15th February, 2015 Source: The Columbus Dispatch

Climate researchers at Ohio State University have found the earliest evidence of human-produced air pollution in South America. Tests of an ice core sample from Peru show that the Spanish empire sent thick clouds of lead dust into the atmosphere about 240 years before the Industrial Revolution. The Spaniards forced Incas to refine silver extracted from the mountaintop mines of Potosi in what is now Bolivia. The dust was found in an ice core from the Quelccaya ice cap in Peru, the largest tropical glacier on Earth. The researchers' findings were published recently in the Proceedings of the National Academy of Sciences.

The Byrd Polar and Climate Research Center at Ohio State keeps hundreds of ice cores that are collected from glaciers and ice caps around the world and serve as frozen climate records. Research teams collect core samples by drilling from the surface of the ice cap to the bedrock at its base. The layers tell the stories of how the climate changed over hundreds or thousands of years. "The beauty of the Quelccaya record is we have very distinct annual layers," said Lonnie Thompson, a climate-change scientist and glaciologist at the Byrd center.

"Every dry season, we have a dust layer, and we count those layers back in time, much like you would count tree rings."

Thompson and his wife and colleague, Ellen Mosley-Thompson, a distinguished professor of geography and director of the Byrd Polar Research Center, removed the core from the Quelccaya ice cap in Peru in 2003. The Thompsons realized that the Peruvian cores were similar to ice cores they had retrieved from Tibet and the Himalayas. When they found matches in ice cores taken from opposite sides of Earth, they knew they had "Rosetta stones" with which to compare other climate histories from tropical and subtropical regions. The cores, which show unprecedented detail dating back 1,800 years, will help link past climate changes around the globe, they said.

Paolo Gabrielli, principle investigator and lecturer at the Byrd center, studied the Quelccaya sample, which contains ice layers from A.D. 793 to 1989. Gabrielli found low and stable levels of trace elements in the ice layers that would have formed from A.D. 794 to about 1450. But around 1480, there was a spike in bismuth, a heavy metal that has similar properties to arsenic. And in the layers that would have formed around 1540, larger amounts of bismuth and other metals, including lead, began to appear.

Gabrielli started digging into historic records. The year 1480 coincides almost perfectly with the expansion of the Incan empire, which mined silver from the mountains in Bolivia and elsewhere in South America. And 1540 was less than a decade after the Spanish empire began colonizing South America and taking over the Incan silver mines.

By 1572, the Spanish had introduced a process that involved grinding silver ore, which contains more lead than silver, into a powder, then mixing it with mercury to refine the metal.
Atmospheric pollution in and around the area would have contained higher concentrations of bismuth and lead, something that Gabrielli's research shows. He analyzed the chemical composition of the metals in the ice sample and concluded that the bismuth and lead on Quelccaya probably came from Potosi, the largest silver mine in the area in the late 1500s.

"We know that they were mining and extracting silver ores, but we don't know how much and when this process started to impact the environment," Gabrielli said. "So this is all basically new information." The findings, he said, open the door for other researchers — anthropologists, historians — to tell the story of how the Spanish mines would have affected people throughout that part of South America. (The researchers point out however, that man-made air pollution in the 20th century far surpasses anything produced by the Spanish mines.) Mr. Thompson said the next step in this research is another trip to Quelccaya to collect additional ice samples and conduct more tests to back up the findings. That has to happen soon, though. Climate change and global warming have caused the Quelccaya ice cap to begin melting. The deeper, older layers are still preserved, Thompson said, but the record is getting muddled. "In a way, I look at what we're doing as kind of a salvage mission to get the histories before they disappear or they get altered to the degree where you can't interpret them," he said.

Thompson said it takes 20 to 30 years before the full effect of today's climate change will be seen on the glaciers he studies.

"We already have a built-in warming going into the future," he said. "A lot of these glaciers like Quelccaya, Kilimanjaro in Africa ... are going to disappear.

"They will disappear, and the archive will disappear with them. Even if the world cools in the future, that archive of the past will be gone."

Health minister: Scientific approach needed to tackle Ahvaz air pollution

Date:16th February, 2015 Source: Tehran Times

TEHRAN - Iran's health minister said on Wednesday that a special committee must be established to scientifically study the dust problem in Khuzestan Province, the IRNA news agency reported.

Hassan Ghazizadeh Hashemi, who had traveled to Ahvaz, the capital of the province, on Tuesday to assess the situation added that installation of monitoring devices, promoting transportation facilities, expanding healthcare services and distribution of mask among citizens are among short term measures that can be taken.

He also said the government has put the Ahvaz air problem at the top of its agenda, saying there is no problem in terms of money to resolve the issue.

President Hassan Rouhani's cabinet set up a working group on Monday to study how to tackle the dust particles. The working group was chaired by the first vice president Jahangiri, health minister, the Department of Environment chief, and oil minister.

According to the health minister, the dust mostly originates from the Hawizeh Marshes and southeast of Khuzestan province, the Eqhtesad Online reported on Friday.

The Hawizeh Marshes lie east of the Tigris and a portion lie in Iran.

In a meeting with the representatives of Khuzestan province in parliament the health minister said he and Vice President Es'haq Jahangiri will visit Iraq at the head of a delegation to discuss the issue with Iraqi officials in order to find a solution to the problem.

"I believe that instead of seeking to blame ministries and organizations… we should find a proper solution to the problem through a scientific approach."

Centre to launch air pollution app

Date: 16th February, 2015 Source: Hindustan Times

The Capital is set to get the country's first mobile app designed to monitor air pollution in the city on real-time basis. The app, also the first to be launched by the Centre, goes live on Tuesday and would monitor air quality in five regions of Delhi. The app, called SAFAR-Air, has been designed by the Pune-based Indian Institute of Tropical Metereology (IITM), an autonomous institution under the ministry of earth sciences, and will provide updates on current air quality and forecast for up to three days. A similar service will be launched in Mumbai and Pune soon.

"The app provides easily understandable colour-coded advisories for people to plan their outdoor trips based on air quality," said Gufrain Beig, project director of System for Air quality Forecasting and Research (SAFAR).

The app is based on the air quality forecasting project handed to IITM during the 2010 Commonwealth Games and the latest air quality index prepared by the Central Pollution Control Board. The index uses a colour-coded system to indicate air quality wherein red means that one should stay indoors. According to the index, air quality in most of the monitored locations in Delhi was red in December and January. The situation has improved slightly in February with the warm weather helping the dispersal of pollutants. Air quality advisories will be available for north, south, east, west and central Delhi. But, the information may not be very precise as IITM has one monitoring station for each zone, with some at a distance from highly-polluted zones.

The app does not take into account the air pollution monitoring done by the Central Pollution Control Board and the Delhi Pollution Control Committee, whose network of pollution monitoring stations is much bigger than that of IITM. For the app to introduce a warning system, IITM will need to upgrade the software that collects air quality information on real-time basis. In addition, synergy between different agencies that collect data on air quality in Delhi will be essential. In 2014, the World Health Organization (WHO) listed Delhi as the most polluted city among 1,600 in the world, for particulate matter pollution. It also warned that

air pollution was the six biggest killer in India. According to a recent study, air pollution in Delhi can reduce one's life by up to three years.

When bus drivers strike, air pollution plummets (so what's the lesson?)

Date: 16th February 16, 2015 Source: Treehugger

There are many, many reasons to use public transit, and to build our cities to be friendly to bikes and pedestrians. Yet transit, as it currently stands, is not without its own challenges too. This fact was highlighted when London's bus drivers recently went on strike. All of a sudden, a city that is notorious for dangerous air pollution, saw a huge drop in air-borne nitrogen oxide. Concentrations around Oxford Street were 58 micrograms per cubic meter (ug/m3), while the previous four Thursdays saw average levels of 172ug/m3.

"Nitrogen dioxide levels on Oxford Street – one of the most polluted roads in the world – were noticeably lower yesterday while a bus strike across the city was going on. This has led to increased calls for Oxford Street to be pedestrianised and for the city to invest in cleaner public transport." The last part of the quote above is particularly significant.

While I am sure there will be some contrarians and anti-greens crowing at the "dangers of buses", the sensible response – and one which has already been evident in petitions and op-eds and social media feeds across the city – is to call for more, not less, investment in cutting-edge emission-free buses, not to mention other measures to clean up the city.

The foundations are being laid for a much greener, more joined-up approach to London's transportation challenges. The city is moving ahead with impressive cross-city cycling "highways," and is treating biking as another form of mass transport by mandating bike parking. Plus, the city already has a few electric buses and some 98mpg range-extended black cabs hitting the streets. Here's hoping that the bus strike helps to provide further impetus for this coming transition.

A Digital Waterfall That Illuminates the Threat of Air Pollution

Date: 16th February, 2015 Source: HYPERALLERGIC

While we can see the rhythm of traffic or the churning clouds from factory smokestacks, the actual levels of pollution in our daily air are less visible. In an ongoing public art project by artist Andrea Polli called "Particle Falls," a waterfall of light changes colors from blue to flaming reds and yellows based on real time air quality data. Polli, an associate professor of art and ecology at the University of New Mexico, debuted this digital art installation in San Jose, California, in 2010. Now after cascading through Detroit, Philadelphia, and Pittsburgh, "Particle Falls" is now in Logan, Utah. "Particle Falls" is controlled with a nephelometer, which shoots a light beam into the air to measure the concentration of fine particulate matter, particularly the smallest particle, PM2.5. "Presenting 'Particle Falls' in several different places has been an eye-opening experience, highlighting how important context is to air quality," Polli told Hyperallergic.

"In Detroit and Philadelphia, for example, the particulate monitor [nephelometer] was placed on a busy street near a stoplight," she explained. "We were able to see the effects of various kinds of buses, seeing real improvement from cleaner air buses for example, and how much more particulate is created by diesel vehicles and idling. However, in Pittsburgh and Logan, Utah, the context was very different." She noted that the persistence of the high levels in these two cities was due to an inversion effect in winter in Utah, and the presence of industry in urban Pittsburgh.

Now part of the newly launched ARTsySTEM project at Utah State University, which brings together art, science, and math, the tumult of blue light on campus is part of Polli's work to visualize the daily impact of air pollution. Her previous projects include "Cloud Car" in New York, which was parked at various spots in the city shrouded in mist symbolizing emissions, and "Breather" in Delhi, which consists of an automobile trapped in a bubble surrounded by its own suffocating fumes. A more collaborative project, "Hello, Weather!," involved five semi-professional weather stations in international community centers that shared data online.

Now through April, the data visualization of the temporary Utah waterfall will be responding to the fluctuating levels of pollution in the surrounding area and representing them with differing concentrations of blue, red, and yellow. It is a strangely beautiful digital stream that is forcing people to confront what they might not want to see.

"Particle Falls" will next go on view February 19, 20, March 19, and April 16 on the side of the Caine Performance Hall at Utah State University (1100 East & 700 North, Logan, Utah).

Authorities have failed to reduce noise and air pollution: HC

Date: 17th February, 2015 Source: The Hindu

Observing that authorities have failed to show concern needed to address the problems of high noise and air pollution in the city from past two years, the Karnataka High Court on Monday directed the State to come out with an overall action plan.

Also, the court said that Secretary of the Urban Development Department should be personally present during the next hearing of a PIL petition, which the court had in 2013 initiated suo motu on taking note of newspaper reports that noise levels around hospitals and residential areas are in excess of permitted levels.

A Division Bench comprising Chief Justice D.H. Waghela and Justice Ram Mohan Reddy also asked the BBMP and the Karnataka State Pollution Control Board (KSPCB) to file a compliance report on the orders issued by the Court earlier, besides directing them to submit data of noise and air pollution levels recorded during the past one month. On development of three model roads by the BBMP based on the court's earlier direction, the Bench wanted to know why the roads that are already in fairly good condition were taken up for improvement.

"Raj Bhavan and Cubbon roads are good. It is like hospitalising healthy persons. What about the roads which need treatment," the Bench questioned.

"Strange are the methods of the BBMP. Has your commissioner visited St. Marks Road, which is in the heart of city? In the name of widening footpaths, you have eaten the roads. The footpaths have been widened three

times though nobody walks on them, and you have reduced the road where even one vehicle can't move…," the court observed.

Meanwhile, the counsel for KSPCB informed the Bench that authorities are yet to implement many directions issued by the Board for reducing noise levels.

Flu outbreak and air pollution: Little cheer as Hong Kong welcomes CNY

Date: 18th February, 2015 Source: THE STRAITS TIMES

The double whammy of a persistent flu outbreak and "serious" air pollution is casting a pall over Chinese New Year festivities in Hong Kong starting tonight. As Hong Kongers gather for reunion dinners and go visiting in the coming days, the health-care industry is preparing for a potential spike in the number of flu cases. This is even as the city reported 18 flu-related deaths in the past 24 hours as of noon yesterday - the highest number seen in a single day since the current outbreak began early last month. This brings the total number of deaths to 228, though the toll is still far from the height of a reported 1,000 or so fatalities in 2005.

In anticipation of more cases over the holiday, more than 300 doctors will be on standby in public hospitals, while public outpatient clinics are being equipped to handle an extra 1,000 cases daily, said health-care authorities. The concern is that crowded trains, buses and homes make it easier for the transmission of viruses. The high number of travellers in and out of Hong Kong is also a worry, said virologist Malik Peiris, who is the director of the School of Public Health at the University of Hong Kong. Meanwhile, the government is trying to get hold of doses of vaccine meant for southern hemisphere countries such as Australia, in a bid to mitigate against the ineffectiveness of the earlier vaccine, which was not a good match for the H3N2 strain that eventually dominated, Prof Peiris added.

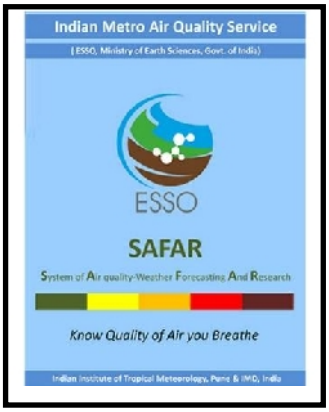
The southern hemisphere vaccine is usually available in April. Health Secretary Ko Wing Man said the earliest the city can get it would be in May or June.

Yesterday, the Centre for Health Protection (CHP) called a meeting of its scientific committee on vaccine-preventable diseases to discuss the situation.

CHP controller Leung Ting Hung said the "peak period" of the outbreak will last for some time, while committee chairman Chow Chun Bong warned that the highest-risk groups are the elderly aged 65 and above, as well as those with underlying conditions such as hypertension, diabetes and lung disease. Exacerbating the situation is an ongoing wave of air pollution, with the Environmental Protection Department warning on Monday that it could reach "serious" levels. The air quality in the past week, according to the Real-time Air Quality Index used in Hong Kong, has ranged from "unhealthy" to "very unhealthy", with smog shrouding Hong Kong's famous skyline. Said Prof Peiris: "Air pollution damages lungs and in combination, both the flu outbreak and the bad air will aggravate (the discomfort from) the other." Despite the negative news, Hong Kongers are not changing their Chinese New Year customs - for now. Hotpot restaurants, where the use of communal cutlery has made a return after the Sars epidemic in 2003, reported "business as usual".

A new app that forecasts air pollution in Delhi, Pune

Date: 18th February, 2015 Source: IBN Live



Pune: India's earth sciences ministry has launched the country's first air quality mobile application to provide the forecast for air quality and corresponding health advisories in real time. The service is presently for Delhi and Pune. Available on Android at present, SAFAR-AIR will provide current and one to three day forecast based on a colour-coded system indicating air quality, where red would mean "very poor".

Developed by scientists at the Pune-based Indian Institute of Tropical Meteorology that had earlier designed country's first air quality forecasting scheme - system for air quality forecasting and research (SAFAR) - this mobile app can be downloaded free from its official site. It is also available on Google Play Store and on the ministry's website.

The users in Delhi and Pune, the first two cities to get the service, would now be able to plan their personal outdoor activities based on the advisories on the app. SAFAR-Mumbai will be launched in April 2015. Releasing the app, Earth Sciences Secretary Shailesh Nayak said SAFAR-AIR was an effort by the government to generate consciousness among people and orient them towards a sustainable lifestyle low on carbon emissions. He said the initiative was also expected to help policy makers adopt city-level practical measures for clean air, especially in Delhi. Delhi would have air quality information and advisories available for five locations - west, east, north, south, and central while it would be four - in Pune.

We have to take emergency measures to check air pollution in Delhi: Prakash Javadekar

Date: 18th February, 2015 Source: India Today

A recent air quality monitoring survey, released on Monday by Greenpeace, found that the deadly PM2.5 levels in Delhi are 10 times higher than the safety limit prescribed by the World Health Organisation (WHO) and four times more than even the Indian safety limit. Rahul Kanwal spoke to Minister for Environment and Forests Prakash Javadekar on the issue. Here are the excerpts:

Q . A Shocking Greenpeace Study says that Delhi is the most polluted city in the world. We are all breathing poison. Is the government aware and what is it planning to do about it? Sir, I want to understand from you whether there is an acceptance in the government that Delhi is now the most polluted city in the world?

A. Absolutely, I understand that the situation of air quality in Delhi and in many other cities is very critical and bad. But that is not only India's story, it's the story of many cities, because the way we are growing. Unfortunately what happened in the last 10 years, this ministry became in a way licence permit quota "Raj". Instead it should have devolved more energy on air pollution, water pollution, clean energy. We are laying that emphasis and I am now initiating a campaigning in 20 cities "Fresh air, my birth right" with people participation. But as far as Delhi is concerned let me tell you two things: First: We know the problem is serious but I am not going into squabbling with Greenpeace or with whose data, because they monitor at one point. They monitor only on one parameter of 2.5 PM (particulate matter). We are, in Delhi, mapping the air

pollution at 25 different locations, continuously on 5 parameters and we are now upgrading it to 8 parameters. So we have a composite data.

Q. So what does your data show? Are you saying that Delhi is not polluted? Even according to your data of 8 parameters Delhi is still the most polluted city in the world?

A. No. No. I am saying that is the first thing that you must know comprehensively about what you are doing. What is the status? and status is bad.

Q. Even according to your data ?
A.Yes.

Q: So what is your data saying? Let's understand that. How does Delhi compare with other cities.
A: If 60 is the particulate matter or any level which is acceptable, we are already 2.5 times worse than what it should have actually been.

Q: Because it's not just Delhi, sir. According to WHO data out of 20, 13 of the worst polluted cities in the world are Indian cities.

A: That is why you don't bring WHO and other organisations because one-on-one there are many lacunae in their presentation. Sometimes I think that there is design in such presentations.

Q. Why would there be a design? What is your insinuation, sir?
A. Because if on one parameter on one day you meter something and you reach a conclusion, that is not the way. You must look at air as a whole and we must comprehensively judge it.

Q. So when you say design, are you suggesting that there is a deliberate attempt to show India in poor light?
A. No. I am not saying that. I used the word design because I don't want to take this debate to that level. Because our air is not fresh in cities. We want clean our air, we want to clean our water, we want to have clean energy and we want to increase our urban greens more rapidly. That's our priority. We have to take action and our ministry has already conducted three meetings with the Delhi government. When the first report came or even the earlier reports, on our own scales, which are bad, we gave them many suggestions.

Q. Sir, you have been in power for 8 months. What have as minister you done to fix this problem ?
A. We have already taken it very seriously and as I told you, we have lost 10 valuable years. Nobody addressed this problem the way it should have been handled, and more importantly we have taken it very seriously with all the states and particularly all the city administrations where the problem is real. In Delhi, we had two-three meetings with concerned officials and we had given them the road map of how to deal with it in a short-term period and what are the long-term solutions. The issue here is and that is why I said that I don't want to dispute and I don't want to go into that discussion whether that WHO's findings or Greenpeace findings are correct or not. That's a small thing. We are a polluted city and it's a fact. We have the humility to accept that this the condition. It has not come about in 8 months.

Q: I have here some things that Beijing does, for example. There's data here which says that on some days Beijing is better than Delhi. They actually have something called Pollution Emergency Measures where on certain days they say that people shouldn't go out especially young kids, pregnant women, old people shouldn't be out and if you go out you should be wearing masks. Do you think we have reached a stage where people in Delhi should be wearing masks?
A: I've been in Beijing many times and from what I've seen I don't agree that we are worse than Beijing. Again, I am not disputing the signs. What I am saying is that we also have to take emergency measures. We also have to train the people.

Q. Sir, you are not answering my question, should there be days where in the morning if your data shows the pollution level is way above what is safe that you tell the schools, you tell the children not to go out, you tell parents to get emergency masks, are we reaching that kind of situation sir ?

A. I don't think we are reaching that level where we will ask our people not to move out, but yes there are many things to be done. Particularly those with asthmatic conditions, we can give them alert that please do this, don't do this and more importantly we have to take action. Mask is not a preventive thing but I am going into preventing things, we are now launching a composite air index -- one number, one code, one colour which will indicate at same point at public display. So people will be aware regarding the health of a particular location. It will also be a constant reminder to the people and alert the people. Then we will launch a campaign also where people will be trained in how to combat this. A mask is a small part of it.

Q. Environment Minister, I am asking you whether you believe that time has come for people to consider wearing masks and go out?
A. I don't think so.

Q: Despite the data showing that Delhi is polluted 10 times more than safety norms?
A: That is not true. Our data shows it is three times.

Q: But three times is bad enough, sir.
A: That is what I am saying. That is what I've said. We are facing a real crisis in as many cities and the world is seeing. I am not bothered about who describes me the baddest or worst. We are the worst. We are bad and we have to improve and to that end we are doing technological innovation, we are taking policy decision, and we are taking short-term measures. Arvind Kejriwal has now taken over and I will be calling the relevant ministers and even if the Chief Minister comes, we will call all the Delhi people who are responsible to manage air in Delhi and will definitely go with it.

Q. There are three big decision that helped control air pollution in Delhi. At least in the years gone by. One was CNG, second is metro and third was moving polluting industries out of Delhi Two out of those three were done by courts. So my question is that green activism that we saw from courts, is that essentially our only hope ?
A. No. We will take our own decision, I hope that with our positive actions, courts will not to be required to take those decisions. Because we'll walk that environment path. My announcement today is, that next week only we will call Delhi govt. officials and if chief minister or other ministers come they are welcome.

Air pollution reaches dangerous level in 106 Chinese cities

Date: 20th February, 2015 Source: Zee News

Beijing: The air pollution reached "dangerous levels" in 106 Chinese cities due to use of fireworks and firecrackers during the celebrations welcoming the Lunar New Year, according to a report. On the eve of New Year on Wednesday night, the Air quality index (AQI) surpassed 300 in 106 cities, state-run Xinhua news agency reported.

Based on China's standard, an AQI between 201 and 300 is considered "heavy pollution", and an AQI of over 300 is defined as "serious".

The China National Environmental Monitoring Center (CNEMC) put the number of air-polluted cities at 201 from Wednesday night to the daytime of Thursday.

More than 40 of them saw "serious pollution." But parched Beijing had its first snowfall on the first day of the Lunar New Year yesterday afternoon.

Beijing today is draped in snow white as most of city experienced moderate snow fall. Skies in the neighboring Tianjin Municipality and Hebei Province were also polluted due to fireworks. The PM 2.5 level did not drop from its peak until 3 a.M. Thursday, according to the CNEMC. Cities in the northeast as well those in Sichuan and Gansu provinces also suffered heavy air pollution, CNEMC's statistics showed. A single firecracker would cause heavy pollution within an area of 10 cubic meters, according to the experiment by Shangguan Wenfeng, a professor with the Center for Combustion and Environmental Technology with the Shanghai Jiao Tong University.

Setting off fireworks during the Lunar New Year is an age-old tradition in China, with ancient superstitions believing the light and sound would scare away evil spirits. In more recent years, they're used to bring a festive atmosphere during the country's most important holiday. Firecracker orders at Beijing retailers are down 20 per cent this year as authorities have slashed the number of permitted sales days and reduced retail spots amid pollution concerns. But it is a different scenario in the countryside, where there is no restrictions on firecrackers. In Qianshan County alone, the sales revenue is more than 50 million yuan (USD 8.16 million), Li said. "The living standard in rural areas is increasing and setting off firecrackers has become a way of blessing and entertainment for rural residents," he said. Migrant workers who come back home always set off a large number of firecrackers during the New Year to show off how much they have earned in the cities, said Wei Bin, a cultural official in Rongshui Miao Autonomous County in south China's Guangxi Zhuang Autonomous Region. "Because of the restrictions in the cities, some urban residents choose to indulge themselves in the fireworks show in the countryside," said Shi Ke, who is in charge of a fireworks company in Guangxi.

High air pollution cuts most Indian lives by 3 years

Date: 21st February, 2015 Source: The Hindu

India's high air pollution, ranked by the World Health Organisation (WHO) among the worst in the world, is adversely impacting the lifespans of its citizens, reducing most Indian lives by over three years, a new study has said. Over half of India's population — 660 million people — live in areas where fine particulate matter pollution is above India's standards for what is considered safe, said the study by economists from the University of Chicago, Harvard and Yale published in Economic & Political Weekly. If India reverses this trend to meet its air standards, those 660 million people would gain about 3.2 years onto their lives, the study said.

Put another way, compliance with Indian air quality standards would save 2.1 billion life years, it said. "India's focus is necessarily on growth. However, for too long, the conventional definition of growth has ignored the health consequences of air pollution," said Michael Greenstone, an author of the study and director of the Energy Policy Institute at the University of Chicago (EPIC).

"This study demonstrates that air pollution retards growth by causing people to die prematurely. Other studies have also shown that air pollution reduces productivity at work, increases the incidence of sick days, and raises health care expenses that could be devoted to other goods." The new figures come after the WHO estimates showed 13 of the 20 most polluted cities in the world were in India. "The loss of more than two billion life years is a substantial price to pay for air pollution," said Rohini Pande, also an author and director of Evidence for Policy Design at the Harvard Kennedy School. "It is in India's power to change this in cost effective ways that allow hundreds of millions of its citizens to live longer, healthier, and more productive lives. Reforms of the current form of regulation would allow for health improvements that lead to increased growth," Pande said. The authors — who also include Nicholas

Ryan of Yale, Janhavi Nilekani and Anish Sugathan of Harvard, and Anant Sudarshan, director of EPIC's India office — offer three policy solutions that would help to cost-effectively decrease India's pollution. One initial step would be to increase its monitoring efforts and take advantage of new technology that allows for real-time monitoring, the authors said.

Indoor Air Far More Polluted Than Outdoor Air? Here Are Nine Almost-Impossible-To-Kill Plants That'll Clean Your Home's Air

Date:21st February, 2015 Source: INQUISITR

Outdoor air pollution is one of the major reasons why the green community is pushing for the advancement of clean energy technology. As fossil fuels become less available, given the fact they are a non-renewable resource (or at least takes way too long to renew), green sources of energy will be sought out, especially energy from the air and sun. But what about indoor air pollution? Believe it or not, the quality of indoor air can be far worse than what is outside. As a matter of fact, the Inquisitr previously reported on the possibility of the government stepping in to mandate an indoor air change. Though the aforementioned may not have passed due to possibly being a violation of a person's rights, it is still evident that most indoor air environments are worse than air outside. Thankfully, there are nine common houseplants that do a phenomenal job cleaning indoor air. The best part about said plants: they are basically impossible to kill.

Before diving into what nine impossible-to-kill houseplants will clean out indoor air, it is best to know why it needs to be cleaned out in the first place. Most people have some knowledge of what makes outside air polluted such as carbon emissions. The thing about indoor air is its pollutants are worse and there is a lot more of it due to poor circulation. According to an article by the United States Environment Protection Agency (EPA), the pollutants of air indoors may be two-to-five times higher than outdoor pollutant levels. At times, the level can even reach 100 times higher. Because of this, it is ranked as one of the top five environmental risks to public health. What's worse, problems may develop subtly without any easily-recognizable or immediate impacts on health.

Many of the indoor air pollutants people may be inhaling are mostly from combustion sources including oil, gas, kerosene, coal, wood, and tobacco products. Sources may include building materials and furniture, asbestos-filled insulation, wet or damp carpet, and cabinetry or the like made of certain pressed wood products. Household cleaning and maintenance products also contribute to indoor air pollution. Even outdoor air pollution sources such as radon and pesticides may creep in to assist its indoor counterpart. Thankfully, Simple Organic Life was able to compile a list of indoor houseplants that can help solve these air quality issues. Even for those who lack any green in their thumb (unskilled in taking care of plants), these houseplants are, as mentioned before, basically impossible to kill. Check out the gallery of them below and start cleaning your indoor air today.

NTPC's Badarpur unit among the most polluting power plants: CSE

Date: 21st February, 2015 Source: Live Mint

New Delhi: India's coal-based thermal power plants are some of the most inefficient in the world and have high pollution levels, said a two-year long study by the Centre for Science and Environment (CSE) on Saturday.

CSE also released environmental rating of the coal-based power plants in the country, according to which,

NTPC's Badarpur thermal power plant in Delhi is one of the most polluting units. CESC's Budge Budge thermal power station in West Bengal topped the list of environmental rating. The study also found that 55% of the thermal power units were violating air pollution standards. The performance of government-owned NTPC, which is also the largest coal-power producing company in India, was also found to be below par. The CSE study, named Heat in Power, analysed and rated 47 coal-based thermal power plants on nearly 60 environmental and energy parameters. According to the study, the "sector scores poorly on all parameters getting a mere 23% score compared with 80% that a plant following all best practices can get". "Forty per cent of the plants rated received less than 20% score. Inefficient resources use and technological backwardness leading to high levels of pollution," the study said. "The objective of the study was to give a clear picture of the environmental performance of the sector," said CSE's director general Sunita Narain. "Our finding is that in India, where the demand for power is increasing, power plants are performing way below the global benchmarks. Given the rapid increase in coal-based power projected by the government, stress on precious resources like water and land will increase and air and water pollution will worsen, unless corrective measures are taken by the industry and policy-makers," said Narain.

"The bottom line is that we cannot afford to continue discounting the environmental and health costs of polluting coal-based power plants. This is the clear message from our rating. We hope that the industry and government will listen to this message and act on it," Narain added. CSE's deputy director general Chandra Bhushan said thermal power plants are operating at 60-70% capacity only and if capacity utilization is improved the sector can meet additional power requirement without building new plants. Bhushan further said that their analysis points out that there is a lot of room for improvement. As per the study, the average efficiency of the thermal power plants was 32.8%, one of the lowest among major coal-based power producing countries, and the average carbon dioxide emission was 1.08 kg/kWh which is 14% higher than China. Meanwhile, Tata-Mundra (Gujarat) plant received an award for having the highest energy efficiency, while Gujarat Industries Power Co. Ltd (GIPCL) project in Surat won an award for lowest water use. The study also revealed that, "India's thermal power plants are estimated to withdraw around 22 billion cubic metre of water, which is over half of India's domestic water need". Disposal of fly ash also came out as a major problem in the study as presently only about 50-60% of the 170 million odd tonne of fly ash generated by the sector is utilized while the remaining is dumped into poorly designed and maintained ash ponds. "Currently, about a billion tonne of these toxic ashes lie dumped in these ponds, polluting land, air and water," the study added.

India's Air Pollution Death Toll: More Than 1 Billion Years of Life

Date: February 21, 2015 Source: The Blaze

The study published Saturday in the Economic & Political Weekly highlights the extensiveness of India's air problems after years of pursuing an all-growth agenda with little regard for the environment. Thirteen Indian cities are now included on the World Health Organization's list of the world's 20 most polluted. That pollution burden nationwide is estimated to be costing more than half the population at least 3.2 years of their lives.

The study's authors acknowledge their estimations may be too conservative, as they are based in part on satellite data that tend to underestimate levels of fine particulate matter known as PM2.5. India has a sparse system for monitoring air quality.

'Indians losing three years of life due to air pollution'

Date: 21st February, 2015 Source: The Economic Times

WASHINGTON: If India can refine its goals to meet air standards, 660 million people would add about 3.2 years into their lives, a significant research has found, adding that compliance with Indian air quality standards would save 2.1 billion life-years.

The team involving several Indian-origin researchers from the Universities of Chicago, Harvard and Yale have found that India's high air pollution, ranked by the World Health Organisation (WHO) as some of the worst in the world, is having an adverse impact on lifespans.

"India's focus is necessarily on growth. However, for too long, the conventional definition of growth has ignored the health consequences of air pollution," said Michael Greenstone, lead study author and director of the Energy Policy Institute at the University of Chicago (EPIC) in a University press release.

The new figures came after the WHO estimates showed 13 of the 20 most polluted cities in the world were in India, including the worst-ranked city - Delhi.

India has the highest rate of death caused by chronic respiratory diseases anywhere in the world. This study demonstrates that air pollution retards growth by causing people to die prematurely. "The loss of more than two billion life years is a substantial price to pay for air pollution. It is in India's power to change this in cost-effective ways that allow hundreds of millions of its citizens to live longer, healthier, and more productive lives," emphasised Rohini Pande, co-author and director of Evidence for Policy Design at the Harvard Kennedy School.

"Reforms of the current form of regulation would allow for health improvements that lead to increased growth," she noted.

The authors, Nicholas Ryan of Yale, Janhavi Nilekani and Anish Sugathan of Harvard, and Anant Sudarshan, director of EPIC's India office, offer three policy solutions that would help to cost-effectively decrease India's pollution. One initial step would be for India to increase its monitoring efforts and take advantage of new technology that allows for real-time monitoring. "Intermittent sampling of plants taken once or twice a year is not enough to identify violators," the authors wrote. Further, there is not enough pollution monitoring stations for the public to learn about ambient concentrations. As one point of comparison, Beijing has 35 monitoring stations while the Indian city with the most monitoring stations, Kolkata, has only 20. Additionally, the authors say a greater reliance on civil rather than criminal penalties would instill a "polluter pays" system that would provide polluters with an incentive to reduce pollution.

"Other studies have also shown that air pollution reduces productivity at work, increases the incidence of sick days, and raises health care expenses that could be devoted to other goods," Greenstone concluded.

Air pollution cuts Indian lives by three years: Study

Date: 22nd February, 2015 Source: The Financial Express

India's high air pollution, ranked by the World Health Organisation among the worst in the world, is adversely impacting the lifespans of its citizens, reducing Indian lives by over three years, a new study has said. Over half of India's population — 660 million people — lives in areas where fine particulate matter pollution is above India's standards for what is considered safe, said the study by economists from the University of Chicago, Harvard and Yale, published in this week's Economic & Political Weekly. If India reverses this trend to meet its air standards, those 660 million people would gain about 3.2 years onto their lives, the study said. Put another way, compliance with Indian air quality standards would save 2.1 billion life-years, it said. "India's focus is necessarily on growth.

However, for too long, the conventional definition of growth has ignored the health consequences of air pollution," said Michael Greenstone, an author of the study and director of the Energy Policy Institute at the University of Chicago (EPIC).

"This study demonstrates that air pollution retards growth by causing people to die prematurely. Other studies have also shown that air pollution reduces productivity at work, increases the incidence of sick days, and raises health care expenses that could be devoted to other goods." The new figures come after the WHO estimates showed 13 of the 20 most polluted cities in the world were in India, including the worst-ranked city, Delhi. "The loss of more than two billion life years is a substantial price to pay for air pollution," said Rohini Pande, also an author and director of Evidence for Policy Design at the Harvard Kennedy School. "It is in India's power to change this in cost-effective ways that allow hundreds of millions of its citizens to live longer, healthier, and more productive lives," Pande said.

The authors—who also include Nicholas Ryan of Yale, Janhavi Nilekani and Anish Sugathan of Harvard, and Anant Sudarshan, director of EPIC's India office—offer three policy solutions that would help to cost-effectively decrease India's pollution. One initial step would be to increase its monitoring efforts and take advantage of new technology that allows for real-time monitoring, the authors said. Further, there is not enough pollution monitoring stations for the public to learn about ambient concentrations. As one point of comparison, Beijing has 35 monitoring stations, while the Indian city with the most monitoring stations, Kolkata, has only 20. The authors argue increased monitoring would put more pressure on polluters to comply with existing regulations.

While the government has taken important steps to improve monitoring, there is room for further expansion. Additionally, the authors say a greater reliance on civil rather than criminal penalties would instill a "polluter pays" system that would provide polluters with an incentive to reduce pollution. India's flagship environmental laws, the authors write, are built on an outdated criminal system with draconian penalties such as imprisonment or industry closure. Because these penalties are so severe, they are difficult to enforce. Building on more rigorous monitoring and financial penalties, the authors suggest India should begin to adopt a market-based approach toward regulating emissions, like an emissions trading system. Such an approach has been proven to reduce pollution at the lowest possible cost, making it compatible with the continued economic growth that is vital for India's future. The study draws from an earlier study by Greenstone conducted in China in which he and his coauthors compared pollution in north China—where a policy subsidised coal use for home heating—to south China.

Through this study, he was able to separate the effect of pollution from other factors that also affect mortality to find an important metric: Every additional 100 micrograms of total suspended particulate matter per cubic meter in the atmosphere lowers life expectancy at birth by three years. That metric was then applied to the Indian data.

MARCH 2015

Beijing Quietly Curbs Discussion of Documentary on Air Pollution

Date:02nd March, 2015 Source: The Wall Street Journal

BEIJING—A deeply emotive documentary on air pollution by a well-known journalist was quickly praised by a top government official, but after it drew some 100 million views online over the weekend, censors stepped in to tamp down the buzz, according to several accounts. Produced by former state television broadcaster Chai Jing, "Under the Dome" is a bleak look at the state of the Middle Kingdom's skies and an unhappy commentary on how government efforts to target the problem have failed.

Ms. Chai decided to investigate pollution after the birth of her daughter, who was diagnosed with a benign tumor at birth and had to be swiftly operated upon.

"Before, I never paid attention to pollution. Wherever I went, I never wore a mask," Ms. Chai says. But she says caring for her daughter—whom she compares to a prisoner, kept inside away from the smog for most of her first year—made her increasingly concerned about the air. The film has dominated China's social media following its release online Saturday, which prompted both praise and criticism.

China's War on Air Pollution May Cause More Global Warming

Date: March 02, 2015 Source: Scientific American

China's efforts to improve urban air quality are often viewed as a helper for fighting climate change, but a new joint China-U.S. study says otherwise. The study—carried out by researchers at the Massachusetts Institute of Technology and Tsinghua University in Beijing—was released last week. It shows that China's strategies for cleaning up air do not necessarily lead to carbon dioxide emissions reductions. Sometimes, according to the study, the efforts could actually increase emissions. The study came as cleaning up air climbed to near the top of China's policy priorities, especially with record air pollution levels in 2013. The smog triggered unprecedented public outcry that motivated Chinese leaders to declare a "war on pollution."

China rolled out its Air Pollution Action Plan, which calls for limiting coal to 65 percent of the primary energy mix and prohibiting any increase in coal use in three major urban regions along the coast. In addition to displacing coal, the plan also promotes the installation of desulfurization, dust-removal equipment and other pollutant treatment technologies in industrial boilers, furnaces and power plants, particularly those close to cities. "The urgency with which Beijing is tackling air pollution is certainly positive, and these efforts will also have related benefits in curtailing carbon dioxide emissions—to a certain extent," the report said. "But it would be a mistake to view the current initiatives on air pollution, which are primarily aimed at scrubbing coal-related pollutants or reducing coal use, as perfectly aligned with carbon reduction." That is because once low-cost opportunities to reduce coal are exhausted, the continued displacement of coal from China's energy mix will become more expensive. If the focus remains narrowly on air quality, the researchers say, Chinese power producers will likely stick with end-of-pipe solutions—such as scrubbing pollutants from the exhaust stream of coal power plants—rather than switching to use more renewable energy. That, in turn, slows down China's green transition in energy structure. Worse yet, according to the researchers, if the pollution-scrubbing technologies are running on coal-generated electricity, the use of them could increase carbon emissions, even as air quality improves. Would a carbon price be better than

scrubbing? Wang Tao, an expert on climate and energy policy at the Carnegie-Tsinghua Center for Global Policy in Beijing, agreed. "Although fighting air pollution and combating climate change can go hand in hand in many aspects, sometimes they also conflict with each other," Wang said. He added that Chinese policymakers will have to decide their short- and long-term goals, based on which environmental problems are most pressing. For the report authors, an easier approach is to put a price on carbon dioxide emissions, which could ensure air pollution control does not come at the expense of sound, long-term climate change management. "If China's leaders are willing to take aggressive steps to address climate change specifically by pricing CO2 emissions, they would make meaningful process on air quality too," the researchers said in the report. "Such a prioritization can also help the government avoid part of an otherwise substantial investment in technology to scrub pollutants and emissions from coal-fired power that will, over time, end up locking in a high-carbon energy system." China already kicked off seven regionwide carbon trading pilot programs, trading 15.68 million tons of carbon dioxide at nearly 570 million yuan ($91 million) by the end of 2014. Some government officials have indicated that an introduction of a carbon tax and a nationwide carbon market is also in the pipeline.

Traffic lights are hot spots for air pollution

Date: 03rd March, 2015 Source: Mother Nature Network

We spend 2 percent of our total commuting time stopped at intersections, but the concentration of tailpipes while we wait is so bad that we get 25 percent of our total exposure to air pollutants there, says a new study. The big problem is particulate matter, a key emission from diesel engines. The Occupational Safety and Health Administration (OSHA) warns that short-term exposure to high concentrations "can cause headache, dizziness, and irritation of the eye, nose and throat severe enough to distract or disable" workers. Prolonged exposure "can increase the risk of cardiovascular, cardiopulmonary and respiratory disease and lung cancer." The World Health Organization links air pollution to seven million premature deaths annually (one-eighth of total global deaths).

The revelations are contained in a new study by Anju Goel and Prashant Kumar, both scientists the University of Surrey in England. They monitored exposure to air pollution at various points of a typical commuter's journey, and found that intersections with traffic lights were the biggest "hot spots," thanks to drivers accelerating and de-accelerating to meet the demands of the signal. "Peak particle concentrations were found to be 29 times higher than during free-flowing traffic conditions," they found. Another problem with traffic lights is that cars are bunched up at them, so your exposure is worse than it otherwise would be. Dr. Kumar tells me, "At traffic lights, we found that when we closed the windows and switched off the fan, this gave us the lowest exposure. When the windows were closed but the fan was on, the exposure was at its highest. This is due to the fact that the air outside the vehicle at red lights is generally much more polluted than the air inside the car. Switching on the fan sucks the dirty outside air to the inside the vehicle, and the air inside takes some time to dilute or escape out of the vehicle, resulting in an accumulation of pollutants inside." I asked Dr. Kumar about New Delhi, believed to be the dirtiest city in the world in terms of air pollution. Driving there, would traffic lights actually make a really bad situation even worse? He gave an interesting answer: One of the interesting points in cities like Delhi is that commuters normally switch off their engines due to long queues on the roads. They're trying to save fuel, but it indirectly helps cut emissions. In case of congestion, most of the road becomes hotspots rather than just the red lights. However there are a number of flyovers been built in recent years in Delhi, and that helps reduce traffic congestion and hence emissions.

Air pollution can hamper your kids' memory

Date: 04th March, 2015 Source: Zee News

London: Admitting your kids to schools located near busy roads or in areas with high levels of air pollution could hamper their intellectual development, new research suggests.

Attendance at schools exposed to high levels of traffic-related air pollution is linked to slower cognitive development among seven to 10-year-old children, the findings showed. "Children attending schools with higher traffic-related air pollution had a smaller improvement in cognitive development," said Jordi Sunyer from the Centre for Research in Environmental Epidemiology (CREAL), Barcelona, Catalonia, Spain.
The findings suggest that the developing brain may be vulnerable to traffic-related air pollution well into middle childhood, a conclusion that has implications for the design of air pollution regulations and for the location of new schools. The researchers measured three cognitive outcomes (working memory, superior working memory, and attentiveness) every three months over a 12-month period in 2,715 primary school children attending 39 schools in Barcelona. The increase in cognitive development over time among children attending highly polluted schools was less than among children attending school exposed to low levels of pollution, even after adjusting for additional factors that affect cognitive development, the findings showed.
Thus, for example, there was an 11.5 percent increase in working memory in a year at the lowly-polluted schools but only a 7.4 percent 12-month increase in working memory at the highly-polluted schools. These results were confirmed using direct measurements of traffic related pollutants at schools. "Air pollution is a suspected developmental neurotoxicant," the researchers noted. The study appeared in the journal PLOS Medicine.

Why does Chamonix have some of the worst air pollution in France?

Date: 05th March, 2015 Source: The Guardian

My ears pop as the car winds its way up the mountainside. On either side, a sheer, vertical drop of over 60 metres looms. Ahead, just before the Mont Blanc Tunnel, is the picturesque French resort of Chamonix, where over 10,000 people live and almost five million tourists visit every year.

Anyone there to enjoy the pure mountain air may be disappointed. Chamonix, like much of the l'Arve Valley, is home to some of the highest air pollution levels in France. Chamonix has, in a way, become a victim of its own natural beauty. An idyllic winter wonderland situated at the foot of Mont Blanc, it is one of the oldest ski resorts in France, with unparalleled panoramas and mountain ranges that make it a mecca for skiing, gliding and climbing enthusiasts. What people often don't see, amid the excitement of a ski trip or weekend getaway, is the industrial plain of Passy below or the sheer amount of traffic that filters through the area every day. Now, as a result of its V-shaped valley, Chamonix is suffering. "Last night, we had the monthly council meeting," says the mayor of Chamonix, Eric Fournier, as we sit down in his office at the town hall. "Everybody – whether it's the opposition or not – is in agreement that Chamonix has to be a pioneer in our commitment to improving the air quality." Fournier is a Chamonix local and the son of a mountain guide, who was first elected mayor in 1995. He has spent the last 10 years trying to find a solution to the town's pollution problem. "The geographical situation of the valley – the fact that it's V-shaped – makes it quite encased, so when we have high pressure it basically puts a lid on the valley," he explains. Rising levels of pollution in the l'Arve Valley first set alarm bells ringing 15 years ago and have worsened ever since, erupting in 2012 when the EU threatened to sue Chamonix for endangering the health of its

inhabitants. Currently, the pollutants affecting Chamonix mostly include fine particles as a result of residential activity such as heating or burning green waste, and nitrogen dioxide from traffic. Another pollutant reaching worrying concentrations is a cancerous organic compound known as Benzo(a)pyrene (BaP). All of these are regulated by European laws, whose daily limits the valley often exceeds. When levels become critical, the alarm is raised. "At 10am this morning we were at 17 micrograms per cubic metre [for PM10s, fine particulate pollution] ," Fournier says, scrolling through a website that lists the stats. "We inform the population from 50 onwards and when it hits 80, it becomes critical and an alert goes out." At that point, physical activity is discouraged. Onscreen, a green box indicates that all is 'bon' in Chamonix – for now at least. Some of the steps that have been taken to combat the rising pollution levels in Chamonix are impressive. They include changes to the public transport system, which is now free throughout the valley for both visitors and residents. This costs the municipality around €5m (£3.6m) per annum, but for Fournier and the local environment, it's worth it. "Public transport carries three million people every year," he says. "And that number has tripled since it's been free." I'm aware that I am Chamonix's worst nightmare, having travelled the 80km from Geneva by car. However, most people living locally know how difficult it is to get here by train and willingly take to the roads – even if that does mean a €6 toll. Now, a new project called Grande Geneve aims to improve the rail network. "At the moment, people can't really get to Chamonix by train because it's so complicated," says Fournier. "You have to change, it takes forever and the Chamonix line is a metric line so the rails aren't the same width as the main ones. Grande Geneve will make a big difference for us." Chamonix's property sector, too, is being transformed, thanks to a local fund that promises to finance 20% of any renovation work. Tax reductions are on offer for homeowners who install sustainable heating systems and many public buildings, such as the library, have been completely redeveloped. In an area where much of the property hails from the early 1900s, particle filters, solar panels and insulation are nothing short of revolutionary. But for all his efforts, Fournier knows that he can't fix the problem without help from the state. External factors like heavy goods vehicles – a major source of pollution – are ones Chamonix has limited influence over. HGV vehicles, particularly those travelling through the Mont Blanc Tunnel, have been a headache for Chamonix over the years. Between 1999 and 2002, when the tunnel was closed after a transport truck fire, the air quality throughout the l'Arve region improved dramatically. Wild flowers that hadn't been seen for years suddenly re-appeared. The entrance to the tunnel, blackened by exhaust fumes, became pearly white.

Air pollution increases chance of stroke, study says

Date: March 06, 2015 Source: SCMP

People living in areas with high air pollution, such as New York City, face a greater risk of stroke according to a new study from New York University's Langone Medical Center.

The study found that fine particulate matter produced from burning wood or coal or from car exhaust can contribute to a narrowing of the arteries that supply blood to the brain, or carotid artery stenosis. This constriction of the arteries is associated with more than half of the strokes that occur in the United States each year.

"Our study adds to the growing body of evidence that air pollution is a significant risk factor for cardiovascular disease," said Jonathan D. Newman, M.D., M.P.H., a cardiologist at NYU Langone Medical Center and the study's lead author. "It shows that a person's cardiovascular risk is not only associated with their genes, health behaviors and lifestyle choices, it also depends to some extent on the world we live in and the air we breathe." The screening of 300,000 people living in New York, New Jersey and Connecticut was a voluntary, self-pay program that studied the health of participants' hearts and arteries using cardiovascular ultrasounds and other tests. Researchers analyzed the levels of air pollution in each person's home ZIP code, based on air quality measurements collected by the Environmental Protection Agency from

2003-2008, and the relationship between it and carotid artery stenosis. They found that those living in ZIP codes in the top quartile for air pollution had a 24 percent greater risk of stroke compared to those living in the bottom quartile ZIP codes. "The results draw attention to the importance of strategies to reduce air pollution," Newman said. "If you're in good health, the level of air pollution we see in most parts of the United States probably doesn't pose a significant health risk to you. But for people who are very young, very old or have other medical problems, air pollution could be a significant source of cardiovascular disease risk." The findings also point to air pollution as one potential factor that could help explain why some people, such as those with diabetes, seem to be more susceptible to cardiovascular problems than others. "People with other cardiovascular risk factors would be wise to limit the amount of time spent outdoors on days when air pollution levels are high," Newman said

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Energy Files: EON 'disappointed and frustrated' that UK weakened air pollution rules

Date: 06th March, 2015 Source: Energy Desk

E.ON's chief executive complained that the UK was trying to weaken its proposed power plant pollution regulations — according to documents acquired via Freedom of Information. Tony Cocker, who runs E.ON's UK division, wrote to the Environment Agency in 2013 to express "great disappointment and frustration at the agency's proposals for the regulation of coal-fired power stations", which he said represents a "significant dilution" of the future standards. This follows a recent analysis that revealed the proposed Europe-wide environmental pollution standards – called BREF – had been weakened to the extent that Chinese air standards are more stringent.

The rules, which will likely be adopted in 2016, have received numerous objections from industry-led national delegations, and parts written by industry representatives.

In a letter addressed to EA chief executive Paul Leinster, Cocker also claimed the EA was was proposing "lax approach" to implementing the future regulations, and thus "failing in its duty". E.ON, it turns out, had actually been preparing for these regulations, having "made a significant investment in Selective Catalytic Reduction (SCR) at [the] Ratcliffe-on-Soar Power Station". SCR is a kind of technology to reduce the amount of nitrogen oxides (NOx) in coal plant emissions – which contributes to air pollution as is addressed in the standards.

Los Angeles Kids are Healthier Since Pollution Levels Have Dropped

Date: March 07, 2015 Source: CARE 2

If you think adults have trouble breathing in Los Angeles, just imagine what the city's infamous smog is doing to the bodies of local kids. Indeed, scientists discovered that kids in the city were at an increased rate of having underdeveloped lungs, but new academic research has shown that, fortunately, L.A.'s efforts to cut down on pollution has halved the number of cases of damaged lungs over a period of 20 years, reports USA Today.

The study, now published in The New England Journal of Medicine, examined the lung health of over 2,000 kids starting back in 1994. Researchers at the University of Southern California found that, in the first five years of the study, 7.9 percent of Los Angeles kids tested as having "abnormally low lung

function." However, by the last five years of the study, just 3.6 percent showed the same problems. This data is important because L.A. has managed to reduce its pollution levels by 40 percent since the mid 1990s. Although there are currently more cars on the road than there were two decades ago, the city achieved this drop by enacting tougher emissions standards on its vehicles. The study strongly suggests that cleaning the air allowed kids' lungs to develop properly. It's not an exaggeration to say that protecting kids' lungs today has an impact on their longevity, either. In general, people with healthier lungs live much longer, and also are less likely to have heart disease or respiratory illnesses. While most people with common sense won't exactly be surprised by the study's findings, it is the first research of its kind to offer substantial scientific evidence that reducing pollution has a positive impact on kids' health. Previous studies have found that children in cities with lower pollution are healthier than those in smoggy cities, but USC's research is the first to demonstrate how a single community's efforts over an extended period of time can make a significant difference in public health. Hopefully, that will inspire other city officials to tackle this matter in their own backyards as well. Government and industry officials seem pleased with the current reduced rate of pollution, but some experts who have reviewed the study don't think it should stop there. "The current report and other studies suggest that further improvement in air quality may have beneficial public health effects," wrote James Ware and Douglas Dockery of Harvard's School of Public Health. The study's authors cautioned Los Angeles that settling for "good enough" may not be enough to even keep the improved state of kids' health, however. Not only are more cars popping up in the city, but corporations, particularly those on the ports, are adding undue amounts of pollution to the air as well. Researchers mention other studies that shows pollution increases during periods of drought, which looks poised to plague California in the decades ahead. "We have to maintain the same sort of level of effort to keep the levels of air pollution down," said senior author Frank Gilliland. "Just because we've succeeded now doesn't mean that without continued effort we're going to succeed in the future."

China pollution film disappears from local video sites

Date: 07th March 07, 2015 Source: Reuters

(Reuters) - A popular documentary on China's struggles with pollution was inaccessible on the country's video sharing websites on Saturday, sparking concern from Chinese Internet users that it had been censored within a week of its launch.

"Under the Dome", a film by journalist Chai Jing that explains air pollution in straightforward terms, spurred a national debate after its release last weekend and quickly garnered hundreds of millions of views on streaming video sites.

Its removal will likely be seen as underscoring the government's prime focus on maintaining social stability. The ruling Communist Party has previously described tackling pollution as a top priority and promised greater transparency on the subject.

Just on Thursday, at the opening of the annual session of parliament, Premier Li Keqiang called pollution a blight on people's lives and vowed to step up efforts to combat it.

In a sign of the sensitivity around the issue, no reporters from major foreign news outlets were called on to ask a question at a news conference held by the environment minister on Saturday. The issue of Chai's film being pulled from the Internet did not come up in the questions that were asked. The film started becoming inaccessible on the country's biggest online video sharing websites late on Friday.

By Saturday morning, it was inaccessible on all the major video sites, as well as a number of smaller video sites, with users getting error messages when they tried to play it. Neither internet regulator the Cyberspace Administration of China, nor the State Administration of Press, Publication, Radio, Film and Television

responded to requests for comment. Youku Tudou Inc, Tencent Holdings Ltd, Sohu.com Inc and iQiyi, the online video service of Baidu Inc, which operate video streaming services, also did not respond to requests for comment. Nor did Chai, the filmmaker.

The website of Communist Party mouthpiece the People's Daily, which had originally posted the video on its site, did not answer repeated calls requesting comment.

China operates one of the world's most sophisticated online censorship mechanisms, known as the Great Firewall. Censors keep a grip on what can be published online, particularly content seen as potentially undermining the Communist Party.

Chai was a well-known journalist on state-run television before making the film, which was released just as China's leaders prepared to hold the annual meeting of the National People's Congress (NPC) this week. The disappearance of the video was met with anger from many Internet users.

"Some people have the power to completely smother Chai Jing's 'Under the Dome' on the Internet, but don't have the power to smother haze in this country," one Internet user said on the Twitter-like site, Weibo.

Air Pollution Levels Show Correlations to Suicide Rates

Date: March 07, 2015 Source: Mad In India

Increases in air pollution have strong links to increases in suicide rates, according to research by a team from the Sungkyunkwan University School of Medicine in Korea.

Publishing in PLOS One, the researchers examined pollution data from 251 sites in 79 cities in Korea, and compared it to suicide numbers in 16 regions. They compensated for other potential influences on suicide rates such as celebrity suicides and economic downturns.

China pollution inspires Stanford team's air filter

Date: March 08, 2015 Source: Santa Cruz Sentinel

STANFORD- In 1999, then-Chinese Premier Zhu Rongji said that Beijing's pall of smog "would shorten my life at least five years," a hazard level scientists affirmed two years ago with a study of China's air pollution. That reality did not sit well with Stanford University researcher Yi Cui, who makes frequent trips to China.

"The air pollution there is terrible," Cui said. "I decided we needed to do something about it." He didn't realize it at the time, but a solution was in his gloved hands every day at his Palo Alto laboratory, where his team works on touch-screen and battery technologies.

Cui challenged his team at Stanford to come up with an approach that could make a dent in Beijing's lifespan-shaving smog. His researchers discovered that a mesh made from polyacrylonitrile, a chemical used to produce surgical gloves, had a remarkable appetite for air pollutants. They developed a thin filter that gobbled up even the smallest pollutants, and it could absorb many times its own weight in sooty particles. "The chemical composition of the fiber here is the key," said fellow Stanford professor Lynn Hildemann, who was not affiliated with Cui's research. Other scientists have shown that small fibers are better at trapping air pollutants, but not using this material. Now, Cui and his team hope their innovative approach can help clear the air by the lungful for people living in high pollution zones in Beijing and beyond. Even moderate levels of air pollution contribute to respiratory and cardiac ailments. In 2013, the International Agency for Research on Cancer classified outdoor air pollution as a cancer-causing agent. The

most hazardous parts of air pollution are “fine particles,” airborne chemicals and compounds smaller than 2.5 microns (about 1,000 times smaller than the smallest grains of sand).

People in high pollution zones inhale fine particles deep into their lungs, where they can become lodged or even enter the bloodstream.

The World Health Organization’s Global Burdens of Disease project estimated that air pollution contributed to 3.2 million deaths worldwide in 2010, including more than 200,000 deaths from lung cancer.

From 2010 to 2012, the American Lung Association reported that more than 46 million people in the United States live in counties with unhealthy levels of particulate air pollution. The five worst metropolitan areas were Fresno, Visalia, Los Angeles, Bakersfield and Modesto. Cui’s team used a technique called electrospinning to create filters made from different industrial polymers, explained Stanford graduate students Chong Liu and Po-Chun Hsu. Electrospinning uses an electric field to pull a thick liquid polymer into thin threads just one-thousandth the width of a human hair and deposit them on a surface to dry.

Liu, Hsu and their colleagues tested how well different meshes, each made from a unique type of polymer, filtered particles in the air. Each polymer has its own chemical properties, which will affect how it will interact with pollution particles, Liu said. “How ‘sticky’ the surface is determines” whether a particular mesh will hold on to these pollutants, she added.

They exposed each mesh to simulated air pollution from an unlikely source: burning incense.The incense smoke had air particles of a similar size to the air pollution that plagues cities in northern China, including the fine particles that are the greatest threat to human health. The polyacrylonitrile mesh grabbed and held onto more than 99 percent of all the air particulates, including over 98 percent of fine particles. The filter could collect up to 10 times its own weight. “That actually surprised me,” Cui said. “This filter is so efficient and takes in so many particles.”

Cui’s team didn’t need to force air through the filter. The fibers in the mesh were so thin that air could flow through it, and the polymer could seize pollutants as they passed. One member of Cui’s team even took a polyacrylonitrile filter to China in July. He discovered The filters they made also were at least 70 percent transparent, which the scientists hope will make polyacrylonitrile filters an attractive option for window screens in homes and apartments. “The sunlight can still come in,” Cui said.

Current window filters lack this transparency and block out sunlight, said Al Veeck, executive director of the National Air Filtration Association.

“It utilizes the best of both worlds,” he said. “It’s using outdoor air and filtering it in a more natural setting.” The filter’s thinness and transparency also could make it easy to incorporate into other devices to filter out pollutants. “It might improve airflow in personal masks,” Liu said.

Other researchers in Singapore, China and the United States also are trying to use electrospinning to filter pollutants and even pathogens from air and water. Nanofibers currently are used in some commercial air and water filters, but in conjunction with other filtering technologies, Veeck said. In principle, Cui’s approach to air filtration also could gobble up air pollutants closer to their emission sources, including cars, power plants and industrial centers. However, those filters must be durable enough to withstand high temperatures and harsh chemicals. Cui plans to continue working on new air filters for industrial, commercial or residential settings. There is certainly an urgent need for solutions, said Liu, who frequently visits her native China. “We all see this heavy haze when we go,” she said. “It’s really serious now.”

12 million cars causing air pollution, say experts

Date: 10th March 10, 2015 Source: Arab News

Experts at King Abdul Aziz University (KAU) have suggested that the relation between air and car pollution is evident and increases with the number of cars on the roads.

As the number of cars increases so do the emissions because of the kind of gas and the type of car, its size, age and the way it is driven.

Move afoot to 'dress up' Delhi's air pollution data?

Date: 10th March 10, 2015 Source: The Economic Times

NEW DELHI: Under watch across the world over the alarming quality of air in its national capital, are Indian authorities trying to shoot the messenger?

The Delhi Pollution Control Committee, which runs a real-time air pollution monitoring system, has been rapped for releasing "raw" or "unedited" air quality data on its website. In a meeting last week, the Union environment ministry has decided that DPCC's data will be "validated" by the Central Pollution Control Board (CPCB) and "quality control" mechanisms put in place before it is released online.

The decision appears strange because automatic air quality monitoring usually doesn't require any editing. While it defeats the purpose of having a real-time monitoring system because any vetting would delay the process, experts also fear that the edited data may be "dressed up" and not give the true picture. DPCC releases real-time data from six stations: RK Puram, Civil Lines, Punjabi Bagh, Mandir Marg, Anand Vihar and IGI. It's the only state agency in India to provide real-time feed from so many station and for a wide range of pollutant such as PM10, PM2.5, SO2, NO2, CO, ozone and benzene.

Fuel Tech Awarded Air Pollution Control Orders Totaling $4.8 Million

Date: 11th March, 2015 Source: Business Wire

WARRENVILLE, Ill.--(BUSINESS WIRE)--Fuel Tech, Inc. (NASDAQ:FTEK), a world leader in advanced engineering solutions for the optimization of combustion systems and emissions control in utility and industrial applications, today announced the receipt of multiple air pollution control (APC) contracts from customers in the US and China. These awards have an aggregate value of approximately $4.8 million. The first US order is for a NOxOUT® Selective Non-Catalytic Reduction (SNCR) system for a coal-fired boiler at a Western power generation facility to meet its emission requirements under the Clean Air Act Regional Haze program. Delivery is scheduled for second quarter of 2016. The second US order is for an Electrostatic Precipitator (ESP) retrofit on an industrial boiler in the Southeast where the scope includes ESP upgrades and refurbishment to improve the safety and reliability of the unit. The turnkey project is scheduled to be completed in the second quarter of 2015. In addition, there were several contracts for engineering and modeling studies, along with orders for SNCR and SCR optimization services.

In China, an order was received for ULTRA™ systems that will be installed at several municipal solid waste units being retrofitted with nitrogen oxide (NOx) reduction technology. Fuel Tech's ULTRA process provides for the safe and cost-effective on-site conversion of urea to ammonia for use as a reagent in the selective catalytic reduction (SCR) of NOx, eliminating the hazards associated with the transport, storage and handling of anhydrous or aqueous ammonia. Equipment deliveries are expected to occur in the second quarter of 2015.

Douglas G. Bailey, Chairman, President and Chief Executive Officer, commented, "These orders reflect the breadth of Fuel Tech's service and solutions portfolio for the distinct global markets and the wide range of combustion units and fuels used by our customers. Fuel Tech's solutions continue to assist plant operators throughout the US to create strategies to meet upcoming particulate regulations under the MATS Rule for utility boilers or under the Boiler Maximum Achievable Control Technology (MACT) Rule for industrial boilers. Our SNCR technology continues to provide a low-cost capital solution for NOx reduction to customers worldwide as they comply with ever tightening regulations. In addition, our ULTRA technology offers a cost-effective solution for simplifying on-site ammonia generation for SCR applications of all types."

About Fuel Tech: Fuel Tech is a leading technology company engaged in the worldwide development, commercialization and application of state-of-the-art proprietary technologies for air pollution control, process optimization, and advanced engineering services. These technologies enable customers to produce both energy and processed materials in a cost-effective and environmentally sustainable manner. The Company's nitrogen oxide (NOx) reduction technologies include advanced combustion modification techniques - such as Low NOx Burners and Over-Fire Air systems - and post-combustion NOx control approaches, including NOxOUT® and HERT™ SNCR systems, ASCR™ Advanced Selective Catalytic Reduction systems, NOxOUT-SCR®, NOxOUT CASCADE®, and I-NOx™ Integrated NOx Reduction Systems, which utilize various combinations of these systems, along with the ULTRA™ process for safe ammonia generation. These technologies have established Fuel Tech as a leader in NOx reduction, with installations on over 800 units worldwide, where coal, fuel oil, natural gas, municipal waste, biomass and other fuels are utilized.

Fuel Tech's technologies for particulate control include Electrostatic Precipitator (ESP) products and services include ESP Inspection Services, Performance Modeling, Performance and Efficiency Upgrades, along with complete turnkey capability for ESP retrofits, with more than 60 major rebuilds on units up to 700 MW. Flue gas conditioning (FGC) systems include treatment using sulfur trioxide (SO3) and ammonia (NH3) based conditioning to improve the performance of ESPs by modifying the properties of the fly ash particle. FGC systems offer a lower capital cost approach to improving ash particulate capture versus the alternative of installing larger ESPs or utilizing fabric filter technology to meet targeted emissions and opacity limits. Fuel Tech's particulate control technologies have been installed on more than 125 units worldwide.

The Company's FUEL CHEM® technology revolves around the unique application of chemicals to improve the efficiency, reliability, fuel flexibility and environmental status of combustion units by controlling slagging, fouling, corrosion, opacity and operational issues associated with sulfur trioxide, ammonium bisulfate, particulate matter (PM2.5), carbon dioxide and NOx. The Company has experience with this technology, in the form of a customizable FUEL CHEM program, on over 110 combustion units burning a wide variety of fuels including coal, heavy oil, biomass, and municipal waste. Fuel Tech also provides a range of combustion optimization services, including airflow testing, coal flow testing and boiler tuning, as well as services to help optimize selective catalytic reduction system performance, including catalyst management services and ammonia injection grid tuning. In addition, flow corrective devices and physical and computational modeling services are available to optimize flue gas distribution and mixing in both power plant and industrial applications. Many of Fuel Tech's products and services rely heavily on the Company's exceptional Computational Fluid

Dynamics modeling capabilities, which are enhanced by internally developed, high-end visualization software. These capabilities, coupled with the Company's innovative technologies and multi-disciplined team approach, enable Fuel Tech to provide practical solutions to some of our customers' most challenging problems. For more information, visit Fuel Tech's web site at www.ftek.com. This press release may contain statements of a forward-looking nature regarding future events. These statements are only predictions and actual events may differ materially. Please refer to documents that Fuel Tech files from time to time with the Securities and Exchange Commission for a discussion of certain factors that could cause actual results to differ materially from those contained in the forward-looking statements.

Coal industry setting its own air pollution standards

Date: 11th March, 2015 Source: Ecologist

Coal is Europe's biggest source of mercury and sulphur pollution, writes Kyla Mandel, killing tens of thousands of people a year. So how come more than half the members appointed by EU governments to set air pollution standards for coal plants are industry representatives? The UK is one of several European governments allowing energy industry representatives to help draw up the European Union's (EU) new air pollution standards, aGreenpeace investigation has found.

The EU is currently in the process of drafting new standards to limit pollution from coal-fired power stations. However, this "once-in-a-decade opportunity" has been captured by the coal industry Greenpeace claims and could result in "extremely lax" emission limits.

"Not only would most of the existing plants be allowed to pollute several times more than could be achieved by adopting the best clean technologies available", the environmental NGO said, "but EU standards would also be significantly weaker than those imposed in other parts of the world, including China."

Greenpeace analysed the backgrounds of hundreds of representatives appointed by governments to sit on a key official group that is formulating new limits on air pollution across Europe. More than half of the working group members are industry reps.

It found that out of 352 members of the technical working group, 183 are either employed by the energy companies that are being regulated or by lobby groups that represent those companies. "This means, that the polluters are designing the regulations intended to govern their own industry", Greenpeace said. "Europe is allowing the polluters to set their own standards."

Seven EU countries in particular are responsible for the vast majority of comments seeking to weaken the emission limits: Poland, Czech Republic, Greece, Germany, France, Spain and the UK. The UK's nine-person member state delegation, for example, has five representatives of large polluters, including coal power plant operators RWE, EDF and E.ON and the Stanlow oil refinery. "These countries are among the largest sources of coal-fired power plant pollution in Europe, causing significant health impacts and costs on their citizens and on the citizens of neighbouring countries", Greenpeace said. The result - feeble regulation. The draft proposal shows that EU industrial air pollution limits currently under consideration are much weaker than those adopted by China, Japan and the United States.

It also shows that existing coal power plants, both within and outside Europe, already have much more demanding emission limits than would be required under the proposal. The proposal would also allow much more pollution than would result from the use of the best technologies currently available. "This is a classic case of allowing the fox to guard the henhouse", said Lawrence Carter, a Greenpeace campaigner. "Coal companies should be nowhere near these talks."

Carter explained that in dozens of cases, members of staff from coal-burning firms are also taking part in the process, "not as formal industry representatives, but as government delegates appointed by the member states." Coal is Europe's biggest source of mercury and SO2 pollutionCoal plants are one of the largest sources of toxic pollution in Europe. They are the largest source of sulphur dioxide and mercury emissions in Europe and one of the largest industrial sources of emissions of nitrogen oxides, arsenic, lead and cadmium. Exposure to particular matter, as found in coal emissions, is the largest environmental health threat in Europe, according to the European Environment Agency. It increases the risk of death from heart disease, respiratory diseases and lung cancer as well as shortening life expectancy by 6-12 months. Research from Stuttgart University commissioned by Greenpeace, shows that air pollution from European coal-fired power stations caused an estimated 22,300 premature deaths in 2010 as well as exacerbating asthma and contributing to dangerous levels of mercury found in the blood of thousands of babies born in Europe.

Just last week, Ed Davey, Secretary of State for Climate Change and Energy, said that the UK hasn't done enough to tackle air pollution, which he said is "more significant to public health than alcohol or obesity". "Coal is the near-term climate change problem", Davey said, calling for Britain to become a zero-carbon nation by 2050. To do so, he argued, the country must stop burning unabated coal by 2025.

Hydraulic fracturing air pollution rules mandate changed by North Carolina House

Date:11th March, 2015 Source: PennEnergy

RALEIGH, N.C. (AP) — The North Carolina House has agreed to adjust the mandate on environmental regulators relating to air quality standards as work may soon begin to find natural gas using the process called fracking. The House voted Wednesday for an environmental bill that largely cleaned up previous laws.

A change added earlier this week gives the Environmental Management Commission the option not to create its own rules on air pollution created by fracking if the panel determines federal or state regulations are adequate. The House had blocked the same amendment last week because Republicans were unhappy how their majority leader had put the provision in another bill unrelated to fracking. The proposal comes as rules for North Carolina's first fracking permit applications can be implemented next week.

Have diesel cars been unfairly demonised for air pollution?

Date:11th March, 2015 Source: The Guardian

The car industry on Wednesday launched a campaign to “challenge the increasing demonisation of diesel” vehicles. The campaign, launched by the Society of Motor Manufacturers and Traders (SMMT), promotes the credentials of the new Euro-6 standards. This Europe-wide law, which will come into force in September,

limits nitrogen oxide (NOx) emissions from new diesel cars to 80mg/km in order to bring down air pollution levels that breach health regulations in many EU cities.

Diesel cars have come in for increasing criticism in the last year for their larger-than-thought emissions of NOx and small particulates. Last year London mayor Boris Johnson proposed a scheme that would pay diesel car owners up to £2,000 to scrap their vehicle and switch to a cleaner model. Diesel was supposed to be the answer to the high carbon emissions of the transport sector, a lower emitting fuel that was a mature technology – unlike electric or hydrogen cars. In the early 2000s the Blair government threw its weight behind the sector by changing 'road tax' (vehicle excise duty) to a CO2-based system, which favoured diesel cars as they generally had lower CO2 emissions than petrol versions. It inspired British car makers to invest heavily in a manufacturing process that most countries outside Europe have ignored. In 1994 the UK car fleet was only 7.4% diesel. By 2013 there were 10.1m diesel cars in the UK, 34.5% of the total.

But studies have since shown that diesel cars' emissions of other pollutants can have serious impacts on the health of people exposed to them.

Now the European Union is scrambling to reduce the impact of its massive diesel industry on the health of its citizens. Carmakers have had some success in cutting the particulate matter of their engines, but according to recent independent testing, NOx levels remain stubbornly high. A Channel 4 documentary in January called the subsidisation of the diesel industry the "great car con". In the programme the current shadow environment minister Barry Gardiner MP, who was a member of the Blair government, admitted the policy was a mistake.

"Hands up, can I say there's absolutely no question that the decision we took was the wrong decision." In 2014 the European commission took the UK to court for regularly exceeding NOx limits in 16 zones from London to Glasgow.

In an attempt to restore consumer confidence the car industry has produced leaflets (available at car markers and dealerships) as well as a "myth-busting" website. The campaign shows the growth of the diesel market and claims success for car makers in reducing emissions of NOx, particulate matter and CO2. Mike Hawes, SMMT chief executive, says: "Today's diesel engines are the cleanest ever, and the culmination of billions of pounds of investment by manufacturers to improve air quality ... The allegations against diesel cars made in recent months threaten to misguide policy making and undermine public confidence in diesel. It's time to put the record straight." But the claims of the industry have been criticised by experts who say the numbers cited by car makers are based on a test that does not represent real-world conditions. For official standards, diesel cars have their emissions tested in a laboratory, but recent testing by the International Council on Clean Transportation found:

On average, real-world NOx emissions from the tested vehicles were about seven times higher than the limits set by the Euro-6 standard. If applied to the entire new vehicle fleet, this would correspond to an on-road level of about 560 mg/km of NOx (compared to the regulatory limit under Euro 6 of 80 mg/km).

The Euro-6 regulations require a real-world test to be introduced, but the timing of this is still being debated. Greg Archer from campaign group Transport & Environment says the car industry has successfully lobbied the European commission to have the likely date for an introduction moved back from 2017 to 2020. "They've based it on limits and tests which are carried out in laboratories and don't represent the amount of pollution that these vehicles actually produce on the road. And they know that. "Carmakers are trying to greenwash dirty diesel to hide the truth that compared to a petrol car a typical new

diesel car on the road emits 10 times more nitrogen oxides. While carmakers claim modern diesels are clean they are pushing to delay and weaken the introduction of new pollution tests. This is because most new diesels can't reach the limits agreed back in 2007 without fitting new technology," says Archer. An SMMT spokeswoman denied the industry was pushing back on real-world testing. To the contrary, she said, they were very supportive of getting the regime in place "as soon as possible". "We are waiting for a finalised communication from the European commission, which will set the parameters for the real-world testing. Until we have sight of that, manufacturers cannot commence the additional engineering investment required with any degree of certainty." Ben Barratt, an air pollution expert from King's College London, says the early implementation of the new test is critical for the success of the regulations. "In the absense of a real-world test we have to question these figures because history shows us that past performance has not delivered," says Barrett.

"The sooner the real-world test comes in the better, without doubt. Because we will not know whether to trust the Euro-6 figures until that test comes in. Cities around Europe are reliant on Euro-6 delivering the reductions it is supposed to. If Euro-6 doesn't deliver then many parts of Europe, including London and other cities in the UK, will continue to fail to meet European Union air quality standards." Councils around the country are beginning to take action to discourage their residents from buying diesel cars. Islington council will introduce a £96 per year diesel vehicle parking surcharge on 1 April. It will be the highest charge of its kind in the country and one of the first such schemes introduced. Councillor Claudia Webbe said: "Pollutants in diesel exhausts have been linked to heart and lung diseases, which are major causes of serious and long-term health issues and even death in Islington, and the surcharge will encourage a move away from diesel." But Hawes said the charges made "no sense from an environmental point of view" citing the results from the tests the car industry agrees are flawed. The chairman and managing director of Ford of Britain, Mark Ovenden, says the charges are an unnecessary interference in the market. "We support customer choice and the market should determine the best technologies for meeting CO2 and air quality goals," he says. But the car market is far from even. The carbon emissions tax regime currently levies £180 on a new petrol-powered Ford Mondeo. The rate for the diesel version is £0. Last month the UK government rejected an environmental audit committee recommendation to remove the tax advantage enjoyed by diesel cars. Signalling it remained supportive of the diesel industry. The SMMT document also says that the furore over diesel's contribution to air pollution is overblown, given the relatively small contribution (14%) cars make to the nation's overall NOx emissions. There is a large misconception over who is the real villain, says the website. More than half of those survey by YouGov incorrectly identified cars and commercial vehicles as the biggest cause of air pollution in the UK.

"It would take 42m Euro-6 diesel cars (almost four times the number on the roads) to generate the same amount of NOx as one UK coal-fired power station," says the Diesel Facts website. But Archer says this is "another example of the car industry greenwashing the figures". Where the pollution is occuring is more important than how much, he says.

"The pollution that comes out of [power stations] is highly disperesed. It's rather different when you're a child in a push chair being pushed along a curb breathing in the exhaust fues which are coming out of the cars standing next to you. So in terms of exposure to pollution, vehicles are far, far more important than power stations are."

Is CNG worsening city's air pollution? IIT to find out

Date: 13rd March, 2015 Source: Hindustan Times

The spurt in vehicles running on Compressed Natural Gas (CNG) may have contributed to the rise in particulate matter (PM) pollution in Delhi, especially particles of less than 2.5 microns in size. A definite

answer, however, will come when the Indian Institute of Technology completes its source appropriation study for Delhi by September this year.

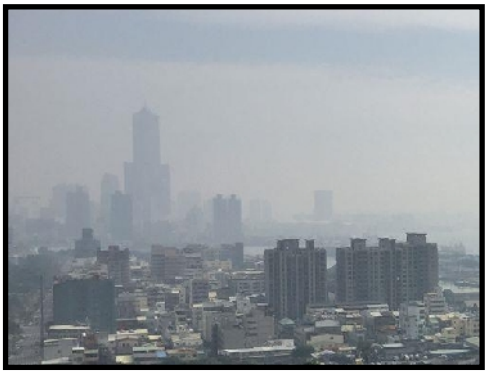
The findings of the study may be interesting as the authorities have tried to avoid the issue of CNG's contribution in the increase in pollution levels in Delhi.

The Central Pollution Control Board had done a study done a few years ago on CNG contributing to vehicular pollution in Delhi but its final findings were not made public because of outcry by environmental groups. As the issue has not been debated, there has been negligible upgrade in CNG technology for vehicles. Unlike many of the western cities like California and Beijing which has introduced CNG engines, India has not been able to develop engines that run on natural gas. Technology improvement in CNG can improve air quality in Delhi as every 10th vehicle on the road runs on natural gas, said a scientist with Central Road Research Institute (CRRI) that has done some road vehicle density studies in the Capital. Both the cities had been able to reduce pollution from natural gas for vehicles through technology upgrade. In 2010, the Central Pollution Control Board's source appropriation for air pollution study attributed about 7% of particulate matter pollution from CNG-run vehicles. Of the total pollution PM load in the Capital, the study said 52% was because of dust.

The study said that CNG vehicles contributed to about 10% of the total nitrogen dioxide load in the capital. "The CNG does not contribute much to PM 10 (which is widely monitored). But it plays an important role in the circulation of smaller particulate pollution of 2.5 and 1 microns. These facts are known in the scientific community but have not been disseminated to people," said a senior CPCB scientist. The PM 2.5 is monitored only at few locations in Delhi and PM 1 is not monitored. The CPCB 2010 study had said small particulate matter penetrate deep into the lung and can reach the alveolar region causing heart ailments. These fine particles cover a large surface area, absorbs toxic compounds such as heavy metals and Polycyclic Aromatic Hydrocarbons (PAH) organic compounds containing high content of carbon, the study said. Since 2010 when the CPCB study was done, Delhi has witnessed increase in CNG vehicles, especially small commercial cargo and passenger vehicles, popular known as Gramin Seva vans providing last-mile connectivity. As many as 6,153 CNG vans have been registered in Delhi since 2010 under the gramin seva category and another 6,460 under the phatphat seva. About one-third of 80,000 passenger auto-rickshaws in Delhi are post 2010 era. In addition, about 62,000 three-wheeler light commercial vehicles running on CNG have been registered mostly after 2010, the transport department data shows.

People living on lower floors more at risk from air pollution

Date:13th March, 2015 Source: Focus Taiwan New Channel



Taipei, March 13 (CNA) People living on the lower floors of a building are more prone to being affected by air pollution, giving them an increased risk of cardiovascular disease, according to recent research. The research on PM2.5 -- particles 2.5 microns or smaller in diameter -- monitored the balconies of the homes of around 30 residents, checking each location two to three times. The results show that the concentrations of PM2.5 on the lower floors (1st to 3rd), is higher than those in the higher floors by 10-20 percent.

If the houses were near construction sites, industrial zones or thoroughfares, the concentration levels increased, but if the houses were near green land or rivers, the levels decreased. PM2.5 particles are considered particularly dangerous because they are usually made up of substances like

heavy metals that are very toxic and can travel deeper into the human lungs than larger particulates. Cheng Tsun-jen, a professor at the College of Public Health of National Taiwan University, said that the risks posed by PM2.5 are even more serious than the sandstorms from China that affect Taiwan each year. Cheng noted that experiments on mice show that pollutants cause inflammation of the respiratory tract, while small or super-small particles can cause tissue damage and increase the risk of heart disease. He said the research was conducted in 2013 and involved mice being exposed to a PM2.5-heavy environment for three months. The results showed myocarditis, or inflammation of the heart muscle; thickening of the arterial sclerosis, kidney disease and surging blood sugar. Meanwhile, National Taiwan University Hospital physician Su Ta-chen analyzed 689 middle-aged people without coronary disease. He found that after long-term exposure to PM10 (another pollutant) and PM2.5, the arteries will thicken, meaning that the risk of arterial sclerosis will increase. Su noted that air pollution also makes diastolic blood pressure rise, which is bad for those who suffer from sleep disorders or those whose blood pressure does not fall normally at night.

Newborn babies exposed to PM2.5 can also suffer damage to the development of their central nervous systems, he added.

Hundreds speak out on air pollution, health problems near power plant

Date:15th March, 2015 Source: The News-Herald

River Rouge resident Ebony Elmore vividly remembers the "black rain" all around her childhood home, one block from Balenger, the site of the River Rouge Power Plant.

Elmore was one of seven children who grew up surrounded by petcoke in the air, on their things and on them, she said. "My dad worked at the coal plant on Zug Island," Elmore said while at a March 11 public hearing on lowering sulfur dioxide emission limits in the region. "I remember him coming home in his green jump suit covered in a black dust. We would hug him and it would be on our clothes and skin. We didn't know it was petcoke and we didn't know it was bad." Elmore, 31, said her family still lives in that house and it wasn't until years later that they began asking questions about the fact both of her parents suffer from chronic obstructive pulmonary disease, or COPD, and why more than half of their children have asthma. "We have the right to breathe clean air and our children have the right to a better air quality than we have now," Elmore said during the meeting at River Rouge High School. "As residents, we love this community. It's close-knit and we love living here. ... We want to stay and better our environment, not abandon it."

According to the U.S. Environmental Protection Agency, the region spanning River Rouge, Melvindale, Ecorse, Lincoln Park, Wyandotte, Riverview, Trenton, Grosse Ile, Gibraltar and parts of Rockwood, Flat Rock, Woodhaven, Brownstown Township, Taylor, Allen Park, Detroit and Dearborn is in "nonattainment" when it comes to sulfur dioxide pollution in the air. That means the level of sulfur dioxide in the air is considered unhealthy for communities by the EPA. The worst offenders are U.S. Steel, EES Coke, Carmeuse Lime and the River Rouge and Trenton Channel power plants, according to information provided by the Michigan Department of Environmental Quality, which regulates sources of air pollutants to minimize adverse effects on the community. Last week's public hearing was held by the MDEQ to discuss DTE's proposed lower emission limits at the River Rouge and Trenton plants.

Jeff Korniski, MDEQ assistant district supervisor, said their data show ambient air quality in the region is the best it's been in 50 years. But because of changing standards by the EPA, the area now does not comply with the newest set of limitations from 2010.

Why does Chamonix have some of the worst air pollution in France?

Date: 16th March, 2015 Source: The Star Online

It's famous for its winter sports but few visitors know about the high levels of pollution that collect in this idyllic mountain valley. MY ears pop as the car winds its way up the mountainside. On either side, a sheer, vertical drop of over 60m looms. Ahead, just before the Mont Blanc Tunnel, is the picturesque French resort of Chamonix, where over 10,000 people live and almost five million tourists visit every year. Anyone there to enjoy the pure mountain air may be disappointed. Chamonix, like much of the l'Arve Valley, is home to some of the highest air pollution levels in France. Chamonix has, in a way, become a victim of its own natural beauty. An idyllic winter wonderland situated at the foot of Mont Blanc, it is one of the oldest ski resorts in France, with unparalleled panoramas and mountain ranges that make it a mecca for skiing, gliding and climbing enthusiasts.

Paris police lower speed limits amid spike in air pollution

Date: 18th March, 2015 Source: Yahoo News

PARIS (AP) — Paris police have lowered speed limits and ordered a halt to trash burning as part of emergency measures triggered by a spike in air pollution — months before the city hosts a major international climate conference. The police department says Wednesday's order includes a 20 kph (12 mph) reduction in speed limits on highways in the metropolitan area. It comes after state monitoring agency AirParif reported that air pollution rose to "high" under a European classification system. It said changes in weather, and emissions from agricultural activities and road traffic caused the increase.

Paris experienced a similar spike in air pollution last year that ultimately led to imposed, temporary reductions on the numbers of vehicles allowed to circulate.

The city will host a two-week U.N. climate conference starting in November.

Eiffel Tower shrouded in smog as Paris pollution spikes

Date: 18th March, 2015 Source: The Guardian

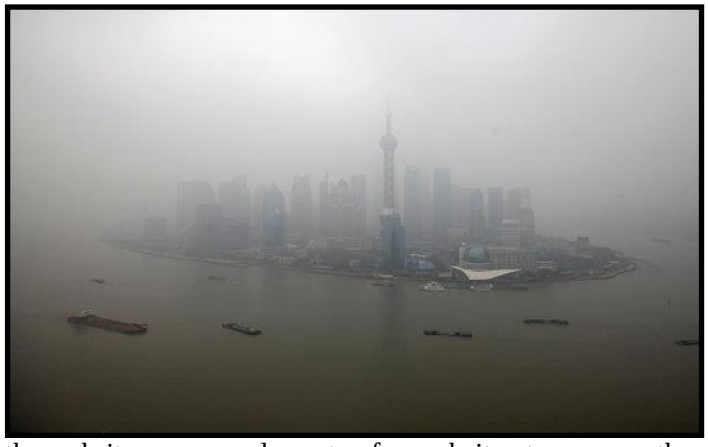
The Eiffel Tower disappeared behind a brown smog on Wednesday as Paris and much of northern France suffered a spike in pollution.

"The pollution levels are consistent. If we don't go over the alert level, we won't be far away," said Airparif, the body responsible for monitoring air quality in the greater Parisregion. In Paris, authorities measure the concentration of particulates with a diameter of less than 10 microns – so-called PM10 – in the air to determine pollution levels. These particulates are created by vehicles, heating and heavy industry, and include the most dangerous particles that measure less than 2.5 microns in diameter, which can penetrate deep into the lungs and the blood system and can cause cancer. The safe limit for PM10 is set at 80 microgrammes per cubic

metre (mcg/m3). Since Wednesday morning, authorities have put in place certain emergency measures, such as limiting cars to 20kph (12mph) on motorways in the Paris area. Authorities have the power to put into place emergency measures such as allowing only one in two cars to enter the French capital and making public transport free. This was last implemented on 17 March last year during a particularly bad spike in the pollution levels. According to a 2011 World Health Organisation report, the planet's most polluted city was Ahvaz in Iran with an average of 372 mcg/m3. Beijing had an average of 121 mcg/m3, while Paris was measured at 38 mcg/m3.

Chinese Authorities Have Realized the Penalties of Air Pollution Watching "Under the Dome" though They May Not Admit It, Analyst

Date:19th March 19, 2015 Source: Empire State Tribune



A documentary that concentrates on air pollution in China, called "Under the Dome", has lifted global awareness concerning the country's pollution catastrophe. The country may be required to deal with the condition of air pollution due to the increasing environmental activities cross-ways the world and the consciousness caused by the documentary.

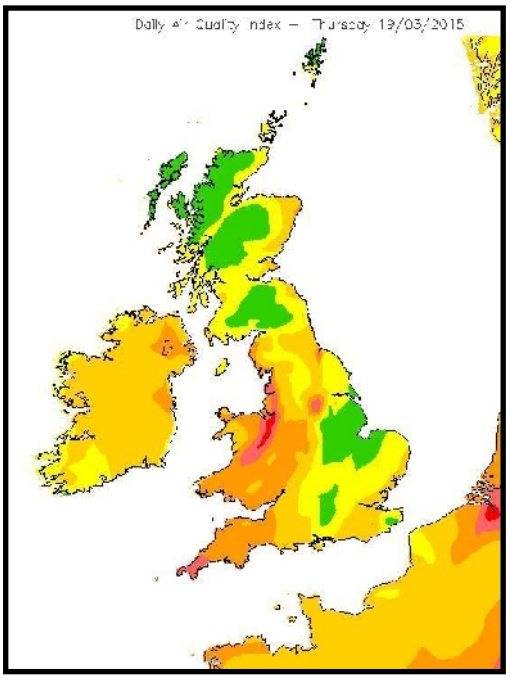
The government of China published commands through its propaganda sector for websites to remove the documentary days later it went viral on the web. The government is blamed by its people for not taking proper actions to minimize air pollution discharges which contribute to global warming. The recently chosen Environment Minister of China, Chen Jining, honored the documentary. The country's president has also revealed laws to penalize violators.

It seems "Under the Dome" has made law makers in China consider more about the penalties of air pollution. At a news forum at the National People's Congress, Premier Li Keqiang, also called for air pollution cut down that concern the value of life for Chinese people. Xiao Qiang, an extra professor at the School of Information at the University of California Berkley and the creator and editor-in-chief of China Digital Times suggests that President Xi needs assistance to battle the country's air pollution. Nevertheless, Xiao recommends Xi doesn't want the people to have actual involvement in fighting pollution. Xi was also engaged in discussions with US President Obama about air pollution concerns and agreed to lessen greenhouse gas discharges. Though, the question occurs how prompt Chinese officials are prepared to take action.

The documentary has produced lots of intense debates in China regarding air pollution. Carnegie-Tsinghua Center for Global Policy's Wang Tao recommends that related officials should be given sufficient authority to undertake the problem. Tao said, "The environment ministry certainly wants to get more power, and it can see huge pressure from the public for a better environment. But there is resistance from vested interests and a power struggle over who should lead this process, in terms of policies and setting standards." The coal burned by the country yearly is more than the total amount of coal burnt by the rest of the globe. Oil companies, factories and automobiles add to the discharge of greenhouse gases. Nonetheless, they elude ecological collisions and related penalties. Specialists consider that appropriate officials have to take firm measures over air pollution and penalize people who don't abide the laws. Chinese people wish that their administration takes fast actions to battle air pollution as quick as possible and lessen its effect on the environment and on the people in China.

STAY INDOORS: Warning issued by health experts as toxic smog covers East Lancashire

Date:19th March, 2015 Source: Lancashire Telegraph



A HEALTH alert has been sparked after high levels of potentially dangerous smog covered East Lancashire. Experts said the toxic cloud could cause fatal asthma attacks and warned those with respiratory problems to stay indoors.
It is not expected to fully lift until Saturday and will remain at a 'moderate' level tomorrow, forecasters said. Dr Tom Smith said: "If you have chronic lung disease or asthma, stay indoors until the smog has cleared. "You should not be going out when there is a weather warning like this."
The Department for Environment, Food and Rural Affairs (Defra), said air pollution had blown in from Europe and mixed with home-grown smog to create the problem across Britain.
Dr Smith said the smog is made up of two components, the acidic chemical sulphur dioxide and small particles of soot-like material, which can both irritate the lungs. He said: "It could put your lung into spasm, and that can have a rebound affect on your heart and your brain."

Asthma sufferers were also warned to carry their inhalers with them at all times.

However, officials said the smog does not pose a health threat for the general population.
Kay Boycott, chief executive of Asthma UK, said: "Two thirds of people with asthma find that air pollution makes their asthma worse, putting them at an increased risk of a potentially fatal asthma attack. "When air pollution is high it's vital people with respiratory conditions including asthma check air pollution forecasts, carry their reliever inhaler with them at all times, and ensure that they are taking their preventer inhaler every day because this will help build resilience to asthma triggers like air pollution.
"People with asthma have told us that on days when air pollution levels are high they feel that they can't even leave the house for fear that it will trigger an attack."

Air pollution must be taken seriously by the residents of Southern Taiwan

Date: March 21, 2015 Source: The China Post

Kaohsiung citizens, have you ever been warned about the poor air quality? I think most of us would answer yes to this question, but how many of us have really taken this issue into consideration? have been studying in Kaohsiung for the last five years and I have been suffering from uncontrollable coughing and sneezing since my first year here. This is why I have been getting colds easier than before. After suffering from colds at an increasing frequency, I started to keep detailed records of my health quality. Surprisingly, when I went to subsequent health check-ups, I found out that they match the state of my health when I first moved here so perfectly that for the first time I take the poor air quality as a threat to my own health.
Poor air quality in Southern Taiwan has been an issue for years; however, it seems that not many people really put any effort into preventing it. The majority still consider only those people who live in those well-known polluted cities, like Beijing or New Delhi, to be at risk of suffering from poor air quality. But, what they may not know is that one new record collected by the World Health Organisation (WHO) indicates that out of nearly six hundred cities, Kaohsiung's ambient PM has ranked at No. 9 for causing deadly sicknesses such as lung cancer. And speaking of lung cancer, since 2010, it has ranked as No. 1 city for deaths caused by cancer.

So, when I first saw this news, I asked some of my classmates how they felt about the air of Kaohsiung. I got answers like “Bad, but I have been breathing in the polluted air since the day I was born, so I think it's not a big deal,” or “I think it's not that bad? After all, I don't see anyone wearing a mask.” Moreover, even after I showed them the news, they still stood up for what that believe and refuse to wear a mask because the hot weather in Kaohsiung makes wearing a mask uncomfortable.

In the end, I started to wonder what is the point of this kind of news trying to protect people if they just ignore it? Perhaps only when serious problems happen to us will we truly understand how important it is to have good protection against poor air quality.

But, when that day comes, is there still time for us to do so? I don't know the answer but hopefully, we will all consider it before it's too late.

Paris halves number of cars on roads, makes public transit free to fight air pollution spike

Date: 21st March, 2015 Source: US News

PARIS (AP) — Paris will cut the number of cars on the road in half beginning Monday and is making public transit free to combat a spike in pollution that has obscured even the Eiffel Tower under a smoggy haze. The mayor's office announced Saturday that only cars with odd-numbered plates will be permitted to drive Monday, as well as any electric or hybrid vehicles and any vehicles with more than three people. Public transit will be free, as will the electric car-sharing and bike sharing-programs Pollution has spiked in the Paris region since Wednesday, when the city briefly had the world's dirtiest air, according to a monitoring company called Plume Labs. Other cities in northern France affected by air pollution are also imposing various restrictions.

India has least number of polluting coal-based power plants; Oxford study

Date: 21st March 21, 2015 Source: Domain-b

India has the lowest number of coal-based power plants among the world's most-polluting power plants.This was revealed in a research from the Stranded Assets Programme at the University of Oxford's Smith School of Enterprise and the Environment on the least efficient coal-fired power stations in the world. The study anlayses the world's 100 largest power plants that were the least efficient and most polluting form of coal-fired power stations, and were at risk of becoming "stranded assets." Stranded assets are assets that have suffered from unanticipated or premature write-downs, devaluations, or conversion to liabilities and they can be caused by a variety of risks. The study found said, "39 per cent of them are in in China, 21 per cent in the US, 10 per cent in the EU, and 9 per cent in India". Over half (59 per cent) are owned by governments globally. In addition to the average subcritical coal-fired power station generating 75 per cent more carbon pollution as the most up-to-date type of coal-fired power station, they also use 67 per cent more water, and create significant amounts of air pollution, according to the study. The study argues the subcritical coal plants are most at risk of becoming 'stranded assets', or assets that experience unanticipated or premature write-downs, devaluations, or conversion to

liabilities because of their carbon intensity and contribution to local air pollution and water stress. The research also shows which companies own these assets and ranks them by exposure to financial risk. It assesses the implications for investors and summarises possible responses from fixed-income and equity investors, rating agencies, and others.

It highlights that the International Energy Agency has warned that to limit global emissions to a level consistent with a 2°C future, it will be necessary to close around a quarter of all sub-critical coal-fired power stations worldwide by 2020. Ben Caldecott, lead author and director of the Stranded Assets Programme at the University of Oxford's Smith School of Enterprise and the Environment, says, "There is a strong case for investors to evaluate the risk of companies exposed to the least efficient coal plants, as these assets are at the greatest risk of becoming stranded due to a wide range of environmental and social factors. "Subcritical plants are typically older and more expensive to operate. Consequently, they may represent a sound choice for closure by budget-constrained policymakers looking for cost-effective ways of tackling pollution."

Air pollutants could boost potency of common airborne allergens

Date: March 22, 2015 Source: PHYS ORG

A pair of air pollutants linked to climate change could also be a major contributor to the unparalleled rise in the number of people sneezing, sniffling and wheezing during allergy season. The gases, nitrogen dioxide and ground-level ozone, appear to provoke chemical changes in certain airborne allergens that could increase their potency. That, in combination with changes in global climate, could help explain why airborne allergies are becoming more common. The findings will be presented today at the 249th National Meeting & Exposition of the American Chemical Society (ACS).

"Scientists have long suspected that air pollution and climate change are involved in the increasing prevalence of allergies worldwide. But understanding the underlying chemical processes behind this phenomenon has proven elusive," says Ulrich Pöschl, Ph.D., of the Max Planck Institute in Germany. "Our research is just a starting point, but it does begin to suggest how chemical modifications in allergenic proteins occur and how they may affect allergenicity." About 50 million people in the United States suffer from nasal allergies, according to the American College of Allergy, Asthma and Immunology. And those numbers are on the rise.

In previous work, Pöschl; Christopher Kampf, Ph.D.; Manabu Shiraiwa, Ph.D.; and colleagues at the Max Planck Institute explored how allergy-causing substances are altered in the air. Building on that work, they decided to dig deeper into how that happens and examine how traffic-related air pollutants could increase the strength of these allergens. In laboratory tests and computer simulations, they studied the effects of various levels of ozone and nitrogen dioxide on the major birch pollen allergen called Bet v 1.

The researchers determined that ozone—the main component of smog—oxidizes an amino acid called tyrosine that helps form Bet v 1 proteins. This transformation sets in motion a chain of chemical reactions that involves reactive oxygen intermediates and can bind proteins together, altering their structures and their potential biological effects. When this occurs, Kampf says the cross-linked proteins can become more potent allergens.

Pöschl's team also found that nitrogen dioxide, a component of automobile exhaust, appears to alter the polarity and binding capabilities of Bet v 1 allergenic proteins. This, in conjunction with the effects of ozone, the researchers predict, may enhance the immune response of the body to these particles, particularly in humid, wet and smoggy environments. The scientists plan to identify other modified allergenic proteins in the environment and hope, in collaboration with biomedical researchers, to study their effects on the human immune system, which may also be affected by other physiological factors.

"Our research is showing that chemical modifications of allergenic proteins may play an important role in the increasing prevalence of allergies worldwide," Kampf says. "With rising levels of these pollutants we will have more of these protein modifications, and in turn, these modifications will affect the allergenic potential of the protein."

Air pollution, malnutrition responsible for persistent TB'

Date: 22nd March, 2015 Source: The Hindu

Air pollution, malnutrition, overcrowding and poor living conditions are responsible for continuing tuberculosis problems in the country, noted the Indian Medical Association. It stated that to put off the chance of transmission and prevent the spreading of the disease, it is essential to reach all TB cases for treatment and cure. "This will also prevent the emergence of drug-resistance TB," noted a release issued by the Indian Medical Association. Awareness movement- Several celebrities from across the city joined the TB awareness movement initiated by the IMA in association with the Central TB Division under the Directorate General of Health Services. They collectively signed and released the message 'TB Harega Desh Jeetega' and 'Swachh Bharat Swasthya Bharat TB Mukt Bharat'. Speaking on the occasion, Dr. K.K. Aggarwal IMA office bearer said: "Today, one fourth of all global TB cases occur in India every year.

In 2013, twenty lakh TB cases occurred in India. The prevalence of the disease in India is 211 per lakh population, which amounts to 26 lakh annually. The incidence of TB per lakh population is 171. Deaths due to TB occur in 19 per lakh population. In total, 2.4 lakh people die of TB in India every year."

No more a stigma- Dr. Jagdish Prasad, director general of health services, Ministry of Health and Family Welfare, said that no one should ignore any cough of more than two weeks in duration. He further said that TB is no more a stigma. All contacts of TB patients should be checked, as they may be infectious before it clinically manifest as TB. Today, one fourth of all global TB cases occur in India every year. In 2013, twenty lakh TB cases occurred in our country. The prevalence of the disease is 211 per lakh population, which amounts to 26 lakh annually.

New regs for Tuesday: Hydraulic fracturing, air pollution, chemicals

Date: 23rd March, 2015 Source: The Hill

Tuesday's edition of the Federal Register contains new rules for hydraulic fracturing activities on Indian lands, endangered species, and emissions reporting requirements for hazardous air pollution. Here's what is happening: Fracking: The Bureau of Land Management (BLM) is moving forward with new regulations for hydraulic fracturing on federal and Indian lands.

The BLM's hydraulic fracturing regulations are intended to protect local water supplies and disclose to the public which chemicals are used in the process, the agency said.

The hydraulic fracturing regulations were originally proposed in May 2012 and are now being finalized. The rule goes into effect in 90 days.

Residual interest: The Commodity Futures Trading Commission (CFTC) is moving forward with new residual interest regulations for merchants. The CFTC will continue to use a phased-in compliance schedule for futures commission merchants, the agency said. The rule goes into effect in 60 days. Emissions: The Environmental Protection Agency (EPA) is moving forward with emissionsreporting

requirements. The EPA is changing the way that coal- and oil-fired units must report hazardous air pollution to the agency. The changes go into effect immediately.

Chemicals:> The Environmental Protection Agency (EPA) is easing the restrictions on two chemical substances. The chemical substances were metal salts. The EPA is removing the requirement for manufacturers to notify the agency in advance of using of these chemicals.

The changes go into effect in 60 days. Endangered: The Fish and Wildlife Service (FWS) is reconsidering a plan to loosen the protections for certain woodland caribou. The FWS proposed last May to downgrade woodland caribou in the southern Selkirk Mountains from endangered to threatened, but said Monday it is reopening the comment period to give the public more time to discuss the potential changes.

Driving ban on half Paris motorists after air pollution briefly tops Shanghai

Date: 23rd March, 2015 Source: The Telegraph

Even-numbered number plates were told to stay off Paris roads and public transport is free on Monday in bid to cut harmful smogParis on Monday imposed a partial driving ban and made public transport free in an attempt to cut noxious smog, after pollution levels briefly surpassed that of Shanghai last week. Authorities announced that all cars with plates ending in even numbers must stay off the roads on Monday, after days of political wrangling over how to tackle the high amount of harmful particles shrouding Paris. Anne Hidalgo, the Socialist mayor, had wanted to impose the ban last week after lack of wind or rain and cold nights helped push up pollution levels. According to Plume Labs, Paris for a few hours last week hit 127 in its air pollution index chart of 60 cities, with Shanghai in second place on 106 and London on 91.

However, the government of fellow Socialists refused, reportedly so as not to annoy suburban voters ahead of Sunday's local elections. Lorries are being asked to drive around the capital while a maximum speed limit of 20 kilometres per hour is in force in a bid to cut levels of dangerous micro-particles. Motorists unauthorised to drive face a €22 (£16) fine and being told to leave their car where it is or see it impounded.
Commercial, electric or hybrid cars are all exempt, as are those carrying at least three people. Use of Autolibs, Paris' low cost rental electric cars, is free for the first hour for subscribers. The ban came after a strong prevalence of particles with a diameter of less than 10 microns, or PM10. These are the most monitored as the smaller and lighter a particle is, the longer it stays in the atmosphere and can remain suspended for weeks. They can also lead to asthma, allergies and respiratory ailments. The safe limit for PM10 is set at 80 microgrammes per cubic metre (mcg/m3).

Some 750 police officers were stationed on roads leading in to the capital to stop drivers flouting the ban. While many motorists with even number plates were still on the roads – often reportedly telling police they had "not watched the news" – traffic levels were definitely below normal. Similar emergency measures were last implemented almost exactly a year ago – on March 17 – during a particularly bad spike in smog. The operation saw pollution drop but Ségolène Royal, the ecology minister said a more global response was necessary. The partial ban will be lifted on Tuesday, as winds are due to pick up. According to 2011 World Health Organisation figures, Ahwaz, in southwestern Iran, far outstrips infamously polluted cities like New Delhi or Beijing, with 372 parts per million of PM10. Beijing, by comparison, was on 121 parts per million, Paris on 38 and London on 29.

Paris chokes on pollution; City of Light becomes City of Haze

Date: 23rd March, 2015 Source: LA Times

Nine-year-old Lily Martin has been coughing for most of the last three weeks. From morning to evening and most of the night, it has been hack, hack, hack. She is pale and exhausted. Her mother, Sophie, is worried sick. The child is not the only one suffering. All over Paris, people are coughing, wheezing and sniffing as a spike in air pollution has made the French capital one of the smoggiest cities in the world. For one day last week, in fact, air quality in Paris was reported to be the worst among major global cities -- a distinction usually associated with Beijing or New Delhi.

The haze enveloping Paris, which usually enjoys relatively clean air for a city its size, has prompted warnings to the young and elderly to avoid even moderate exercise. Schools have been instructed to keep children in classrooms and limit sports activities.

On Monday, in an attempt to improve air quality, authorities enacted a 24-hour restriction on cars with even-numbered license plates, halving the number of cars entering the city and surrounding areas. On Wednesday, when the air was at its worst, a toxic, choking haze masked the city's most famous landmarks, including the Eiffel Tower. Along the city's grand boulevards, the Champs Elysées and the famous squares -- Bastille, Opera, Republique, Nation -- pedestrians could smell and taste the smog. On Friday, near Place de la Republique, an optician stood at the door of his store offering passersby cheap cardboard spectacles through which to see a solar eclipse. Most people laughed and walked on; the yellow-tinged gray cloud covering the city meant Parisians would see nothing of the extraordinary event.

Experts say the problem is caused by vehicle emissions, an absence of wind to disperse the pollutants and other meteorological conditions, including sunshine coupled with a drop in temperatures. Those have combined to create a stagnant cover of warm air over Paris, which sits in the Seine basin, a geographic bowl. Critics have pointed fingers at successive French governments that have promoted diesel vehicles by subsidizing the fuel so that it is about 15% cheaper than gasoline. Though diesel is more fuel efficient and produces less carbon monoxide, it emits nitrogen oxides that react with sunlight to produce low-level ozone and fine soot particles known to cause bronchial irritation and cancer. In addition to banning cars with even-numbered plates, Paris ordered drivers to adhere to a speed limit of just over 12 mph. About 750 police officers were posted on busy intersections to ensure that drivers stuck to the rules -- and issue on-the-spot, $30 fines for those who didn't. To assuage disgruntled drivers, all public transport in and around the city was free, as was residential parking. "Clean" vehicles, including electric cars and those carrying more than three people, were exempted.

It is not the first time countries have resorted to such vehicle restrictions. During the 2008 Beijing Summer Olympics, Chinese authorities introduced the same measure to combat noxious smog levels. In the United States, the cities of Denver and Phoenix have implemented voluntary no-drive-day campaigns during the winter months when air quality is at its worst, and these have been credited with reducing emissions. Rome, Athens, Mexico City, Santiago, Seoul and Singapore have also useddriving restrictions, either voluntary or mandatory, based on alternative odd and even license plates.

The effect of the ban on some of Paris' busiest roads was evident Monday morning, with at least 30% fewer traffic jams during the morning rush hour, according to the Paris police authority. By midday, more than 2,800 motorists had been stopped and fined, the authority said. City Hall said there were 40% fewer cars on the capital’s roads.

It is only the third time since 1997 that Paris authorities have resorted to such emergency measures. At roughly the same time last year, a similar ban was said to have had a "positive impact" on air quality, reducing the particularly dangerous PM10 particles from diesel combustion and the toxic nitrogen oxides (NOx) according to Airparif, which measures pollution in the capital.

Airparif issued its maximum alert last week, after the carcinogenic PM10 particles (those with a diameter less than 10 microns) topped 80 milligrams per cubic meter and went as high as 120mg. Although the pollution was still "high" on Monday, it was reportedly 30% to 40% lower than at its peak last week. Ariane Etienne, 25, a Parisenne waitress, said she had escaped to the countryside over the weekend and found she could breathe properly for the first time "in ages." "I can feel it in my throat all the time," she said. "I went to the countryside, and it was such a relief to be able to breathe. The moment I got back to Paris I could feel and smell the pollution again." "I woke up this morning and my nose was blocked once more," she added. "But what can you do when you live and work in Paris? There's no escape from it."
For Lionel Pailles, an author and expert on luxury perfumes and an asthma sufferer, there is a sense of frustration over the pollution. "I find it terrifying that for many years the city authorities have put things into effect that should have reduced the pollution," he said. "We've had the Velib bicycle scheme and Autolib [free car program]; we've had improvements in public transport with the metro running later at night, but we still cannot breathe, and we're able to breathe less and less well in this city." "I suffer from occasional asthma attacks, but for the first time in ages I've had them two or three days in a row," Pailles said. "It's frightening."

Martin Pietz, a German photographer who has lived and worked in Paris for 27 years, said the air quality made cycling to his office a challenge."I first noticed it was particularly bad about three months ago, and since then it's got worse, particularly in the last week. On my bike, I felt like the air was being cut off and I couldn't breathe," he said. "Before when I used to get a cough it would last two weeks. Now it lasts two to three months and just won't go."

The emergency ban in Paris sparked a political row between the ecology minister, Ségolene Royal, and Mayor Anne Hidalgo, both from the governing Socialist Party. Hidalgo wanted the driving restrictions introduced days ago, but was overruled by Royal. By Monday afternoon, Royal announced the ban would not be extended a second day, while Hidalgo warned she would demand it be reimposed if air quality dropped further. Etienne doubted a one-day ban would help the city breathe more easily.
"I can't really notice much of a difference even though there is less traffic," she said. "One day of half traffic isn't enough. It needs to be done regularly, like in Rome." Willsher is a special correspondent.

High air pollution linked to stroke precursor; obesity raises cancer risk

Date:23rd March, 2015 Source: LifeStyle

Air pollution has been linked to a dangerous narrowing of neck arteries that occurs prior to strokes, according to researchers at New York Univerity's Langone Medical Centre. The scientists analysed medical test records for more than 300,000 people living in New York, New Jersey or Connecticut. Dwellings, identified by zip codes, were ranked by average PM2.5 (fine particulate matter) levels. It was found that subjects living in the most polluted 25 per cent of zip codes were about 24 per cent more likely than those in the bottom quarter to have shown signs of narrowing in their carotid arteries. "Our study was a population study, so it can't establish cause and effect, but it certainly suggests the hypothesis that lowering pollution levels would reduce the incidence of carotid artery stenosis and stroke," says lead author and cardiologist Dr Jonathan Newman.

One in four obese women will develop a weight-related cancer in their lifetime, and that's about a 40 per cent greater risk than women of a healthy weight, new figures released by Cancer Research UK show. The increased risk is for at least seven types of cancer: bowel, post-menopausal breast, gall bladder, womb, kidney, pancreatic and oesophageal cancer. Dr Julie Sharp, head of health information at Cancer Research UK, says: "Losing weight isn't easy, but you don't have to join a gym and run miles every day or give up your favourite food forever. Just making small changes that you can maintain in the long term can have a real impact. To get started try getting off the bus a stop earlier and cutting down on fatty and sugary foods." If you're watching your waistline and looking for recipes, it's best to get them from a source other than the TV. According to a new Cornell University Food and Brand Lab study, women who obtained recipes from cooking shows and often cooked from scratch weighed an average of five kilograms more than those who watched food TV but didn't often cook and those who looked for new recipes in print, online or from in-person sources. The study, published in Appetite, surveyed 501 women aged 20 to 35 on their cooking habits. "One reason for this phenomenon may be that often the recipes portrayed on TV are not the healthiest and allow you to feel like it's OK to prepare and indulge in either less nutritious food or bigger portions," says Brian Wansink, professor and director of the lab. Many cooking shows, the researchers add, normalise overconsumption.

Life coach Pia Prana Muggerud will be organising a retreat from April 10 to 12 at the Shaolin Wushu Culture Centre in Tai O for women who would like to "ignite a passion to live with an open and honest heart". Says Muggerud: "For all sorts of reasons we find ourselves shut down or closed off and in a state of hurt and protection. This can show up as heartache, blame, isolation, unhealthy relationships, anger, resignation or addiction. We long for something else and we often don't know where to start looking. This workshop is about discovering ways to be more authentic and honest, connecting with yourself and others in ways that create trust and joy." The retreat costs HK$4,900 per person, inclusive of workshop attendance, shared accommodation and meals. Visit co-pia.com for more details and registration.

EPA Settles with Continental Carbon Co. to Reduce Air Pollution in Three States

Date: 24th March, 2015 Source: EHS Today

The settlement with EPA – which includes a fine of $650,000 and $550,000 for environmental projects – should reduce emissions of harmful air pollutants at Continental Carbon Co. carbon black facilities in three states. EPA and the states of Alabama and Oklahoma have reached a settlement with Continental Carbon Co., which has agreed to install pollution control technology that significantly will cut emissions of harmful air pollutants at manufacturing facilities in Alabama, Oklahoma and Texas. The settlement requires Continental to pay a civil penalty of $650,000, which will be shared with Alabama and Oklahoma, co-plaintiffs in the case. Continental must also spend $550,000 on environmental projects to help mitigate the harmful effects of air pollution on the environment and to benefit local communities, including at least $25,000 on energy efficiency projects in the communities near each of the three facilities.

The settlement will resolve claims that Houston-based Continental violated the Clean Air Act by modifying their facilities in a way that caused the release of excess sulfur dioxide (SO2) and nitrogen oxide (NOx). “This settlement brings another major carbon black company into compliance with a law that protects clean air for American communities,” said Cynthia Giles, assistant administrator for EPA’s Office of Enforcement and Compliance Assurance. “By investigating all 15 carbon black manufacturing plants in the U.S., EPA is committed to improving public health and leveling the playing field for companies that follow the law. By

installing the latest pollution control technology and funding environmental projects, Continental is taking steps to reduce emissions of air pollutants that can lead to serious health problems."

Continental manufactures carbon black, a fine carbonaceous powder used in tires, plastics, rubber, inkjet toner and cosmetics, at facilities in Phenix City, Ala., Ponca City, Okla., and Sunray, Texas. Because the oil used to make carbon black is high in sulfur, its production creates large amounts of nitrogen oxide, sulfur dioxide and particulate matter. This settlement supports EPA's and DOJ's national efforts to advance environmental justice by working to protect communities such as Phenix City and Ponca City that have been disproportionately impacted by pollution.

"Today's agreement is good news for residents living near Continental facilities in Alabama, Oklahoma and Texas, who will benefit from cleaner air for years to come because of this action," said Assistant Attorney General John C. Cruden for the Justice Department's Environment and Natural Resources Division. "The agreement also reflects our continuing efforts to vigorously enforce the Clean Air Act to protect public health and the environment. The settlement requires Continental to control large sources of air pollution with advanced technology and requires projects that will have a direct and positive impact on Continental's neighbors."
EPA expects that the actions required by the settlement will reduce harmful emissions by approximately 6,278 tons per year of sulfur dioxide and 1,590 tons per year of nitrogen oxide. Continental estimates that it will spend about $98 million to implement the required measures. The pollution reductions will be achieved through the installation, upgrade and operation of state-of-the-art pollution control devices designed to reduce emissions and protect public health.

SO2 and NOx have numerous adverse effects on human health and are significant contributors to acid rain, smog, and haze. These pollutants are converted in the air to particulate matter that can cause severe respiratory and cardiovascular impacts, and premature death. EPA concluded that the modifications made at Continental's plants violated the Clean Air Act based on information the company submitted in response to an information request from EPA in 2007. EPA issued notices of violation to Continental for these claims in 2012.

Obama mercury air pollution rule faces test at U.S. top court

Date: 24th March, 2015 Source: Reuters

(Reuters) - The latest legal test of President Barack Obama's environmental agenda reaches the U.S. Supreme Court on Wednesday as the justices consider a challenge to a regulation intended to limit emissions of mercury and other hazardous pollutants mainly from coal-fired power plants.
The nine justices are due to hear a 90-minute oral argument on whether the Environmental Protection Agency should have considered the cost of compliance when deciding whether to regulate the pollutants. Industry groups and some states appealed after an appeals court upheld the regulation in June 2014. Among companies opposing the rule are Peabody Energy Corp, the nation's largest coal producer. Exelon Corp, the biggest U.S. nuclear power plant operator, is one of several power companies that support the rule.
The case marks the third time in the past year the Supreme Court has reviewed Obama's air pollution regulations, with his administration mostly winning the two previous cases. In April 2014, the court upheld a

regulation limiting air pollution across state lines. In June 2014, the court largely upheld the government's ability to regulate greenhouse gas emissions from major utilities.

How the administration fares this time around will be closely watched by industry groups and states in part due to the EPA's plans to issue new regulations aimed at curbing carbon emissions from power plants. The 2012 mercury regulation also covers oil-fired plants, although these are less common. It is being targeted by Michigan and 20 other states in addition to various industry groups, including the National Mining Association. The challengers say the EPA's refusal to consider the estimated $9.6 billion-a-year costs will lead to bigger electricity bills for Americans.

The regulation could help prompt utilities to shut down some coal-fired plants due to compliance costs. The EPA says the rule, due to go into effect this year, applies to about 1,400 electricity-generating units at 600 power plants. Many are already in compliance, the U.S. Energy Information Administration said. In issuing the regulation, the EPA said it was not required to consider costs.

It did outline what it saw as the rule's benefits, including preventing up to 11,000 premature deaths annually. The agency also said the regulation could generate billions of dollars in benefits including a reduction in mercury poisoning, which can lead to developmental delays and abnormalities in children. A ruling is due by the end of June. The three consolidated cases are Michigan v. EPA, 14-46, Utility Air Regulatory Group v. EPA, 14-47, National Mining Association v. EPA, 14-49.

Beijing aims to turn smoggy sky blue in 7 yrs

Date: 24th March, 2015 Source: ECNS.cn

With several candidate cities dropping out of the race for 2022 Winter Olympics bids, it seems Beijing's odds of winning have increased substantially, save one crucial detail -- the notorious smog enveloping the city. A team from the International Olympic Committee will arrive in Beijing this week to evaluate the city's ability to host the games. One thing they're certain to find is no shortage of enthusiasm for sport - even in a place where winter sports are confined to skating and skiing -- with an estimated 300 million Chinese people participating in winter sports.

Winter sports facilities and infrastructure are another area where the city is easily covered. With China's successful hosting of the Beijing Olympic Games in 2008, Shanghai Expo in 2010 and Beijing Asia Pacific Economic Cooperation (APEC) summit in 2014 as well a high speed rail linking Beijing to joint host city Zhangjiakou - the facilities to host the games are already in place.

But what about the poor air quality?

Unlike the summer games in 2008, hosting a winter sporting event will coincide with Beijing's worst air period. In winter, millions of tons of coal are burned to fuel collective heating and pollution-clearing winter winds from the north are turned back by the city's mountains, adding to the difficulty of guaranteeing blue skies. Scientists have said it will take Beijing decades to turn smoggy skies blue. A recent environmental protection plan from the Beijing government put the deadline for blue skies at 2030. Qin Dahe, former head of China Meteorological Administration, said fighting air pollution all depends on China's ability to transform its energy and industrial structure, in addition to public efforts. "I can't tell how many years it will take, but I think 30 years would be too long and 3-5 years is too unrealistic," Qin said. So is seven years enough?

Lyu Xinhua, spokesman for this year's national committee of Chinese Political Consultative Conference, a political advisory body, said hosting the winter games may help Beijing achieve the 2030 goal in advance. So far, Beijing has effectively guaranteed good air quality during critical periods. During the APEC summit,

the demonstrated ability to ensure blue skies led to the coining of the phrase "APEC Blue". But "APEC Blue" was created with unconventional methods at a special time, said Li Ting at Institute of Atmospheric Physics of Chinese Academy of Sciences. "Those measures are very costly and can not be enforced permanently."
During the APEC summit, Beijing and several neighboring provinces suspended thousands of factories and construction sites, ordered half of the cars off the streets and granted a six-day vacation to more than two million of its residents. It is yet to be seen whether Beijing still needs to take unconventional measures if the city wins the bidding race, but winning can help the city tackle air pollution, said Wang Hui, deputy secretary general of the Beijing Winter Olympic Games Bid Committee at a press briefing on Saturday. Wang said Beijing will spend more than 40 billion yuan (6.44 billion U.S. dollars) and enterprises will contribute 760 billion yuan to fight smog.

"We are enforcing the sternest measures," said Wang. Wang also said fighting air pollution will help residents of the city breathe clean air rather than just welcome the Olympics. "Bidding for the Olympics will help us tackle air pollution, while fighting air pollution can also help the bidding process." No matter what, Beijing has demonstrated its desire to welcome the games. Last week, two thermal coal-burning plants were shut down, paving the way for use of clean and low-emission energy. Of the four major coal-fired power plants in Beijing, three have been closed and the last is scheduled to be shut down next year.

Beijing's neighboring Hebei province is also gearing up to relinquish economic returns from heavily polluting industries such as steel-making, cement, electricity and glass-making. The Hebei provincial environmental protection department estimates economic growth was cut by 1.75 percentage points due to pollution fighting measures. Some experts believe a two-city bid will help the Beijing-Tianjin-Hebei region better coordinate their efforts to fight pollution. "If the region takes the opportunity of the games and steps up their industrial restructuring process, especially in Hebei, then Winter Olympics Blue is still possible," said Li Ting.

Beijing to Shut All Major Coal Power Plants to Cut Pollution

Date: 24th March, 2015 Source: Bloomberg Business

(Bloomberg) -- Beijing, where pollution averaged more than twice China's national standard last year, will close the last of its four major coal-fired power plants next year.

The capital city will shutter China Huaneng Group Corp.'s 845-megawatt power plant in 2016, after last week closing plants owned by Guohua Electric Power Corp. and Beijing Energy Investment Holding Co., according to a statement Monday on the website of the city's economic planning agency. A fourth major power plant, owned by China Datang Corp., was shut last year.

The facilities will be replaced by four gas-fired stations with capacity to supply 2.6 times more electricity than the coal plants. The closures are part of a broader trend in China, which is the world's biggest carbon emitter. Facing pressure at home and abroad, policy makers are racing to address the environmental damage seen as a byproduct of breakneck economic growth. Beijing plans to cut annual coal consumption by 13 million metric tons by 2017 from the 2012 level in a bid to slash the concentration of pollutants. Shutting all the major coal power plants in the city, equivalent to reducing annual coal use by 9.2 million metric tons, is estimated to cut carbon emissions of about 30 million tons, said Tian Miao, a Beijing-based analyst at North Square Blue Oak Ltd., a London-based research company with a focus on China. 'Clear Impact'- "Most pollutants come from burning coal, so the closure will have a clear impact to reduce emissions," Tian said. "The replacement with natural gas will be much cleaner with less pollution, though with a bit higher cost." Nationally, China planned to close more than 2,000 smaller coal mines from 2013 to

the end of this year, Song Yuanming, vice chief of the State Administration of Coal Mine Safety, said at a news conference in July.

Coal is the most carbon-intensive fossil fuel and the leading source of carbon-dioxide emissions. In the 10 years to 2013, coal demand globally grew by more than 50 percent, meeting almost half of the increase in the world's total primary energy needs, the International Energy Agency said in its annual energy outlook report last year. China was the principal source of the surge, the IEA said. Broader Trend- Closing coal-fired power plants is seen as a critical step in addressing pollution in China, which gets about 64 percent of the primary energy it uses from the fossil fuel. Coal accounts for about 30 percent of the U.S.'s electricity mix, while gas comprises 42 percent, according to Bloomberg New Energy Finance data. Coal use is declining or slowing in China as policy makers encourage broader use of hydroelectric power, solar and wind. The nation is also pushing to restart its nuclear power program in a bid to clear the skies. China's electricity consumption last year grew at its slowest pace in 16 years, according to data from the China Electricity Council.

The nation's emissions of carbon dioxide fell 2 percent last year from 2013, the first decline since 2001, signaling that efforts to control pollution are gaining traction, according to a Bloomberg New Energy Finance estimate based on preliminary energy demand data from China's National Bureau of Statistics. Air pollution has attracted more public attention in the past few years as heavy smog envelops swathes of the nation including Beijing and Shanghai. About 90 percent of the 161 cities whose air quality was monitored in 2014 failed to meet official standards, according to a report by China's National Bureau of Statistics earlier this month. The level of PM2.5, the small particles that pose the greatest risk to human health, averaged 85.9 micrograms per cubic meter last year in the capital, compared with the national standard of 35. The city also aims to take other measures such as closing polluted companies and cutting cement production capacity to clear the air this year, according to the Municipal Environmental Protection Bureau.

Climate change to have considerable impact on Ganga's dynamics

Date: 24th March, 2015 Source: The Economic Times

NEW DELHI: Climate change will have a "considerable" impact on the dynamics of the river Ganga, affecting a major portion of north India which is directly dependent on it for its agriculture and industrial needs, a recent study said.

In a study conducted by researchers at the Indian Institute of Science (IISc), Bangalore, on how the stream-flow in the basin would change under the changing "land use pattern" and "climate", it was found that among both the factors, the effect of climate change was much more "pronounced"."Certain changes are because of land use and some because of climate change. Looking into the future, with respect to water management efforts, if we conclude that climate change has more implications, then our responses will be much different," said Pradeep Mujumdar, Chair Professor in the department of Civil Engineering, who led the study.

The researchers studied about one-eighth of the total catchment area called the Upper Ganga Basin and divided the study region, that also contained the origin of the river, into three different parts depending on the topography, altitude and land use.

After studying the changes in land use through satellite imagery, the analysis of the researchers revealed that between 1973 and 2011, area under cultivation increased by more than 20 per cent. It found that during the same period, the urban land had also expanded significantly, though it occupied a small area in the entire basin. They also noted an appreciable drop in the area under forest cover. "Such changes are not at all

surprising because, between 2001 and 2011, the population of the region has skyrocketed by 120 per cent," a statement quoting Mujumdar said.

Air pollution increases stroke risk, global study claims

Date: 25th March, 2015 Source: The Weather Network

Air pollution increases the risk of hospitalisation or death from stroke, according to a new study published in the British Medical Journal. Carried out by University of Edinburgh and funded by the British Heart Foundation, the research showed that even short-term exposure to pollution increased the risk of stroke. Researchers collected data from around the world, looking at over 6 million stroke cases. Daily increases in pollution were linked with increases in stroke deaths and hospital admissions, particularly in low and middle-income countries. It found that all types of pollution except ozone were associated with the increased risk of stroke. “Long-term exposure to pollution has already been linked to lung, heart and circulatory disease, lead author Dr Anoop Shah, from the centre for cardiovascular science at Edinburgh University, said. “This study now demonstrates that even short-term exposure to air pollution can trigger disabling strokes or death from stroke. “We hope these findings further highlight the adverse effects of pollution on health and that policies will be put in place to continue to reduce atmospheric air pollution,” added Shah.Stroke causes more than 40,000 deaths in the UK each year. Parts of the UK are breaching pollution limits set by the EU. Simon Gillespie, the British Heart Foundation’s Chief Executive, said: “This new research only compounds what we already know, that air pollution is a blight on public health.” “We urge the UK Government, ahead of the Supreme Court ruling next month, to do all that is possible, as quickly as possible, to protect us all from unnecessary risk of death or serious illness from air pollution. Every day’s delay puts thousands more people at risk.”

Study finds link between air pollution and stroke risk

Date: 25th March, 2015 Source: NHS Choices

"Air pollution is linked to an increased risk of stroke," BBC News reports, prompted by a large global study in The BMJ. Researchers found an association even with brief upsurges in air pollution levels. Previous research has shown a strong link between air pollution and heart attacks, but until now the research looking at air pollution andstroke has had mixed results. In this study, the researchers summarised all the relevant research published on the topic worldwide. This showed stroke risk was higher on the day of an increase in air pollution and the days immediately after. They also found the effect of pollution was stronger in lower-income countries such as China.

How Air Pollution Affects Babies in the Womb

Date: 25th March, 2015 Source: Time

A new study finds evidence that prenatal exposure to common pollutants can contribute to hyperactivity, aggression and more in kids. It makes sense that an expectant mom’s exposure to pollutants in the air can affect her still-growing baby’s lungs and respiratory system. But there’s increasing evidence that such compounds can also harm brain development and contribute to behavioral and cognitive problems later in childhood. In the latest study on the subject, published in JAMA Psychiatry, researchers for the first time

pinpointed exactly which areas of the brain are affected if a baby is exposed to car exhaust and the byproducts of burning home heating oil. These polycyclic aromatic hydrocarbons (PAHs) have previously been linked to developmental delays, lower verbal IQ. signs of anxiety depression and problems with attention. But researchers haven't been able to identify which areas of the brain are most vulnerable.

In this study, they recruited 40 mothers and their children living in the inner city who were participating in an ongoing study of pollution's effect on development. They were selected because they had low exposure to environmental factors other than PAHs that could affect development, such as tobacco smoke, lead, insecticides and other chemicals. Based on measurements of PAH in their surroundings, about half of the mothers had PAH exposures below the median of those in the larger group, and half had PAH exposures higher than the median.

"The effects were extraordinarily powerful," says Dr. Bradley Peterson, director of the Institute for the Developing Mind at Children's Hospital Los Angeles and lead author of the study. "The more prenatal exposure to PAH, the bigger the white matter problems the kids had. And the bigger the white matter problems, the more severe symptoms of ADHD, aggression and slow processing they had on cognitive tasks." White matter is made up of the fibrous connections between nerve cells and is critical to helping neurons from one part of the brain communicate with their counterparts in other regions, and the babies with the highest exposure to PAH in the womb showed a dramatically lower volume of white matter in the left side of their brains. The entire left hemisphere, from the front to the back, was affected. "You would assume that an environmental exposure brought in by the blood and circulating to the brain would affect both sides of the brain," says Peterson. "But the adverse effects of PAHs is located on one side; that's surprising." The asymmetrical effect speaks volumes about how PAHs target brain tissue. Like other neurotoxins, they may preferentially seek out actively developing tissue. During gestation, the left side of the brain, which houses language capabilities, may be undergoing more intense structural changes in preparation for birth. This was supported by the fact that in the larger group of children in the study, those who were exposed to PAHs around age five didn't show the same left-sided bias; in the older children, the pollutants affected both sides equally because the right hemisphere of the brain is undergoing active development at that time as well. Peterson suspects that the connection between PAHs and later behavioral and cognitive symptoms such as inattention, hyperactivity and slow processing speed may be due to how PAHs disrupt the normal communication between nerves in the left side of the brain and elsewhere.

The problem, he admits, is that moms-to-be can't easily change where they live or work. And most people aren't aware of how many PAHs they absorb on a daily basis. There are ways to minimize the risk of exposure, however. Expectant mothers can avoid secondhand smoke, a major source of the compounds. Not directly inhaling exhaust from cars on busy streets or smoke from fireplaces can also help, as can spending as much time as possible in parks or other areas free of burning fuels. It won't eliminate the risk from living in an inner city and being surrounded by car emissions, but it can help, Peterson says. "Even if you can reduce your exposure from moderately high to moderate levels, it's going to have a beneficial effect on the developing fetus," he says.

Censored Chinese Air Pollution Documentary "Under The Dome"

Date: 25th March, 2015 Source: Scoop

Under the Dome — a new documentary which examines air pollution in China — has sparked international dialog about the importance of keeping our air clean. The film attracted 150 million views shortly after China Central Television's newscaster, Chai Jin, posted about the film on the internet. However, the

Chinese government instructed websites to take down the film after it went viral on the internet, assumedly to prevent any more harm to their image. But it was too late.

China's energy infrastructure is built around coal, which is one of the main reasons why air pollution is so pervasive throughout the country. No other country in the world emits as much sulfur dioxide. And it's not just China that experiences the effects of these dangerous emissions. When China creates goods for exports to the United States, they are also exporting harmful pollution (nitrogen oxide and carbon monoxide) to America's west coast. In addition to the air pollution, China's rivers are also experiencing severe crises. In the Shanxi Province, 88% of local rivers have been polluted, and 62% of them now unusable. One river in the Zhejiang province in eastern China was so polluted, it caught fire when a lit cigarette was thrown into the water.

By bringing awareness to these situations, Under the Dome triggered a significant reaction from many in the Chinese government, who have proposed an energy saving strategy aimed at reducing emissions, while also setting national standards for the release of sulfur dioxide and other pollutants into the air. Notable figures, such as the Premier of the State Council of the People's Republic of China, Li Keqiang, and the Minister of the Ministry of Environmental Protection, Chen Jining, have also spoken in response to this documentary, in favor of putting environmental concern at the forefront. President Xi Jinping has even promised to strictly punish those who violate environmental laws.

Perhaps the best solution long-term is boosting alternative energy production. In comparison to a fossil fuel, such as coal, alternative energy sources like wind, biomass, hydroelectric, solar, and geothermal energy emit significantly less carbon. In November of last year, China and the United states agreed to use alternative energy sources to cut greenhouse gas emissions.

Advocates for free-market systems insist that alternative energy is more readily available in deregulated markets throughout the world. Regulated markets (such as the one in place in China and many states throughout the U.S.) are dominated by a single company, commonly known as a utility, which owns the infrastructure and is responsible for distributing the energy to the end-users. Regulated energy systems are not conducive to cleaner alternatives being adopted, as the dominant companies don't have a financial incentive to invest in modernizing their infrastructure. However, in deregulated markets, competing providers are allowed to buy the power and sell it directly to consumers. American states that have deregulated their energy markets, such as Ohio, have seen alternative energy becoming readily available to citizens who can now buy the power from the energy companies and gas companies of their choosing. Consumers can compare prices and shop for cheaper energy from any retailer that does the business. With so many resources and alternative energy increasingly available, there is no excuse to do any more harm to our environment. Documentaries such as Under the Dome can and will spark international concern over our environment and well-being, inspiring many to take action and take care of the Earth and its inhabitants.

Ultra low emission zone for London

Date: 27th March, 2015 Source: Home BT

The world's first "ultra low emission zone" will be introduced in central London in 2020 to tackle air pollution, mayor Boris Johnson has confirmed. The move will require vehicles driving in the congestion charge zone to meet new emissions standards at all times of the day and week, or pay a charge, as part of efforts to cut pollution which causes thousands of premature deaths in the capital each year.

The scheme will reduce the most harmful exhaust pollutants by more than half, officials said. An extra £25 million is being provided by the Government for grants to help taxi drivers cover the cost of upgrading to a greener vehicle, in addition to £40 million already pledged by the mayor to help cabbies retire the oldest, most polluting taxis. By 2018, all new taxis and all private hire vehicles under 18 months old presented for licensing in the capital for the first time must be capable of emitting zero emissions, Mr Johnson said. By 2020, all single decker buses in London will be electric vehicles that produce no traffic fumes, while all 3,000 double deckers will be hybrids with lower emissions. The charge for cars, motorbikes and vans which do not meet the ultra low emissions standards will be £12.50 a day, while heavy goods vehicles, buses and coaches face a £100 a day charge. Ministers and City Hall have come under fire from campaigners for failing to tackle air pollution in London and across the UK, with warnings that 29,000 people die prematurely each year because of pollutants in towns and cities. The European Commission has launched legal action against the UK for its failure to reach targets - which should have been met by January 2010 - to cut excessive levels of air pollutant nitrogen dioxide, which mostly comes from traffic fumes.

Mr Johnson made the announcement at a visit to the factory of Chinese giant Geely, in Coventry, which will develop the next generation London black cab, an ultra low emission vehicle, to comply with the new regulations. He said: "The world's first ultra low emission zone is an essential measure to help improve air quality in our city, protect the health of Londoners, and lengthen our lead as the greatest city on earth. "With additional funds announced today, more help is on the way for taxi drivers to support their transition to the latest technology in greener cabs.

"Together we can ensure everyone who lives, works in, or visits our city has the cleanest possible air to breathe." Prime Minister David Cameron said: "I welcome this announcement which is a world first and great news for London, helping to enhance the quality of life and creating opportunities for companies who develop and manufacture this kind of technology.

"This will build on the UK's strengths in low emission technology and the Government is backing this initiative with £25 million of support." Labour's London Assembly environment spokesman Murad Qureshi said: "Whilst welcome, today's confirmation that the ultra low emission zone (ULEZ) will be introduced in 2020 will come far too late for the 7,500 people a year who are estimated to die as a result of air pollution, London's silent killer. "Boris Johnson has had seven years to get to grips with the capital's pollution problem yet on his watch progress has stalled despite growing medical evidence that it costs lives. "By allowing all London boroughs to opt into the ULEZ, instead of limiting it to a small inner London zone as the mayor proposes, we would be able to improve the air quality of the whole capital. "Boris Johnson's limited ambition, and the significant exemptions to the ULEZ, risk undermining its effectiveness and condemning vast swathes of the capital to an increasingly toxic future."

Studies Suggest Significant Association Between Air Pollution and Anxiety, Stroke Risk

Date: March 27, 2015 Source: International Business Times

A study published by BMJ on March 24 suggests that air pollution can increase the clinical signs and symptoms of anxiety, regardless of existing comorbidities.

The major observational study indicates that there is a 12-15 percent anxiety increase in individuals exposed to fine particle air pollution.

Spike In California Air Pollution Brings Reminder Of Bad Old Days

Date: 27th March, 2015 Source: The Huffington Post

KINGS COUNTY, Calif., March 27 (Reuters) - The brown haze over California's San Joaquin Valley breadbasket on some winter days has been an unwelcome reminder of the bad old days, when pollution hung so thickly that people were warned to stay inside. Years of tight environmental rules improved California air quality so much that the state has not issued a smog alert in a dozen years. But prolonged drought and warmer temperatures have triggered a spike in the number of winter days thick with soot and dirt, while summer days have been marred by smog.

"It's shocking sometimes to see the valley on a bad day," said Mike Kleeman, a professor at the University of California, Davis, who studies air quality. The uptick in pollution over California's cities and farms is not enough to undo decades of environmental progress against smog, which is characterized by high levels of ozone in the atmosphere caused by an interaction of heat with pollutants. But Karen Magliano, chief of the state's Air Quality Planning and Sciences Division, said it has caused California to miss a key federal deadline for improving the air in the San Joaquin Valley, and could lead the state to tighten rules on emissions from cars, trucks, factories and even backyard barbecues. "We're tracking it very closely," Magliano said. Last summer, California was out of compliance with federal ozone rules for 99 days in the San Joaquin Valley, up from 89 the year before. Sooty particulates, which cause brown haze in the late fall and winter, were up throughout the state last winter.

Air pollution at Rohtang set to soar due to more vehicles

Date: 28th March, 2015 Source: Hindustan Times

Raising concerns over environmental issues facing the Rohtang pass, a study conducted in 2012 pointed out that air pollution in the region was likely to increase significantly till 2022 due to the burgeoning number of vehicles. Conducted by the National Environment Engineering Research Institute (NEERI), the study, which recommended traffic restrictions in the area and regular vehicle fitness tests, was tabled in the state legislative assembly in reply to a question by the BJP's Manali MLA Gobind Thakur on March 12. The survey also observed the number of vehicles counted on the Manali-Palchen road in end-May in 2012 was 6,359. It also said the number of vehicles plying on the road was expected to increase to 15,000 during the particular period in the wake of growing rate of vehicles in India which is 9%. It also expected increase in automotive emissions due to the increase in vehicles. The study said the calculated emission of particulate matter, nitrogen oxide (NOx) and carbon monoxide for years 2012 and 2022 without any control for a distance of 43 kilometers from the north of Manali to Rohtang would increase. It added carbon monoxide emissions in 2012 were 56.75 kilograms per day and expected to increase to 133.86 kg per day in 2022. Similarly, particulate matter and nitrogen oxide, which were at the level of 3.11 and 34.03 per kg per day in 2012 was expected to increase to 7.34 and 80.26 kg per day, respectively. It added the Beas rivulet had the highest concentration of chloride owing to vehicular exhaust. The study said that according to the tourism department around 2200 to 2500 vehicles ply on the highway passing via the Rohtang pass in May and June, the peak tourist season. Meanwhile, the Border Roads Organisation stated 7,331 to 7,376 vehicles plied on the road. The study said several transportation options were available which would help in reducing energy consumption and vehicular emissions. "These initiatives focus on reducing the use of private vehicles for internal transportation," the study. It also recommended making the vehicle fitness test mandatory. "A fitness centre should be established in Manali and should be managed by trained manpower," it said.

Air pollution in Beijing reaches crazy high levels, AQI hits 895

Date: 28th March, 2015 Source: Shanghaiist

As of midday today, air pollution in Beijing has hit outrageously high levels, with the city's air quality index (AQI) hitting 895 due to a sandstorm enveloping the city. The AQI takes into account five main pollutants, including particulate matter, ground-level ozone, carbon monoxide, sulfur dioxide and nitrogen dioxide. A reading over 300 indicates "hazardous" conditions that will affect the entire exposed population. While China's capital is well known to have a smog problem, today's abnormally high readings are the result of both local pollution and a sandstorm moving in from the northwest of Beijing. Last month one of the country's best known investigative journalists, Chai Jing, unveiled a controversial documentary exploring the causes of China's air pollution and its impact on the population. After being viewed over 150 million times it was taken down by censors.

This Slum Has the Worst Air Pollution in Mumbai

Date: 28th March, 2015 Source: VICE News

A vast grey cloud billows behind the sheet-metal roofs of the Govandi slum in northeast Mumbai. Home to about 600,000 of the city's poorest residents, Govandi is one of the largest slums in Asia. It lies in the shadow of the Deonar landfill, a towering 132-acre mountain of waste that requires clearances from airport authorities as it inches towards the flight paths of planes flying into and out of Mumbai's international airport. Entering the slum, one finds that the grey cloud is smoke from a fire raging atop the landfill.

"Can you smell it, that sweetish burning smell?" asks Arun Kumar, "It's a huge fire in the dump-yard, and it's been going on for the past 24 hours." Kumar is a social worker and the director of Apnalaya, a non-profit that has been working in Govandi for 40 years. He told VICE News that the area's residents breathe some of the most polluted air in the city, filled with toxins and particulate matter from the nearby landfill, as well as a major highway, two oil refineries, a fertilizer factory, and a power plant. "It's also got the most polluted water," Kumar tells VICE News, "and not a single hospital." It's no surprise, then, that this ward also has the city's lowest average life expectancy — a shocking 39.4 years, compared to the metropolis' average of 68 years. The age-sapping power of India's foul air made headlines when a study by researchers at the University of Chicago, Yale, and Harvard found that over half the country's inhabitants breathed air clogged with PM10 pollutants —particles less than 10 microns in diameter that burrow deep into respiratory tracts — which shortened their lives by 3.2 years.

This was close on the heels of World Health Organization (WHO) study that found 13 of the world's 20 most polluted cities were in India. Mumbai narrowly escaped the list. But going by a standard unit of measurement used by scientists to quantify the level of pollutants in the air, at 136 micrograms per cubic meter, Mumbai's PM10 levels vastly exceed the WHO's "safe" level of 20 micrograms per cubic meter, as well as the country's own standard, 60 micrograms per cubic meter. Mumbai's air is also laden with dangerously high levels of nitrogen dioxide, rapidly increasing due to an unabated rise in vehicular traffic. Besides, public health experts suggest that air pollution is a localized issue, noting wild variations across a single city, and levels of toxins spiking in deprived zones like Govandi. In 2009, a local group of activists who call themselves the Smoke Affected Residents' Forum compiled municipal mortality data. They found

that a quarter of the deaths between 2007 and 2008 were caused by respiratory ailments like asthma and chronic obstructive pulmonary disease. In comparison, such illnesses caused only 0.41 per cent of deaths in a neighborhood a little further away. According to a recent Mumbai development plan, more than half of Mumbai's residents — close to 6.5 million — live in slums, which tend to be located on the city's least desirable and most polluted real estate. A 2011 study led by the National Environmental Engineering Research Institute (NEERI) sampled air from four spots across the city, and found that the industrial zone where Govandi is located had an average concentrations of PM2.5, which is even more hazardous than PM10, of 95 micrograms per cubic meter, well above the US EPA's limit of 35 per square meter, and about 38 percent higher than levels in the city's leafiest, most sparsely populated residential areas. Archana Patankar, a researcher with the Indian Institute of Technology-Bombay, says that overcrowding, poor housing, and exposure to multiple types of pollutants has led to a rise in the frequency and incidence of asthma, wheezing, coughs, and loss of breath, as well as cases of allergic rhinitis and chronic obstructive lung disease. It's also likely to have escalated out-of-pocket spending on healthcare. In a 2011 paper, Patankar estimated that coping with the rising health burden of respiratory illnesses would cost a total of $113 million for every increase of 50 micrograms per cubic meter in PM10 levels and $218 million from an equivalent spike in nitrous dioxide levels. She found that most residents of Mumbai paid for these expenses themselves due to a steady decline in investment in public health services and the absence of accessible health insurance. "About 75 per cent of Mumbai's residents go to private hospitals regardless of income levels," she told VICE News. The poorest among them, she adds, are forced to meet medical expenses by selling off the few assets they have or taking out expensive loans. This study also found that nitrous dioxidelevels corresponded to greater incidence of respiratory problems — as well as costs. These levels are attributable to privately owned diesel and gasoline-powered vehicles, which account for an overwhelming 90 per cent of all vehicles on the road, said Rakesh Kumar, chief scientist and head of NEERI.

Extreme winter not a result of climate change: Study

Date: 28th March, 2015 Source: The Economic Times

WASHINGTON: Contrary to popular belief, cold snaps like the ones that hit the eastern United States in the past winter are not a consequence of climate change, says a new study. The results, published in the Journal of Climate, showed that global warming actually tends to reduce temperature variability. Repeated cold snaps led to temperatures far below freezing across the eastern United States in the past two winters. Parts of the Niagara Falls froze, and ice floes formed on Lake Michigan. But scientists at ETH Zurich in Switzerland and the California Institute of Technology in the US led by Tapio Schneider, professor of climate dynamics at ETH Zurich, found that the extreme winters were not a result of climate change.

They used climate simulations and theoretical arguments to show that in most places, the range of temperature fluctuations will decrease as the climate warms. So not only will cold snaps become rarer simply because the climate is warming. Additionally, their frequency will be reduced because fluctuations about the warming mean temperature also become smaller. However, Schneider noted that "despite lower temperature variance, there will be more extreme warm periods in the future because the Earth is warming". Using a highly simplified climate model, they examined various climate scenarios to verify their theory. It showed that the temperature variability in mid-latitudes indeed decreases as the temperature difference between the poles and the equator diminishes. Climate model simulations by the Intergovernmental Panel on Climate Change (IPCC) showed similar results: as the climate warms, temperature differences in mid-latitudes decrease, and so does temperature variability, especially in winter. Temperature extremes will

therefore become rarer as this variability is reduced. But this does not mean there will be no temperature extremes in the future, the researchers added.

PM Modi to launch country's first air quality index next week

Date: March 30, 2015 Source: Hindustan Times

Next week, Prime Minister Narendra Modi will formally launch the country's first air quality index which rated Delhi's air, this winter, as being polluted enough to earn it the dubious distinction of being world's most polluted city. The air quality index is a global standard based on the national ambient air quality standard. India will be adopting the index at a time when the quality of air in most cities is fast deteriorating in the absence of a national policy to combat rising pollution. Despite this move, the Centre may not be able to help states reduce air pollution as the budgetary allocations for the environment ministry have been cut and it does not have extra funds for pollution abatement.

The environment ministry had expressed its inability to help state governments with the execution of air quality standards. While the index will become the basis for state pollution control boards to issue advisories on cities' air quality and forecast air pollution, the government is yet to devise a strategy on how to ensure that the advisories reach every resident in a city. "Percolation of information is a challenge," admitted a senior CPCB official.

In Beijing, whenever a high air pollution advisory is issued for an area, industries are forced to close down and restrictions are imposed on the number of personal vehicles that can ply. "The advisory will work only if local administrations act on them," the CPCB official added. With the launch of the index on April 7 at an environment conference, the Centre hopes the state governments will focus on introducing and promoting greener means of public transport to clean their air.

Environment minister Prakash Javadekar will discuss the issue of air quality with state ministers in a special session on air quality. "We will be proposing some action plans which will be discussed," a senior ministry official said.

Neighbouring states add to Delhi's air pollution woes

Date:31st March, 2015 Source: India Today

If you are wheezing because of the deadly Particulate Matter 2.5 in Delhi's air, then blame the neighbouring states of Uttar Pradesh, Punjab and Haryana for polluting your breath. The rural regions - having an abundance of brick kilns, coal plants, cement and other air-polluting manufacturing units -could be loading winds with as much as 50 per cent of the PM2.5 that is choking Delhi.The National Capital Region townships - full of smelters, tanneries, textiles, chemical making and paper units - are further contributing to the Capital's PM2.5 density. The share of the toxic discharge from Noida and Ghaziabad that lie to the East could be a whopping 44 per cent while the contribution from Gurgaon and Faridabad that are on the South could be as much as 22 per cent.

These are the findings of a three-year study done on North India's meteorological model, air flow patterns, air pollution levels and sources of PM2.5. 'An Investigation of Potential Regional and Local Source Regions Affecting Fine Particulate Matter Concentrations in Delhi' is authored by Jhumoor Biswas and Soma

Roychowdhury of the Indian Institute of Social Welfare and Business Management, Kolkata; Saikat Ghosh of Air Quality Center, Ohio University, the US; Sarath Guttikunda of Desert Research Institute, Reno, the US; and Mugdha Nayak of Ansal Institute of Technology, Gurgaon. It was published in the Journal of the Air & Waste Management Association in January 2015.Of all the noxious elements that constitute polluted air - SOx (sulphur oxides), NOx (nitrogen oxides), Co2 (carbon dioxide), etc - particulate matter is considered to be the most dangerous to human health. They comprise solid particles such as dust and products of vehicular and industrial combustion as well as liquid droplets such as acids and organic chemicals. Particulate matter between 2.5 and 10 micrometers in diameter (PM10) is smaller than the width of a human hair and can easily lodge in the lungs.

However, particulate matter smaller than 2.5 micrometers (PM2.5) is a primary issue of concern as it travels further into the bloodstream to cause heart diseases and cancer. Biswas said: "Another trouble with PM2.5 is that being extremely lightweight, it stays in the air for a long time and travels hundreds of miles in the prevalent wind direction. We used Hybrid Single Particle Lagrangian Integrated Trajectory (HYSPLIT) model of the National Oceanic and Atmospheric Administration, US to distinguish regional and long distance sources of PM2.5 in Delhi.

.Wind and its direction was monitored at Delhi's IGI Airport to determine local sources while concentration-weighted trajectory approach was employed to quantify the contribution of each."At times, the PM2.5 level in Delhi was found to be five times the normal standard (60 g/m3).

Treatment- Biswas added: "Whenever the concentration went upwards of 120 ug/m3, we found Delhi's South-South-west arc - Gurgaon and Faridabad - to be pushing in at least 22 per cent of the PM2.5. Noida and Ghaziabad chipped in with 44 per cent. In Punjab, Uttar Pradesh and Haryana, power plants, coal plants, cement units and brick kilns in summers, and biomass burning in winters, load the air. "The authors emphasised on a holistic treatment to the problem. Guttikunda said: "Vehicular emissions in the city are indeed high, but Delhi having a peculiar geography wherein it amasses pollution from the whole region, needs a more comprehensive management."

Exercise can outweigh harmful effects of air pollution

Date: 30th March, 2015 Source: medical Express

New research from the University of Copenhagen has found that the beneficial effects of exercise are more important for our health than the negative effects of air pollution, in relation to the risk of premature mortality. In other words, benefits of exercise outweigh the harmful effects of air pollution.

The study shows that despite the adverse effects of air pollution on health, air pollution should be not perceived as a barrier to exercise in urban areas. "Even for those living in the most polluted areas of Copenhagen, it is healthier to go for a run, a walk or to cycle to work than it is to stay inactive," says Associate Professor Zorana Jovanovic Andersen from the Centre for Epidemiology and Screening at the University of Copenhagen. The research results have been published in the journal Environmental Health Perspectives.

Air pollution a barrier to exercise? It is well known that physical activity reduces, while air pollution increases the risk of premature mortality. Physical activity amplifies respiratory intake and accumulation of air pollutants in our lungs, which may increase the harmful effects of air pollution during exercise. "Air pollution is often perceived as a barrier to exercise in urban areas. In the face of an increasing health

burden due to rising physical inactivity and obesity in modern societies, our findings provide support for efforts in promoting exercise, even in urban areas with high pollution," says Associate Professor Zorana Jovanovic Andersen

"However, we would still advise people to exercise and cycle in green areas, parks, woods, with low air pollution and away from busy roads, when possible," she adds. The study- This is the first large population-based, prospective cohort study that has examined the joint effects of both physical activity and air pollution on mortality. It is based on high quality data on both physical activity and air pollution exposure. The Danish study includes 52,061 subjects, aged 50-65 years, from the two main cities Aarhus and Copenhagen, who participated in the cohort study Diet, Cancer and Health. From 1993-97, they reported on their physical leisure activities, including sports, cycling to/from work and in their leisure time, gardening and walking. The researchers then estimated air pollution levels from traffic at their residential addresses. 5,500 participants died before 2010, and the researchers observed about 20% fewer deaths among those who exercised than among those who didn't exercise, even for those who lived in the most polluted areas, in central Copenhagen and Aarhus, or close to busy roads and highways.

"It is also important to note that these results pertain to Denmark and sites with similar air pollution levels, and may not necessary be true in cities with several fold higher air pollution levels, as seen in other parts of the world," concludes Andersen.

APRIL 2015

Ecan Air Pollution Clamp-down - Have your say

Date:01st April 01, 2015 Source: Duncan Cotterill

Tighter air pollution restrictions affecting a wide range of Cantabrians have been put out by ECan, which has a 1 May deadline for submissions opposing or wanting changes the new rules. The new rules apply to all air pollutants, including dust, smoke and odour and will affect everyone from farmers, restaurant operators and home owners to manufacturers, the construction industry, aggregate extractors and food processers. This will happen through the proposed Canterbury Air Regional Plan (pCARP), which will replace Chapter 3 of the Natural Resources Regional Plan. Examples of changes are:

Odour- Simply avoiding objectionable or offensive odours will no longer be good enough, but general odour management will become compulsory. New requirements for resource consents and compulsory odour management plans are included. Dust- New rules will control dust coming from the full range of sources, covering new builds, demolition and clean fill sites, subdivisions under development, vehicles driving on unsealed roads, ports and quarries. They set higher standards for dust management and impose new resource consent and dust management plan requirements. Industrial Scale Discharges- The pCARP deals with the largest producers of air pollution by not only encouraging location away from sensitive areas or activities, but by requiring them to stick to air quality guidelines and industry best practice standards, including the use of new, cleaner technology. Wood burners- The new rules also clamp down on wood burners through further banning open fires and even low-emission burners in some areas, compulsory maintenance record keeping for wood fires and, by 2019, making the installation of anything other than ultra-low emitting burner illegal across the whole Region.

Farm and outdoor burning- The pCARP tackles smoke from burn-offs (like crop stubble) and other vegetation fires by imposing new restrictions on how, where and when it can happen, triggering more requirements for resource consents and smoke management plans in many situations.

Exercise can 'outweigh harmful effects of air pollution'

Date:01st April, 2015 Source: Air Quality News

Air pollution should not be perceived as a barrier to exercising in urban areas, new research carried out by the University of Copenhagen has found. This, the researchers said, is despite the fact that physical activity amplifies respiratory intake and accumulation of air pollutants in the lungs, which may increase the harmful effects of air pollution during exercise. Nevertheless, the study – published in the journal Environmental Health Perspectives this week (March 30) – argues that the beneficial effects of exercise are more important for good health than the negative effects of air pollution with regards to premature mortality. Lead author of the study and associate professor at the University's Centre for Epidemiology and Screening, Zorana Jovanovic, said: "Even for those living in the most polluted areas of Copenhagen, it is healthier to go for a run, a walk or to cycle to work than it is to stay inactive. She added: "Air pollution is often perceived as a barrier to exercise in urban areas.

In the face of an increasing health burden due to rising physical inactivity and obesity in modern societies, our findings provide support for efforts in promoting exercise, even in urban areas with high pollution. "However, we would still advise people to exercise and cycle in green areas, parks, woods, with low air pollution and away from busy roads, when possible."

It is the first large-scale population-based research to examine the joint effects of physical activity and air pollution on mortality, and used data from a 1993 health study of 52,061 subjects aged between 50 and 65 years old from Aarhus and Copenhagen in Denmark. This found that 5,500 participants died before 2010, but researchers observed that there were around 20% fewer deaths among those who exercised compared to those who did not – even for those living in the most polluted areas of the cities or close to busy roads. Despite the findings however, Professor Jovanovic added: "It is also important to note that these results pertain to Denmark and sites with similar air pollution levels, and may not necessary be true in cities with several fold higher air pollution levels, as seen in other parts of the world."

Air Pollution Takes Early Toll on Children

Date:02nd April 02, 2015 Source: Well

Air pollution can be bad for children – starting even before birth, a new study suggests. Researchers studied exposure to polycyclic aromatic hydrocarbons, or PAHs, a form of pollution caused by burning gasoline, diesel fuel, home heating oil and coal. They found that prenatal exposure to these compounds was tied to changes in the structure of offspring's brains and to intellectual deficits and behavioral problems in childhood.

The researchers measured PAH concentrations in the air and in the blood and urine of 40 mothers in their third trimester of pregnancy, as well as in their children's urine. They followed the children until they were 7 to 9 years old, performing M.R.I. exams on their brains. The results are in JAMA Psychiatry. The higher the exposure to PAHs, the more reductions the children had in the white matter surface of the left hemispheres of their brains. The amount of damaged white matter correlated directly with higher scores on measures of symptoms of attention deficit hyperactivity disorder and other behavioral problems.

Higher exposure to PAHs and white matter deterioration were also associated with lower scores on tests of processing speed, the ability to take in new information and respond to it. "Everyone is exposed to these compounds," said the lead author, Dr. Bradley S. Peterson, director of the Institute for the Developing Mind at Children's Hospital Los Angeles. "Pregnant women and young children are very vulnerable to environmental insults to the developing brain, and these exposures are likely having devastating effects."

Air pollution may be damaging children's brains – before they are even born

Date: -02nd April, 2015 Source: The Conversation

Exposure to air pollutants during pregnancy may contribute to childhood abnormalities in the brain, a new study suggests. The research, from the Children's Hospital of Los Angeles, measured the exposure of the mothers to PAH air pollution and used brain imaging to look at the effects on their children's brains. PAHs, or polycyclic aromatic hydrocarbons, are widespread pollutants formed when organic materials are incompletely burned. They originate from vehicle exhausts, burning coal and oil, waste incineration, and wildfires. They can also be found inside the home, for example from tobacco smoke or open fires and stoves. We need our white matter- The researchers began looking at the effects of prenatal exposure to PAH on brain development in the 1990s. The initial study recruited more than 600 women in the third trimester of pregnancy from New York City minority communities. They completed questionnaires and were given portable pollution monitors for 48 hours to allow researchers to determine their exposure.

Their children were then assessed between the ages of three and seven, and the team found that exposure was associated with symptoms of ADHD (attention deficit hyperactivity disorder) and other cognitive and behavioural problems including reduced IQ, anxiety and depression. For the latest study, 40 of the same children had their brains scanned, revealing a strong link between PAH exposure in the womb and a reduction of white matter in the brain. Brain white matter is made of millions of cells called axons that allow rapid connections between different regions of the brain. What's more, these disturbances in the brain were associated with slower reaction times during intelligent testing as well as more severe ADHD symptoms and conduct disorder.

Growing signs of trouble- This study's findings add to a growing body of literature on air pollution and health, from which other studies report associations with autism spectrum disorders, schizophrenia and cognitive impairment.For example, one study of Californian children showed that those exposed to the highest levels of traffic-related air pollution during pregnancy and in the first year of life were more likely to develop autistic spectrum disorders than those exposed to the lowest levels. More direct evidence that air pollution affects the developing brain comes from animal studies. One study of the brains of young mice exposed to ultra-fine particles at concentrations similar to those found in rush-hour traffic found the mice displayed enlarged cavities in their brains – a condition which in humans is associated with autism and schizophrenia. Particles – bad news for the brain- The mechanism by which air pollution is toxic to the brain is not yet fully understood, in particular, the pathway to the brain of particulate matter (PM) – small pollutants particles which can carry PAHs on their surface. Ultrafine particles are believed to move to the brain either by travelling from the lung into the systemic circulation and across the blood brain barrier or by landing at the back of the nose then travelling to the brain via the olfactory nerve. Once in the brain, pollutant particles can cause inflammation and cellular damage.

Need for more research- As with any scientific project, there were limitations to the study: the sample size was small and it was not possible to exclude the possibility that the findings could have been caused by other environmental exposures. The researchers plan to scan many more children, and to assess the way PAH interact with other contaminants and their effects on the brain. It's also important to remember that the findings were made from a study of a specific population with a high level of poverty, low educational attainment and below-average maternal IQ – so the results may not easily generalise to other populations. This study and much of the other research on air pollution and the brain originates from the US, where the proportion of one major source of urban air pollution – the diesel-powered car – is low compared to the UK. This makes it necessary to collect our own data here. In our recently launched birth cohort study we will be collecting detailed information on 80,000 UK babies and their parents during pregnancy and the first year of children's lives to work out which factors shape growth, development, health and well-being. The cost of air pollution- Although there has been relatively little research on the negative effects of air pollution on the nervous system, evidence is already mounting. A unique feature of air pollution as a risk factor for disease is that exposure is almost universal.

Importantly, the study showed that the more the mother was exposed to PAH while pregnant, the larger the white matter disturbance in the child. This suggests that reduction in exposure to PAHs during pregnancy and just after birth has the potential to bring about an equivalent reduction in white matter disturbance in the child's brain and its effects. If further studies find similar results, the public health implications are significant given how widespread PAHs are and how little we know about the causes of mental health problems – an area that presents a large and growing disease burden on society. The ever-accumulating evidence that so many components of air pollution contribute to such a diverse set of diseases confirms the urgent need to manage the quality of the air we breathe. Achieving this promises to be a significant and cost-effective way of improving our health and quality of life.

EPA air pollution alerts in Gippsland improving says Emergency Management Commissioner Craig Lapsley

Date:02nd April, 2015 Source: ABC News

Victoria's Emergency Management Commissioner says he is satisfied with the time it has taken the Environment Protection Authority (EPA) to alert residents to air pollution.This week Gippsland's only air quality monitoring stations in the Latrobe Valley have recorded 'very poor' readings due to smoke from planned burns. Some residents have expressed anger over the often contradictory information on the EPA's website and the time it has taken to send out warnings, with calls for text message alerts to be issued.

Commissioner Craig Lapsley said he believed the EPA was improving the way it communicated to the public. "So two-and-a-half hours was considered to be a reasonable time, and we'll work closely with EPA to make sure that timely information can be improved," he said. "Obviously the Minister for Environment is focused on this and we're getting plenty of attention about what is the right way to warn communities about the currency of information." He said taking an hour or two to alert the public was an improvement on taking more than a day.

"That is an improvement of where [we] were some weeks ago, if you remember we actually had an incidence in the valley some weeks ago, so we've already seen in two weeks an improvement," he said. New information on the EPA website showed high levels of the dangerous PM 2.5 particles and very poor air quality at Churchill yesterday. The levels yesterday at Churchill exceeded 40 micrograms per cubic metre for most of the day and reached peaks of more than 50. An EPA spokesman said yesterday that levels over 40 micrograms could trigger health warnings from the Health Department. Up until yesterday, only Morwell East, Morwell South and Traralgon were listed on the website. Churchill and Moe were added to the air quality tables some time yesterday.

Here are nine ways to deal with Delhi's air pollution—but you may not be able to afford any of them

Date: 02nd April , 2015 Source: Quartz India

Delhi's air pollution hit new highs last winter, giving the city, at least briefly, the worst air quality readings of any place on earth. Unlike in years past, though, the warmer weather hasn't brought that much relief. Delhi's air pollution has been worse than Beijing's again this week. The count of the most insidious particles, the tiny PM 2.5 that enter your blood stream from your lungs and cause cancer, has fluctuated between 61 and 166 in Beijing during that time. In Delhi, they've bounced between 96 and 153. In Beijing, filthy air has spawned public protests, plans to build air domes, widespread donning of face masks and a government declaration of "war" on the polluter culprits. But in Delhi the reaction has been much more muted, even though the air is often worse. There's no discernible government push to fight the rise in diesel generators, brick kilns, and traffic jams that cause the problem—minus a recent political letter-writing campaign.

Delhi residents are, let's face it, pretty much stuck trying to deal with the problem themselves. Here are some common coping strategies. But a caveat up front: They are not all available to everyone. Protecting yourself, and your kids, from Delhi's air pollution takes one thing—money. Avoid auto rickshaws- Researchers with Delhi's Indian Institute of Technology and University of California, Berkeley took more than 80 trips through Delhi during rush hour in an auto rickshaw from February to May (pdf, pg. 12), measuring particulate matter and black carbon, and compared those levels to a fixed air

monitor in central Delhi. It probably isn't surprising that the figures on the road are higher than those off the road, but the difference between the two is stark: The alternative here is to travel in a car instead, with the windows rolled up, and your air circulation system set to "recirculate," rather than pulling in air from outside. This only works, though, if you have a car. Buy air purifiers by the cartload Delhiites who can afford them are snapping up air purifiers that can cost Rs30,000 ($484) or more for every room of their house. Some residents have spent several lakh outfitting their entire home. Sales of air purifiers have been growing as much as 50% a year in India, and new entrants to the business expect that figure will only increase—especially if they can convince schools to sign up. Already some high-end private schools have installed central air purifiers, but most of Delhi's schools have not. If you can afford about $24,000 a year for tuition, you're in luck. Keep the kids, and yourself, home from school and work- Last year, the national pollution control authority asked India's Supreme Court to suspend school on heavy pollution days. "Closure of kindergartens, primary and middle schools is one of the steps taken in China on days when pollution levels are high. Such a measure is essential in Delhi," the environment board wrote in a report submitted to the Supreme Court last year. But the ministries of environment, road transport and petroleum quickly shrugged the recommendation off. That doesn't mean you can't still keep your kids home, or stay home yourself. But this only works if you have an understanding boss and teachers, and can possibly afford to lose your job. Don't go outdoors at night- Delhi's pollution varies depending on the neighbourhood and traffic patterns, but in general the coldest temperatures (i.e. in the middle of the night) create the highest levels pollution because of inversion, which traps pollutants from cars and factories under a blanket of warm air. Take a pollu-cation- Travel just a few hours out of Delhi, and the air clears considerably. The hills are lovely this time of year. Mussoorie's Claridges Nabha residence is running a Rs11,000 per night promotion. You don't need to spend that much money, of course: Hotels in Kasauli start at Rs500 a night. Hire clean air consultants- Yes, they exist. BreatheEasy123 will come to your home, test your pollution levels and suggest filters and fixes. Increase the greenery- Does adding more houseplants to your home actually make indoor air cleaner? New Delhi-based architect Kamal Meattle popularised the idea with a TED Talk that's been viewed by over 2 million people. Many air pollution specialists say there's no scientific evidence to support this, but, hey, it can't hurt. Outdoor trees can help when their leaves catch big particulate matter. Supplements, cleansing tonics, and treatments- There's everything from "bio-tulsi" tablets, made from dried basil "to counteract the effects of environmental pollution," to ginger tea, which is believed to stave of colds and sniffles. Again, not entirely supported by science. Move out- Well before an AIIMS doctor told the Indian Express newspaper that leaving Delhi was the best way to be healthy, some residents have been fleeing. Since 2007, Sarath Guttikunda, the founder of Urban Emissions, has been measuring Delhi's air and trying to raise awareness about air pollution. Last year, he moved his family to Goa.

"I have two small kids and you can't really take them to the park for long" during the Delhi winter, he told Quartz. "We were trying to keep them in their room all the time and in the house all the time." In Goa, Guttikunda said, "they can go out whenever they want, and we don't have to worry they'll be sneezing tomorrow."

Coal dust pollution has increased in Gladstone: report

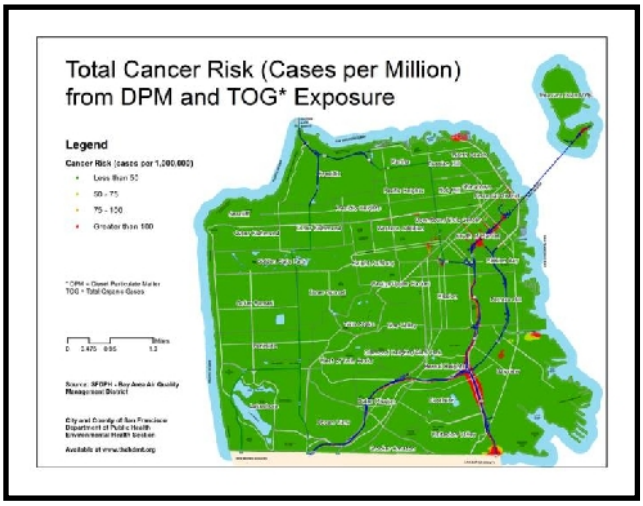
Date 04th April 04, 2015 Source: The Observer

DEVELOPER Allan Jeffery wasn't surprised to hear Gladstone has been named one of the hot spots for air pollution in Australia. Every two weeks the Toolooa St resident washes down his home from the greasy, oily dust. He said it's "soul destroying". "You can't just hose it off. You have to scrub it with detergent," he said. Mr Jeffery said it had gotten worse over the past five years. A new report backs up his claims. The report based on National Pollutant Inventory data says air pollution was responsible for more

deaths than traffic accidents. "It's a planning problem and the council aren't interested," Mr Jeffery said. "If you want a job here you have to swallow sh*t." Mr Jeffery said coal and other material dust meant houses were locked up for most of the day, with air-conditioners blaring. With town planning experience under his belt, Mr Jeffery says lids on the coal wagons for trains and enclosing the QAL dust pile were feasible solutions. The health and environment group that released the report says there has been a massive increase in airborne dust pollution from the nation's coal industry. "The data shows Mackay, Gladstone, south-east Queensland and central Queensland are hot-spots of high air pollution in Australia," Environmental Justice Australia advocacy and research director Nicola Rivers said. People living in central Queensland were more likely to experience health effects of increased air pollution. The report said 14 of the country's 20 most polluting coal mines were in central Queensland. Around Mackay, increased coal loading contributed to a 136% increase in particle pollution emissions in the past five years, and an increase of more than 4000% in fine particle emissions. The report also stated coal dust pollution from Gladstone Power Station increased by 40% in the past five years and fine particle emissions increased by 649%. In the Bowen Basin, the report said two open-cut mines near Moranbah were among the worst polluting coal mines in Australia. The Environmental Justice Australia report said air pollution contributed to the premature death of more than 3000 Australians every year. "More Australians die from air pollution than from car crashes, but too little is being done to control major polluters," Ms Rivers said. "It's now clear that pollution from the burning and mining of coal increases cardiovascular and respiratory disease and lung cancer rates." The report said particle pollution from coal mines increased by 107% in the past five years.

Should You Be Worried About Air Pollution In Your Neighborhood?

Date: 05th April, 2015 Source: Hoodline



One of Hoodline's editors lives on Oak Street, a heavily trafficked thoroughfare, and he's noticed that his window sills are always covered in some kind of black soot. Which got us wondering: Is that a tangible result of air pollution caused by the cars endlessly streaming past his building? More importantly, should he be worried?

According to the SF Indicator Project, a San Francisco Department of Health website that provides data on a number of neighborhood health issues, 3.3 percent of San Franciscans live in an area where air pollution creates a cancer risk greater than or equal to 100 cases in 1 million people.

But some San Francisco neighborhoods bear an inordinate amount of that burden. About 28 percent of Mission Bay and SoMa residents live in an area with elevated cancer risk, while the same can be said of nearly 17 percent of those who call the Financial District home. Other at-risk neighborhoods include the Western Addition (almost 9 percent, including, perhaps, our editor) and the Bayview, Downtown/Civic Center, and the Excelsior (closer to 5 percent). In the majority of San Francisco neighborhoods, zero percent (or close to it) of residents live in an area with high cancer risks due to air pollution.

Here is an "Air Pollutant Exposure Zone" map., below, created by the Department of Health and the Bay Area Air Quality Management District (BAAQMD) to show which parts of town have higher concentrations of air pollutants: As you can see from the map, parts of Oak Street are indeed considered to be in an area of exceptionally high air pollution. If you, too, live in one of these areas, your first question might be about whether or not it's your responsibility or your landlord's (assuming you rent) to take precautionary measures. The answer is that it depends when your building was built.

In a joint statement, the Department of Health's June Weintraub, an acting manager in the Environmental Health Branch, and Meg Wall Shui, a senior epidemiologist who also maintains the SF Indicator Project website, told Hoodline:

"In 2008, San Francisco Health Code Article 38 was adopted to require new residential construction projects located in areas where models show poor air quality and pollution from roadways must install enhanced ventilation to protect residents from the respiratory, heart, and other health effects of living in a poor air quality area." If your building was built before 2008, or you just want to arm yourself with all the facts you can, the SF Indicator Project is a great place to start. You can look up how your neighborhood performs in terms of eight different community health indicators (Environment, Transportation, Community, Public Realm, Education, Housing, Economy, and Health), and even drill down to neighborhood-level statistics on air quality. "We encourage members of our community to use the data on SFIP to explore the various assets and challenges that their neighborhood may have and to become engaged in efforts to improve conditions; whether that be speaking to their local policy maker about their concerns, engaging in health promoting behaviors like walking rather than driving, or becoming engaged in neighborhood groups," Weintraub and Shui say.

The most at-risk parts of the city are those gathered around freeways and other high-traffic areas, says Aaron Richardson, who works in the communications and outreach office for the BAAQMD, which is charged with regulating air pollution from stationary sources, like power plants. But it's the mobile sources of air pollution San Franciscans need to be most worried about, he says. Our cars and trucks are a major source of benzene and other air pollution as well as fine particulates. "We know there are health impacts from traffic," Richardson tells Hoodline. "Diesel exhaust has been identified as a serious health concern in our communities, they think it's responsible for 70 to 80 percent of cancer risk from traffic." He also lists increased incidence of asthma and restricted lung capacity as other common maladies, noting that the risks are elevated for anyone living within 500 to 1000 feet of a freeway. (See top two maps.) Richardson says that the soot on our editor's window sill is likely caused by traffic on Oak Street, but the soot itself is not the greatest danger. "It's the really small particles, 0.25 microns, smaller than human hair, that are really harmful. [The soot] is an indication the smaller particles might be present." He suggests anyone living near a thoroughfare like Oak keep their windows facing the street closed during peak hours, and consider getting a HEPA air filter.

Large, small businesses required to apply for air pollution permit

Date: 05th April, 2015 Source: The BG News

Amidst concerns that small businesses do not need to get air pollution permits if they don't think they need one, the Ohio Environmental Protection Agency said that may not be the case. The Ohio EPA requires any business that produces emissions to get an air-pollution permit, no matter if it's a large or small business. Emissions would include any type of air pollutants that could cause environmental hazards. "Getting a permit or not is not a choice. If a business of any size has emissions or has federal regulations that say they require a permit, the business must obtain appropriate construction and/or operating permits," said EPA Media Coordinator Dina Pierce. When a business is started, the EPA works with it to inspect the business and speaks with those in charge about whether or not their company will need a permit depending on the work they do. It is more common for larger businesses to have air-pollution permits. This is because large businesses could include restaurants, auto shops, factories and others that produce large amounts of emissions and pollution. "Small businesses don't always have a lot of pollution where a large factory is giving off more pollutants into the air. This type of business would definitely need to obtain a permit," said a representative of the city of Bowling Green. According to the Ohio EPA website, most of the businesses within the Bowling Green area that have air-pollution permits are automotive industries, equipment factories, dry cleaners, electronic repair shops, and other large factories.

The process to get an air-pollution permit could be confusing for a new business since there is not just one type of permit to choose from. Pierce said the most common air-pollution permits are permit-to-install and operate, Title V permits, general permits and permits-by-rule. Since there is a lot that goes into obtaining one of these permits the Ohio EPA is there to help any business. "Ohio EPA provides free and confidential technical assistance to help companies comply with environmental regulations. This includes helping a business decide if it needs a permit and helping them through the permitting process," Pierce said. All the businesses in Bowing Green that have a permit went through the permitting process and obtained the correct permit that fits their business, according to the EPA website.

It is important for all businesses, small and large, to work with the EPA and decide if they need a permit or not. Pierce said, "If Ohio EPA discovers a company that does not have the necessary permit, we work with them to obtain a permit and can take enforcement action if necessary."

State: New study finds stronger link of asthma with air pollutants

Date: 06th April, 2015 Source: CVBT

New research supports a growing body of scientific literature indicating that sensitive people, including children, certain ethnic groups and people of lower socioeconomic status, are more vulnerable to the effects of high exposures to traffic-related air pollution, the California Air Resources Board says Monday. The study from the University of California, Irvine, examined the effect of chronic exposure in asthmatic children living in homes near traffic pollution.

Overall, acute worsening of asthma was associated with short-term elevations of air pollution, particularly in asthmatic children living near high traffic roadways. It is the first study to show increased sensitivity to daily air pollution exposures in asthmatic children living in homes in areas with higher levels of air pollution from traffic, compared to asthmatic children exposed to lower levels of traffic-related pollution. While numerous studies have linked fine particulate pollution (known as PM2.5) exposures to respiratory illnesses, including asthma, there is a lack of information about the health effects of exposure to particulate pollution from different sources. Assessing the health impacts from exposure to fine particle pollution from a variety of important sources could help CARB to better target sources of PM2.5 for future control measures, the agency says. Research data included 11,390 emergency room visits and hospital admissions made by 7,954 children ages 0 to 18 between 2000 and 2008.

Key findings include:

• Associations of asthma with ambient pollution, including carbon monoxide, oxides of nitrogen and PM2.5, were stronger among children exposed to high traffic-related air pollution at their homes, suggesting this is a vulnerable population.

• Hospital encounters for asthma were linked to PM2.5 and ozone in warm months, and with PM2.5, carbon monoxide, nitrogen dioxide and oxides of nitrogen in the cool season.

• Hispanic and African-American children, as well as those without private insurance, tended to live in areas associated with higher levels of traffic-related air pollution, further increasing their vulnerability. The study was led by Ralph Delfino of the Department of Epidemiology at UC Irvine. It was funded by the California Air Resources Board with additional funding by the South Coast Air Quality Management District.

Introduction of air quality index marred by glitches

Date: 06th April, 2015 Source: Live Mint

New Delhi: Prime Minister Narendra Modi on Monday launched a national air quality index (NAQI) that will rate the quality of air people are breathing in 10 cities in real time.

The index will cover Delhi, Agra, Kanpur, Lucknow, Varanasi, Faridabad, Ahmedabad, Chennai, Bengaluru and Hyderabad. The index will be later expanded to 46 more cities having a population of more than one million, besides 20 state capitals.

Concerns have risen about air pollution in Indian cities. A recent report by the World Health Organization (WHO) said that of the 20 most polluted cities in the world, 13 are in India, with Delhi at the top. "The air quality index may prove to be a major impetus to improving air quality in urban areas, as it will improve public awareness in cities to take steps for air pollution mitigation," environment minister Prakash Javadekar said. However, introduction of the index was marred by glitches. Of the 10 cities, the index for Agra, Faridabad and Ahmedabad could not be calculated as they had "insufficient data". While some cities have multiple air-monitoring stations, some have only one. The environment ministry plans to have an average of four stations in every city covered by the index. On Monday, there were several monitoring stations that were not working properly and giving insufficient data. Of the four stations in Delhi, one was not working.

"Monitoring stations at several cities were showing insufficient data. To roll this out, they have to ensure the monitoring stations are maintained properly. It's a huge monitoring infrastructure issue. They would have to put in place good-quality controls. There needs to be a focused effort. Monitoring infrastructure will be a critical issue," said Anumita Roychowdhury, executive director (research and advocacy) at Delhi-based Centre for Science and Environment (CSE), an environmental non-governmental organization. She expressed concern that if monitoring stations doesn't work, the plan could fail. Meanwhile, Modi, who inaugurated a two-day national conference of environment and forest ministers of the state governments and Union territories in New Delhi where the index was launched, said his 10-month-old government is focusing on clean energy in a big way, citing its emphasis on solar, wind and biomass energy. Highlighting India's tradition of living in harmony with nature, Modi said India should lead the global fight against climate change, regretting that the country is often seen as a hurdle.

"People of India have been the protectors and devotees of nature. We need to project this fact properly, so that the world realizes that India cannot be questioned in this regard. Indians have always conserved nature, and even today, have among the lowest per-capita carbon emission, globally," said Modi.

"We want to reduce carbon emissions…but unless we bring a change in our lifestyle, we will not be able to save the environment," said Modi. "Instead of being forced to follow parameters laid down by others, India should lead the world in the fight against climate change," the Prime Minister added. He also released a standard 'Terms of Reference for Environment Impact Analysis' prepared by the environment ministry.

The standard ToRs are expected to cut delays by at least one year in projects getting green clearances. Javadekar called it a step that would contribute to ease of doing business. Modi also asked urban bodies across India to focus on solid waste management with programmes to generate wealth from waste.

Govt. moves to clear the air

Date:07th April 07, 2015 Source: The Hindu

Amid growing concerns over deteriorating air quality in India's major cities, the government on Monday launched the National Air Quality Index (AQI) that will put out real time data about the level of pollutants in the air and inform people about the possible impacts on health. Launched by Prime Minister Narendra Modi during the two-day conference of Environment and Forest Ministers, the new index will initially cover 10 cities — Delhi, Agra, Kanpur, Lucknow, Varanasi, Faridabad, Ahmedabad, Chennai, Bengaluru and Hyderabad — each of which would have monitoring stations with AQI display boards. The aim was to eventually deploy the index in all cities with a population of over one million.

The government has been under immense pressure to take a strong stand on air pollution after a World Health Organization study of 1,600 cities released last year showed that Delhi was the world's most polluted capital. Another study, conducted by economists and public policy experts from the Energy Policy Institute at Chicago, Yale and Harvard University, found that India's poor air quality reduces the lifespan of the average citizen by 3.2 years. "The Air Quality Index may prove to be a major impetus to improving air quality in urban areas, as it will improve public awareness in cities to take steps for air pollution mitigation," Environment Minister Prakash Javadekar said at the conference.

The AQI is a global standard. It takes multiple data on pollution already available with the country's Central Pollution Control Board and presents them as a colour-coded scale with six levels. Dark green, the first level, indicates good air quality while maroon at the other end indicates severe pollution. For each category, the index identifies associated health impacts. For example, when the scale touches maroon, the advisory reads: "May cause respiratory impact even on healthy people, and serious health impacts on people with lung/heart disease. The health impacts may be experienced even during light physical activity." CPCB officials stress need for uniform air quality data- The new National Air Quality Index launched by Prime Minister Narendra Modi on Monday, gives current as well as 24-hour average data on particulate matter – PM2.5 or very fine particles smaller than 2.5 micrometres in diameter, and PM 10 which are less than 10 micrometers in diameter – as well as other pollutants including nitrogen dioxide, ozone and carbon monoxide. PM 2.5 levels are commonly used as the best indicator of severe air pollution, while PM 10 particles are also a cause of public health concern, but less lethal.

India now grades air quality along a colour-coded chart based on pollutant levels. Officials from the Central Pollution Control Board warned that the quality of new monitoring stations was mixed across the country, and said Delhi was likely to have the most rigorous data. "There is still a lot of standardisation work we need to do to get all cities and all monitoring stations comparable. The new index should be seen as indicative," the official said, asking not to be named.

The Hindu analysed data from 17 location across the country based on this data and found that despite its reputation, Delhi had better air quality that south Bangalore for the first week of April. While comparable data for these 17 locations is available only for the last few weeks, particulate matter is heavily influenced by weather patterns. Anumita Roychowdhury, head of the Centre for Science and Environment's air pollution and clean transportation programmes, compiled data for Delhi from October 2014 onwards. The data shows that while there were "moderate" days in October, February and March, the second halves of November and December, and the first half of January were consistently "very poor". Delhi the worst- In 2014, the World Health Organisation compiled average annual PM 2.5 numbers for over 1600 cities across the world,

including 124 from India. Delhi had the worst air quality in the world by that estimate, but 12 other Indian cities were among the world's worst 20 – Patna, Gwalior, Raipur, Ahmedabad, Lucknow, Firozabad, Kanpur, Amritsar, Ludhiana, Allahabad, Agra and Khanna.

The Centre for Science and Environment, which has for long advocated the adoption of the AQI, welcomed the government's move "For the first time, the government has taken the initiative to inform people about daily air quality with simple descriptions that people can understand. This can help build public awareness as well as public support for hard decisions needed to get cleaner air,"said CSE's executive director Anumita Roychowdhury. No preventives- However, in stark contrast with other countries that have air quality warning systems, India does not yet have a mechanism or measures in place to bring down peak pollution levels. Beijing for instance, puts in motion a slew of operations when the warning signal for severe pollution is issued. On such days kindergartens, primary and middle schools close, there is a cap on the number of cars allowed on the roads and polluting factories either cut down emissions or shut down completely. Similarly, when the air quality index rose in Paris recently, the city made public transport free and removed almost 50 per cent of the vehicles off the road.

2-day Gulf dust storm makes Mumbai India's most polluted

Date: 07th April, 2015 Source: The Times of India

MUMBAI: Mumbai has trounced Delhi as India's most polluted city on two consecutive days starting Sunday. The US embassy's air quality index (AQI) readings for the area around its embassy in New Delhi and consulate in Mumbai at 10am on Sunday showed that particulate matter in Mumbai stood at 183 as against 173 in Delhi. Monday's readings were 201 in Mumbai compared to 197 in Delhi. But this "dangerous" reading is likely to be temporary as it was caused by the remnants of a dust storm that originated in the Arabian Peninsula and crossed the Arabian Sea into Mumbai. Experts say the resulting haze over the city most possibly contained PM2.5—the term for particulate matter, or particles, whose diameter is less than 2.5 micrometres. PM2.5 is considered dangerous because it could worsen the plight of patients suffering from heart diseases, respiratory problems such as asthma, or lung cancer. AQI has emerged in recent times as an indicator of a city's overall air quality. Last year, Beijing and New Delhi made headlines for their poor AQI (on Monday, Beijing's AQI stood at a moderate 53). Mumbai is likely to limp back to normalcy within a day, said experts. But antipollution activists like Sumaira Abdulali said Monday's readings should make Mumbaikars realize that the sea cannot always drive away pollutants. "The sea does help in keep air pollution low, but it can only help so much. The pollutants, moreover, come back in the form of water vapour or rain and get into our food chain," she said.

Modi launches easy to read air pollution index

Date: 07th April, 2015 Source: Business Standard

Prime Minister Narendra Modi launched India's first-ever Air Quality Index at the inaugural of a two-day meeting with state forest ministers and officials here on Monday. The composite index, measuring several air pollutants, will initially be available for 10 cities, including Delhi and Mumbai. The prime minister also released the standard terms of reference for environmental appraisal of projects which is expected to cut down time taken for clearances by six-12 months. In a glitch, which officials said was being fixed and had happened due to sudden burden on the servers, the website providing the air pollution index crashed on the day of the launch.

The launch of the index was welcomed by environmental think tanks such as the Centre for Science and Environment. It said, "This much-awaited measure was needed to protect public health and catalyse pollution emergency measures in cities." The government plans to expand the monitoring mechanism across 66 cities, but it has not revealed any plan to take pollution-abatement action based on such an index. Governments in many countries use the index to put in place emergency measures when the index indicates a high-degree of risk to public health from spike in pollution levels. Some cities send advisories to schools to shut down, others shut down industrial activities temporarily while many others curtail the number of cars and vehicles on road.

The Union Environment and Forests Minister, Prakash Javadekar, said standards for construction-related dust would be brought out soon. Dust from construction is one of the key components of the overall pollution load in cities such as Delhi.

The index will measure eight pollutants in the air but will be reporting the data on a real-time basis for only the cities with automated pollutant measuring devices. For others, the data would be a week old — too old to help any immediate management. There are only about 40 automated pollution-measuring machines across India at the moment, the Central Pollution Control Board noted. The index will permit citizens to easily find if there is a spike in any one or more of specific pollutants. The index website will also provide the degree of danger that the spike could cause to public health based on a simple colour coding.

The prime minister also launched the standard terms of reference for carrying out environmental impact assessment studies as part of the green clearances process. At present, the expert appraisal committee gives site and project specific terms of references for carrying out the impact assessment. Once the assessment is in and a public hearing held on its basis, the committee evaluates the project for the clearance. Javadekar said the 'Standard Terms of Reference' for 39 industries, would bring down the time for granting approvals from six months to one year earlier to 30 days now.

Temperatures as hot as Greece will bring increased air pollution

Date: 09th April 2015 Source: ECHO

Soaring temperatures on Friday could come in tandem with increased levels of air pollution, forecasters predict.
It is expected to be hotter than Greece tomorrow, but what nature gives with one hand, it takes away with another.
The recent spell of good weather, which is predicted to last until the weekend, will heighten pollen rates, experts say, although pollen season is not yet upon us. Data from the University of Worcester said: "The tree pollen risk is expected to rise to high in many parts of the country while the spore risk will remain low." Pollutants such as traffic fumes, combined with pollution from the continent and Saharan dust from the south are expected to create short-lived problems, particularly in the South East and eastern England, the Environment Department (Defra) said. This is predicted to clear on Saturday, Defra said, with pollution levels returning to low throughout the morning.

Delhi air pollution case: From an 'innocuous petition' to NGT's ban

Date: 09th April, 2015 Source: Hindustan Times

During his routine morning jogs, Vardhaman Kaushik often felt his stamina was going down. The young environment lawyer choked on what he felt was highly toxic air. In February 2014, he moved the National Green Tribunal (NGT) for relief.

He didn't expect his 'innocuous petition' will escalate to the level it now has, and result in a ban for all petrol vehicles older than 15 years and diesel ones registered after 2005. The orders have come amid reports of worsening air pollution taking a dangerous toll on people.

Kaushik (26) said, "I was very saddened when the western media started mocking India when we surpassed China in terms of air pollution. I have a lot of expectations from this case. The ball is in the government's court. Citizens should also wake up and make sacrifices."
Kaushik who studied law in Pune and lives in Gurgaon says his family is prepared to make their first sacrifice. "One of the three cars we have in the family is a 2005 model (diesel) Mercedes-Benz. My father owns it but we will have to let go of our prized possession. Maybe we will keep it at a smaller place, where air pollution is not such a massive problem.

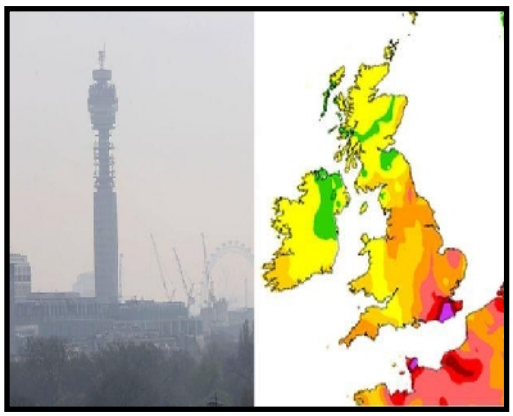
The NGT Tuesday ordered all diesel vehicles, private and commercial, over 10 years old off Delhi-NCR's roads to help clean the Capital's toxic air. The action follows NGT's November 2014 order banning all vehicles 15 years and older in Delhi.

"My limited plea was the causes for the rising air pollution should be identified and curbed. Imade a submission and sought a direction to authorities to build cycle tracks, install air filters, and make a web portal for people to complain about activities like waste burning," he said. Kaushik feels government agencies initially displayed much hostility. "They said the Supreme Court was hearing an air pollution case, and my petition in the tribunal was not maintainable. But the tribunal said I could not be kept from taking recourse to my statutory right of seeking relief," he said.

Government agencies have so far filed 15-20 affidavits. "But mostly they're talking about letters written among each other and other such non-significant matters. There is not much progress on the ground," he said. The biggest problem lies in implementation. "The Delhi Pollution Control Committee's helpline doesn't work. They have not advertised the web portal. Today itself, I saw dry leaves being burnt near Barakhamba road," he said. It is not even known how many vehicles have been sold, scrapped or moved out of Delhi in the last 10-15 years.

Smoggies? South to be hit by air pollution - but impact on Teesside is only moderate

Date: 10th April, 2015 Source: Gazette Live



Warnings have been issued over a spike in air pollution and potential 'blood rain' blowing over Britain from North Africa. Health warnings have been issued over a spike in air pollution and potential "blood rain" today. Asthma sufferers, the elderly and those with heart and lung problems are being advised to "reduce physical exertion" particularly while outdoors, as the air becomes more dense with pollutants causing smog to build over the area. While there were no specific details available for Teesside, the Department for Environment, Food and Rural Affairs (DEFRA) said air pollution in the area was "moderate". They are expected to have cleared by tomorrow morning.

But a red dust blown over to Britain from the deserts of North Africa could turn into blood rain tonight if

there is a downpour leaving cars stained red, yellow and brown, say experts. MeteoGroup forecaster Mario Cuellar said: “Blood rain is dust in rain from the Sahara.

“Some of this dust currently in the UK’s polluted air could be found on cars after rain on Friday night. “Spain saw this blood rain or mud rain yesterday as the Saharan dust moved north.” Blood rain is the term used when rain mixes with sand from deserts. Storms in the Sahara desert whip up sand into a fine dust which is carried for more than 2,000 miles to Britain. In relation to the air pollution, Dr Sotiris Vardoulakis, head of the air pollution and climate change group at Public Health England’s Centre, said most people will not be affected by short-term peaks in air pollution. But she added: “Some individuals, particularly those with existing heart or lung conditions, may experience increased symptoms.” She added asthma sufferers and older people should reduce physical exertion, particularly outdoors.

Air pollution spike across England sparks warning from health charities

Date: 10th April , 2015 Source: The Guardian

A major spike in air pollution across much of England poses a risk to those suffering from respiratory diseases, older people and children, health charities warned on Friday. The government pushed its smog alert levels to “very high” - its most extreme pollution warning - for some parts of south east England. In Brighton, Eastbourne and Hastings the official advice is for all residents - regardless of their health - to reduce their physical exertion. Older people and children on Easter school holidays have been urged to avoid any strenuous activity at all. In other areas of England, particularly the south east and Midlands, the smog levels will be high enough to cause problems for those with pre-existing problems.

Dr Penny Woods, chief executive of the British Lung Foundation (BLF), said: “To reduce the impact, people who find their health affected can take simple steps such as avoiding busy roads, especially during rush hour, and refraining from strenuous exercise outside.” The event closely follows another high level pollution event in March. Professor Malcolm Green, founder of the BLF, said long term exposure to air pollution was “associated with lung diseases including asthma, as well as lung cancer, and can make symptoms worse in those with pre-existing respiratory conditions. The effects of air pollution depend on the severity of exposure, length of exposure, and susceptibility of the individual”. Asthma UK told asthma sufferers to carry their inhalers at all times. Especially as the high pollution event was due to combine with increased pollen counts.

“Poor air quality and pollen allergy can both trigger asthma symptoms, and increase the chance of a potentially life-threatening asthma attack. Children can be more affected by pollution because they have faster breathing rates, and their lungs are still developing,” said an Asthma UK advisory. Woods said it was unfair that those suffering asthma and other lung conditions should be repeatedly forced indoors by air pollution events. “People living with lung conditions shouldn’t have to take such steps simply to avoid being made ill by the air they breathe. With periods of high pollution often resulting from a combination of domestically-produced pollution and that coming from mainland Europe, we need urgent action from government to clean up the air we breathe, across all government departments at home and at a pan-European level.” Keith Taylor is the Greens MEP for the south east, the area most heavily affected by Friday’s event, said the problem should be a national priority. “Whoever forms the next government, one of the first things they must do is to urgently address this public health crisis that currently only seems to be getting worse.”

Simon Birkett, director of campaign group Clean Air in London, said: “This is the biggest, most serious air pollution or particle episode since the so-called Sahara dust episode a year ago. “If there is one lesson this week, it’s that we must follow the lead of cities like Paris that are issuing public health warnings, restricting

traffic and putting forward ambitious plans to triple cycling rates within five years." The slow moving cloud of smog is being fed by a sluggish southerly weather system, which is also responsible for this week's warm spring weather.

Dr Helen Dacre, a meteorologist at the University of Reading, said: "Southerly flow will lead to pollution being imported from the industrialised urban parts of Europe. This pollution will blow across Britain and add to the local pollution produced by British car drivers and heavy industry, creating high concentrations of pollutants in the air. On Saturday however, the weather will change. Clean Atlantic air will spread across the UK and pollution will return to low levels." Northern Europe, especially France, will be cloaked in a thick shroud of smog for much of Friday. In Paris and northern cities the government has reduced all traffic speed limits by 20km/hr. Residential parking has been made free in Paris to encourage people to leave their cars at home. In March, Paris implemented license plate bans to take half of all cars from the road.

Gzb air pollution 4 times over normal

Date: 10th April, 2015 Source: The Times of India

GHAZIABAD: The analysis of Ghaziabad's air samples, collected by the state pollution control board, has come to alarming conclusions. Levels of suspended particulate matter in the city's air have been three-four times higher than normal in the past five months.The samples were collected by the board's regional office in Vasundhara Sector 16. The Uttar Pradesh Pollution Control Board has, however, claimed that the city has recorded a decrease in pollutants — ultrafine particles of size less than 10 microns (PM 10) and 2.5 microns (PM 2.5) — in the past two months, particularly in the February and March, due to wet weather conditions. "Decrease in pollutants, particularly those of ultrafine particulate matter, in the past two months could be attributed to wet weather conditions. High moisture content in the air helps settle air particles quickly. But these figures are not reflective of any long-term decreasing trend in pollution levels in Ghaziabad. We have begun monitoring PM 2.5 levels only recently. It's still unclear as to what quantum of pollutants is contributed by cities in the NCR. A source apportionment study needs to be conducted by the CPCB to determine the contribution of pollutants by the NCR cities," said a senior UPPCB official. According to the state pollution board officials, 24-hour ambient air quality monitoring tests conducted on the borders of Ghaziabad and Delhi on the directions of the National Green Tribunal have been inconclusive. The tests were conducted on February 16, 17 and 18 by the regional pollution control board at the Apsara Border near Dilshad Garden and on NH-24 near UP Gate in February. The average of PM 10 and PM 2.5 levels at Apsara Border were 148.49 and 105.37 micrograms per cubic metre respectively on February 16-17. The corresponding figures for these parameters on the same dates on NH-24 were 155.10 and 114.13 micrograms per cubic metre respectively. The average levels of PM 10 and PM 2.5 at Apsara Border were 161.31 and 119. 86 micrograms per cubic metre respectively on February 17-18. Averages of these pollutants on the same day on NH-24 were 158.47 and 110.02 micrograms per cubic metre respectively.

Cancer-causing pollutants released at fuel filling stations alarm government

Date: 12th April, 2015 Source: India Todays

Air pollution in Delhi has alarmed one and all, and the Union Health and Family Welfare Ministry is no exception. With doctors voicing concern over increasing levels of cancerous Volatile Organic Compounds (VOC) - such as formaldehyde, benzene, methylene chloride and perchloroethylene - the Union Health Ministry has convened a high-level meeting to deal with the issue. With the doctors flagging conditions such as cardiac

arrhythmia - in which the heartbeat is irregular, and sudden death can result due to heart dysfunction, the ministry has called upon the environmental health experts and cancer specialists to discuss the matter.

"The Central Pollution Control Board (CPCB) and Maulana Azad Medical College have already shown in their studies that there is an increased level of benzene in Delhi's air. Apart from cancer, a new concern is that people are at a high risk of sudden death due to inhalation of these vapours and cardiac arrhythmia," said Dr. T.K. Joshi, special adviser on environmental and occupational health to the Union Health Ministry.
A paper authored by the scientists of the Indian Oil Corporation and published by the Society of Automotive Engineers International recently has provided an indication of ambient levels of benzene in the immediate vicinity of petrol stations in Delhi and the National Capital Region. The monitoring of benzene was conducted across the vicinity of petrol stations to ascertain the effect of outside pollutant concentration on forecourt area. Continuous monitoring of benzene was achieved by an air quality monitoring facility stationed across the selected locations at four selected fuel filling stations. It was observed that the average concentrations of benzene measured during the study ranged between 2.28 ppb to 9.43 ppb. The study also revealed few peaks in the benzene level during heavy traffic and these values were higher than the limiting value of 1.56 ppb as prescribed by the National Ambient Air Quality Standard of India. The variation in the concentration of benzene was high at busy traffic intersections and comparatively low during non-peak hours. Diesel engines also release these compounds in considerable amount. Toxic VOCs are present in the urban atmosphere due to both exhaust emissions from vehicles and evaporative emissions at fuel filling stations. VOC like perchloroethylene is suspected to cause breathing-related problems.
"VOC can cause sudden death. It may occur during exposure or in the subsequent hours. Intoxication may also lead to indirect deaths due to trauma. Cardiac arrhythmia can also cause death which is unpredictable, unpreventable and resuscitation is rarely successful in such cases," said Dr. Joshi.
Dr. Manav Manchanda, HoD, respiratory and critical care medicine, Asian Institute of Medical Science, said, "Exposure to high levels of pollution can lead to serious health issues. Polluted air also leads to conjunctivitis, wheezing, nasal bleeding and inflammation.

Delhi to go for Mechanical Cleaning of Roads to Stem Alarming Dust and Air Pollution

Date: 12th April, 2015 Source: MFMonitor

Delhi pollution is alarmingly rising above the levels of Beijing and to fight it on a war-footing, the Delhi government has decided to go for mechanical cleaning of roads first and then plant grass on either side of the road. Dust, accounting for 38% of air pollution, is a major concern in the national capital and during winters it reaches the worst levels triggering a ban on all diesel vehicles which are 10 years old or aboveby the National Green Tribunal recently. It has also asked the authorities to control completely the dust coming from construction sites in the city. Nearly 78% of the air pollution is caused by vehicles, out of which 38% is by dust and mechanical cleaning can reduce it to 27%, said the officials.

Prompted by the ban and uproar over the rising level of air pollution, the Delhi government's PWD is targeting cleaning roads first. "We have prepared a plan to decrease air pollution, according to which we will make all 1,200 km roads of Public Works Department dust-free by mechanical cleaning. In the next three months, mechanical cleaning of PWD's roads will begin," said PWD minister Satyender Jain.
In another move, planting grass on either side of the roads is under consideration. Since dust remains suspended in the air for a longer time during the day owing to continuous movement of vehicles, "a permanent solution would be to plant grass along roads," said the minister. He also said the repairing all broken footpaths would taken up soon. In a recent research, jointly conducted by the University of Birmingham (Britain), the Indian Institute of Technology – Delhi, the Central Road Research Institute (India), and the Desert Research Institute (US), it was revealed that the particles are associated with respiratory diseases such as asthma and bronchitis, which cause inflammation and lead to cardiovascular

diseases. The researchers collected air samples between December 2013 and January 2014, adjacent to a heavy traffic site on Mathura Road, nearer to industrial belt with high emissions. "It was found that for average 12 hours…PM 2.5, fine particles, which is less than 2.5 micrometers in diameter, concentrations in winter were significantly higher than the 24-hour National Ambient Air Quality Standard in India," said the report. "Harmful components including lead, zinc and polycyclic aromatic hydrocarbons were found to be present in very high concentrations during winter season, said the report. The quantitative analysis showed that sources of particulate matter include soil, dust and emissions from vehicles, wood, coal and waste burning. "Dust and soil level in the air increase in summer when temperatures are high with less rainfall. However, in winter season, when people use wood and other substances for heating, low temperature accompanied with little or no wind can lead to building-up of pollutants in the atmosphere," said the report. In another revelation, global climate awareness agency Greenpeace, citing the Central Pollution Control Board of India said Delhi's average pollution at PM2.5 level in 2013 as 153μg/m3, based on hourly measurements at 6 different stations was alarmingly very high. "This is 15 times the World Health Organization guideline and 3.8 times the national standard," it said. Delhi's average is also 80 percent higher than the average in Beijing.

However, Delhi lags behind Beijing in terms of monitoring stations. While Beijing has continuously monitoring stations for all days in a year, Delhi monitoring stations run by Delhi Pollution control Committee (DPCC) had no data for 56 days in the year 2014, it pointed out. Based on the available data for PM2.5 from three locations: R.K.Puram, Mandir Marg and Punjabi Bagh, Greenpeace has made the health risk estimations for each of these areas in Delhi and have made comparisons with the average pollution levels for Beijing. These estimates, based on the methodology of the Global Burden of Disease Study, 2010, show an increased risk in lung cancer, chronic respiratory diseases and Ischaemic heart disease in these areas, several times higher than that of Beijing, it said. The Greenpeace study, published in the Atmospheric Pollution Research Journal, on air pollution and atmospheric processes, said Delhi faces the highest health risks from air pollution.

Polluted' Thakur Village: Factory owners, locals continue to trade allegations

Date: 13th April, 2015 Source: DNA

The MPCB is currently in the process of verifying the permits issued by the civic body to the developers and is also going to carry out site inspections that was scheduled when air pollution tests revealed respirable suspended particulate matter to be thrice the normal limit. In the backdrop of the simmering tension between the local residents of the Thakur Village in Kandivli east and owner of several factories in the area, the latter have written to the Maharashtra Pollution Control Board, alleging that many of the residential colonies are illegal. Meanwhile, the MPCB is yet to carry out an inspection checking the compliance of the industrial units.

"The plant owners said that most of the residential buildings have cropped up in the area in the past five to six years. They claimed to have been operating in that area since 1937 and are protesting the directives to them by the MPCB," said Amar Durgule.

Durgule said, quoting the factory owners, that the residential complexes had been built without necessary approvals from the Brihanmumbai Municipal Corporation. "The area was primarily an industrial zone and residential buildings have cropped up only recently."

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is also going to carry out site inspections that was scheduled when air pollution tests revealed respirable suspended particulate matter to be thrice the normal limit.

Following this, the pollution control board issued directives to the industrial plants to install the mandatory pollution control devices. They also scheduled an inspection to check compliance of their directives, but it had not happened until recently. "We had tried to conduct the inspection but the plants were closed so we could not check for compliance," said Durgule.

Local resident Nishith Bhandari said, "It is easy the plant owners, MPCB and BMC to pass the buck between themselves, but why should we pay the price with our health? We have been dealing with inhuman levels of air pollution in the area and someone has to put a stop to it. We will wait for the inspection by the MPCB to check for compliance by the. If no action is taken, we will approach higher authorities. All we want is a better environment to live and raise our children in."

The origins of the dispute can be traced to early March when residents from the area had complained about the high levels of air pollution caused by surrounding bitumin and stone-crushing plants. Many residents said they had developed respiratory diseases due to heavy air pollution in the area.

How China's thirst for clean drinking water may raise its CO2 emissions

Date: 13th April, 2015 Source: E&E News

HONG KONG -- China has long been accused of using too much water to produce energy, but now some of its coastal cities are compounding this problem by planning for desalination, which will spike both their energy needs and their emissions. According to a recent study by the World Resources Institute, northern China's Qingdao city may risk using too much energy to produce water. Since the country's power supplies mainly come from coal, increased energy use means higher carbon dioxide emissions and worsening air pollution. The environmental organization made the conclusion after looking at different energy needs for producing drinking water from various sources in Qingdao. Its finding shows that desalination plants -- which are expected to meet a significant share of Qingdao's future water demand -- use 10 times more energy than extracting water from local rivers. Of all the unconventional water sources, the study notes, turning seawater into fresh water is also the most energy-intensive, on average consuming 4 kilowatt-hours per cubic meter of fresh water produced. By contrast, wastewater reuse requires less than 1 kWh of power to process the same volume and produce the same quality of water.

Qingdao is among the most water-stressed Chinese cities, with per-capita water resources only about 12 percent of the national average. The city has already been constructing a desalination plant to meet the water demand for one-quarter of its downtown population. Qingdao also plans to triple its daily desalination water production capacity to 400,000 cubic meters before 2016.

"But desalination's high-energy demand and steep capital expenditure and operational cost challenge it as a sustainable environmental and economic water supply approach," the researchers said in the study. "For instance, if all 400,000 cubic meters of Qingdao's proposed daily desalination capacity were in place, greenhouse gas emissions would increase by 80 percent per cubic meter of water produced." The planners' dilemma- This conflict between resources may not only happen in Qingdao but across the

nation. To quench China's chronic thirst, the government has turned to desalination, aiming to produce as much as 3 million cubic meters of desalinated water daily by 2020, up from 0.9 million cubic meters in 2013. Zhong Lijin, the research project lead and a senior associate at the World Resources Institute's Beijing office, said that other Chinese cities are likely to face the same challenge as Qingdao does, because most desalination plants use similar technologies. "It is a fact that desalination is both energy- and carbon-intensive, but this issue has been largely ignored," Zhong said. The China Desalination Association, an industry group based in Beijing, declined to comment, saying that its work focuses on producing water rather than climate change. Repeated phone calls to the energy conservation office in the Qingdao Development and Reform Commission went unanswered.

Zhong said that the amount of energy used for turning seawater into fresh water could go down eventually as desalination technology advances, but the technology breakthrough may not appear in the coming years. While countries like Australia have reduced their carbon emissions in desalination by using wind power to run the plant, whether China can replicate such an approach remains a question. That is because where desalination plants are built may not necessarily have the needed renewable energy resources, Zhong said. There is also an issue of lack of awareness. Because carbon emissions from producing desalinated water are still insignificant compared with other industrial activities, Zhong said that Chinese officials have yet to pay enough attention to the climate impact of desalination plants. Besides that, the country has been desperately seeking water. A 2012 government survey shows that nearly 90 percent of Chinese coastal cities face some degree of water scarcity. While recovering clean water from wastewater could help China alleviate its water shortage at relatively lower economic and environmental costs, Zhong said that the spread of this solution has been discouraged by public doubts about the quality of reclaimed water and qualms about its origin.

Air pollution survey on Kaushambi

Date: 13th April , 2015 Source: The Times of India

GHAZIABAD: The UP Pollution Control Board (UPPCB) has conducted a study of air pollutant levels in Kaushambi following complaints by RWAs about massive environmental pollution in the area. The process of collecting air samples from Kaushambi was completed on Saturday, following which they were sent to the laboratory for tests and analysis. Pollution control board officials said the results are expected within the next couple of days. The survey was undertaken by the board on the request of Kaushambi Apartments' RWAs (KARWA). KARWA issued notices to several authorities in Delhi and Ghaziabad complaining about large-scale pollution in Kaushambi due to the presence of multiple bus terminals, industrial estates, diesel-run vehicles and a landfill site. "Samples will be analyzed for levels of (particulate matter) PM 2.5, PM 10 and oxides ofsulphur and nitrogen in the air around Kaushambi where 24-hour monitoring has been conducted to assess pollution levels," said a board official.

New Delhi to combat air pollution using mechanical road cleaning equipments

Date: 13th April , 2015 Source: PC Tablet

Delhi – With the heavy smog disrupting the regular traffic flow and causing alarming problems at the start of the year the Delhi government has now come up with a solution for combating the air pollution and dust problem. It plans to use mechanical cleaning equipment to reduce the percentage of airborne particles in the atmosphere along with planting grass on both the roadsides. The next three months will see the Delhi government keenly initiating the mechanical road cleaning process and grass

plantation. Just a year back, the World Health Organization had warned India about the presence of small airborne particles in the atmosphere of the country's capital city, New Delhi. However, the Indian authorities considered the report to be a bit exaggerated stating that the scenario was not as bad as was being reflected in the WHO report. Today it is being stipulated that the air pollution in New Delhi is as bad as that in Beijing, which is quite alarming.

Planting Trees and Grasses Reduce Air Pollution- Air Pollution is known to cause serious health problems such as lung diseases, lung cancer, breathing difficulties and more. That is why, environmentalists have long been stressing on the need to plant more trees and shrubs to reduce the air pollution in the atmosphere. At present, the air in New Delhi is 78 percent polluted out of which 38 percent pollution comes from the vehicles. With the city growing in leaps and bounds, there is no way in which the growth in the number of vehicles can be stopped. However, the percentage of pollution in the air can be controlled by planting evergreen trees, shrubs and grass alongside the road. To ensure that the newly planted plants and grass do not succumb to the atmospheric conditions, the Delhi government will need to take good care of them. Only then, all the planning and efforts will show the desired results.

Air pollution comes with a price tag in Mumbai

Date: 14th April, 2015 Source: Hindustan Times

Air pollution extracts a heavy price – both in terms of health and money. A study published by the Indian Institute of Technology-Bombay (IIT-B) in 2011 put a price tag on air pollution in Mumbai.

Pushpa Trivedi, a professor at the department of Humanities and Social Sciences at IIT-B, and an author of the study, said, "Increase in pollutants leads to an additional burden of cases, and a monetary burden on the patients." Trivedi estimated the total cost of treatment for diseases triggered by air pollution in Mumbai was set to go up from Rs 1,349.42 crore in 2008 to Rs 1,658.20 crore in 2015.

A 50 microgram per cubic metre (µg/m3) increase in NO2 (nitrogen dioxide, largely released by the burning of fuel) led to heath complications, the treatment of which cost Rs888.67 crore in 2008, said Trivedi. The cost was expected to rise to Rs1,090.35 crore in 2015. "The study showed that the burden of diseases caused by 50µg/m3 increase in PM10 (particulate matter 10 – see box) was estimated to rise from Rs460.75 crore in 2008 to Rs567.84 crore in 2015," said Trivedi.

"Pollution extracts a heavy price from affected individuals, society and the government. During our study, we found many patients were being hospitalised twice or thrice a year because of lung complications. Public hospitals are few in number and crowded, and we found 70% people opting for treatment at private clinics," said Archana Patankar, co-author of the doctoral study.
According to a 2014 World Health Organisation (WHO) report, the average PM10 level was 136 µg/m3 in Mumbai, compared to 121 µg/m3 in Beijing. The Central Pollution Control Board says the safe limit for PM10 is 100 µg/m3. The average PM10 level in the world is 71µg/m3, according to a WHO report. Doctors in Mumbai said over a period of five years, the number of patients with allergic bronchitis have increased by 30-40%. "Many times, I have asked my patients to leave the city as a treatment. They go to their village for a few days and their cough disappears. Such cases are a result of increased pollution levels," said Dr Shahid Barmare, physician, Kohinoor Hospital, Kurla. Dr Barmare said people who travel in open vehicles such as autos and motorcycles have a higher exposure to pollutants and develop allergic bronchitis because they inhale more particulate matter.

Doctors said people who have existing lung conditions such as asthma and chronic obstructive pulmonary disorder are the worst affected. Higher pollutant levels in the city can trigger allergic rhinitis – which causes a burning sensation in the eyes and increases the risk of heart conditions and cancer, said doctors. Recently, the WHO identified outdoor air pollution as a carcinogenic – something that causes cancer – just like tobacco. HT found that patients with lung complications spend between Rs 10,000 and Rs 2-lakh annually for treatment, depending on the severity of the conditions and the frequency of hospitalisation. Thane resident Shruti Mani, 23, for instance, spends Rs 24,000 on her treatment annually. "I visit the doctor twice a month. I am trying out alternative medication," said Mani, who noticed she has more asthma attacks during Diwali, when air pollution levels go up. What is more worrying is the rise in number of people complaining of respiratory infections that rarely respond to common medicines. "While their lung function test results are normal, their condition does not seem to improve with regular medication. Such respiratory distress could be related to higher exposure to toxic gases inhaled," said Dr Samir Garde, pulmonologist, Global Hospital, Parel.

Dr Pratit Samdani, physician, Breach Candy Hospital, said, "Particulate matter (PM10 and PM2.5) also carries virus and bacteria, which infect the lungs and cause lung infections."

Doctors said people should avoid walking in polluted areas. They should also avoid taking early morning and evening walks, as the pollutants are closer to the ground. "I always ask my patients to avoid running on the Marine Drive, as they are inhaling vehicular emission at a much faster rate when they are running," said Dr Rohini Chowghule from the Indian Institute of Environmental Medicine and a senior chest specialist.

Outdoor air pollution is a carcinogen: WHO study

* Outdoor air pollution is a major environmental health problem affecting people in developed and developing countries alike.
* The World Health Organisation (WHO) estimates that 80% of premature deaths related to outdoor air pollution were caused by ischaemic heart diseases and strokes, while 14% of the premature deaths were caused by chronic obstructive pulmonary disease or acute lower respiratory infections; 6% of the deaths were caused by lung cancer.
* A 2013 assessment by WHO's International Agency for Research on Cancer concluded that outdoor air pollution is carcinogenic to humans, with the particulate matter component of air pollution most closely associated with increased cancer incidence, especially cancer of the lung.
* This means air pollution is a human carcinogen, similar to tobacco smoke, asbestos and arsenic – a leading cause of cancer deaths globally.
* Health experts have known for years that air pollution increases the risk of a wide range of ailments, including respiratory problems and heart disease. Some compounds in the air we breathe, such as diesel exhaust, have already been deemed cancer-causing. But the 2013 study was the first time the organisation's International Agency for Research on Cancer classified air pollution in its entirety as a cause of cancer.

India to Monitor Air Pollution in 10 Cities

Date: 15th April, 2015 Source: Learning English

The Indian capital of New Delhi recently passed Beijing, China, for having the world's most polluted air. Now, Indian Prime Minister Narendra Modi is launching a national air quality index to monitor pollution levels in 10 of the country's major cities.

Mr. Modi launched the air quality index at a two-day conference that included the environment and forest ministers from all Indian states. Officials at the conference are considering measures to strengthen

environmental laws. Over the next two years, the index will be expanded to about 66 cities with a population of more than one million.

The new air pollution index will measure eight pollutants. The index will use color coding to describe the air's impact on human health. That will make it easy for citizens in big cities like New Delhi, Bangalore and Chennai to know their city's air quality. Prime Minister Modi said in launching the index that the country must change the world's opinion that India does not care about the environment or about climate change.

Mr. Modi said that India has a long tradition of respecting the environment and can show the rest of the world the way in fighting climate change. He also urged Indians to reduce waste and save resources as they become more wealthy. The high levels of air pollution in Indian cities are a major concern for residents. The World Health Organization says that 13 of the world's 20 most polluted cities are in India. The worst is Delhi, the densely populated capital territory of India. Indian officials do not agree with the WHO's findings. However, experts say that the pollutants in Delhi's air in winter months can reach up to three times the safe limits on some days. Fumes from diesel vehicles have caused the increasingly polluted air of India's cities. Officials also blame smoke and dust from industrial and building activity. Doctors have warned that rising levels of air pollution are leading to an increased number of citizens with asthma, chronic bronchitis and lung cancer. WHO officials call air pollution a leading cause of premature, or early, death in India. About 620,000 people die of pollution-related diseases every year. Anumita Roychowdhury leads the air pollution program at New Delhi's Center for Science and Environment. She calls the launch of the index a good first step in fighting the severe problem. She says the next step should be for city governments to release public health warnings. She also says city officials should plan what to do on days when pollution levels are unsafe. Ms. Roychowdhury also says the new index could make it easier for governments to demand difficult measures, such as restrictions on private vehicles. I'm Ashley Thompson. VOA correspondent Anjana Pasricha reported and wrote this story from New Delhi. Ashley Thompson wrote it for Learning English. Mario Ritter was the editor.

Cancer cases in Haifa Bay may be linked to air pollution, study finds.

Date: 15th April, 2015 Source: The Jerusalem Post

As existing data resurfaced in recent days potentially linking increased cancer incidence in the Haifa Bay to air pollution, Environmental Protection Ministry professionals said on Wednesday that they will recommend that their new minister declare the area "an air-pollution-stricken region." "Despite the significant decrease in air pollution and the fact that no irregularities were measured at facilities in the region, the area is still ranked first in air pollution emissions in Israel," a statement from the ministry said. "In light of all the data, the ministry is formulating recommendations, to the new minister when he or she assumes the position, to declare Haifa Bay as 'an air-pollution-stricken region.'" The Environmental Protection Ministry was reacting to media reports over the past two days claiming that Health Ministry officials had acknowledged a causal link between air pollution and cancer in the Haifa Bay region. Although pollution remains problematic in the region, the Environment Ministry stressed that during the past six years, air pollution levels have decreased by 70 percent, due to increased industrial supervision and regulation.

The media reports regarding the link between Haifa Bay cancer incidence and air pollution surfaced after Prof. Itamar Grotto, director of the Health Ministry's Public Health Services, recently sent a letter to the

appeals supervisor in the Interior Ministry's National Planning Administration, in response to objections regarding the expansion of oil refineries in the area. Grotto based his letter on a 2013 article published in the American Journal of Cancer Epidemiology and Prevention, which examined prevalence of cancer in the Haifa area from 1998 through 2007.Citing the article, Grotto explained that over the 10-year time period, about 780 of the 4,860 cancer cases found in the region likely resulted from air pollution exposure. Of the 60 cancer cases that occurred in children from ages 0 to 14, about 30 were probably linked to air pollution, he wrote. "Lung cancer and bladder cancer are causally related to air pollution; regarding the other types of cancers, so far there is no proven causal relationship to air pollution," Grotto said.

Although according to Grotto the data from that study suggest that some 50% of child cancer cases during those years may have resulted from air pollution, a second study he cited later in the letter warns that findings regarding a high incidence of childhood cancer in the Haifa region may not be statistically significant. This second study, published in 2012 in the Journal of Pediatric Hematology/Oncology, examined the incidence of cancer among 4,255 children from ages 0 to 19 also from 1998 to 2007 in Israel. While the study determined that incidence of cancer among children there was higher in comparison to the national average, the findings might not be statistically significant due to failure to adjust for socioeconomic and other variables, Grotto wrote.Referring to the 2013 article, the Environmental Protection Ministry emphasized that "the report that was published on the subject is based on air pollution data from a decade ago." Meanwhile, the Health Ministry spokeswoman's office said Wednesday that there were exaggerated media reports on cancer in children and higher pollution in Haifa. The spokeswoman said that only a small number of conflicting studies have been conducted on cancers in children and air pollution.

There is a higher level of disease in Haifa than other regions, but more research is needed, she said.Prof. Rafael Beyar, a leading cardiologist who is director-general of Haifa's largest hospital – Rambam Medical Center – poured some cold water on claims that air pollution has been linked directly to an increase in cancers among children in Haifa."I am not an epidemiologist," Beyer said. "We treat patients. In the last 10 years, we have seen a 20% to 30% increase in cancer patients–including children. But we receive patients from all over the North. We built a modern, NIS 50 million children's hospital, which attracts patients from all over. Whether patients come to us depends on personal preference and referrals from the health funds." "It doesn't," he asserted, "mean an increase in cancer in general." What is important, said the director-general, is for the Health Ministry to "expand the infrastructure of hospitals to improve treatment of patients and to increase prevention efforts. During the next decade, the state has to invest in this, because cancer has been for some time the leading cause of death in Israel and much of the world," said Beyar.Prof. Amos Etzioni, director of Rambam's Ruth Rappaport Children's Hospital, added: "Cancers shown to be connected to air pollution – such as lung cancers – are very rare in children. There are other kinds of cancer suggested to be linked to pollution, but they have not been proven."

Ozone air pollution could impact fertility

Date: 15th April, 2015 Source: PENN STATE

HERSHEY, Pa. -- Many urban and suburban areas have high levels of ground-level ozone, an air pollutant that can adversely affect lung and heart health. New research in mice suggests that breathing high levels of ozone could also affect women's ability to conceive.

Dr. Carla R. Caruso, a resident physician at the Hershey Medical Center, recently presented this research, which was led by Patricia Silveyra, assistant professor of pediatrics at Penn State College of Medicine, at the American Society for Investigative Pathology's Experimental Biology 2015 meeting. In some areas, ozone can reach high levels in the summer because the bright sunlight and heat combine with compounds from industrial emissions, car exhaust, and gasoline vapors to form the air pollutant. "It is important that we know what is in the air we breathe and understand how it can affect our health," said Silveyra. "We don't

know a lot about the damaging effects of ozone, but since it does increase inflammation in the lungs, it is possible that this inflammation could affect more than one system in the human body." Silveyra and her team were studying sex differences in the effects of ozone on lung inflammation in mice when they discovered that short exposures to ozone affected female levels of progesterone, a major reproductive hormone involved in ovulation and pregnancy. To examine this further, they designed an experiment in which female mice were exposed to two parts per million (ppm) of ozone for 3 hours on the day the mice were expected to ovulate. Other studies have shown that this level of exposure in mice is roughly analogous to a person breathing high levels of ozone in a city. "We found that breathing ozone on the day of ovulation not only decreased progesterone levels in female mice, but also reduced the number of ovulated eggs," said Caruso. "In addition, this acute exposure to ozone affected important brain and ovarian signaling events that are key for the ovulation process." The levels of progesterone in the blood of female mice on the day of ovulation decreased from a normal value of 8 nanograms per milliliter (ng/ml) in females breathing filtered air, to an average of 2 ng/ml in mice breathing ozone. When the investigators compared the number of ovulated eggs the following morning, they found a statistically significant reduction of 30 percent in females exposed to ozone. Expression of key enzymes involved in the progesterone synthesis pathway was also significantly reduced in the ovaries of ozone-exposed female mice. Based on their findings, the researchers postulate that women in large cities could experience fertility issues from inhaling high concentrations of ground-level ozone. However, they caution that their findings are preliminary and that the research involved only mice, not people. "Population studies evaluating fertility complications in geographical areas with high- and low-ozone pollution levels, as well as clinical studies conducted in women of reproductive age can help elucidate these concerns," Silveyra said. The researchers are now working to understand the mechanisms of ozone's effects on ovulation in mice. The study was funded by grants from the National Institutes of Health (K12HD055882 and R25HL103166).

Cement companies make slow progress in complying with air pollution norms

Date: 15th April, 2015 Source: Business Line

MUMBAI: Even as the Modi Government is working to ensure that mechanisms for curbing pollution are put in place, the cement industry has been slow to implement air pollution norms. Less than 5 per cent of the plants have taken steps to comply with the air pollution norms, notified by the Ministry of Environment and Forest (MoEF) in 2014. As of now, 194 cement plants have to fully comply with the notification by June 30, 2016. The MoEF had asked all 194 cement plants in the country to reduce their particulate matter emission by a third. Similarly, sulphur dioxide and nitrogen dioxide emissions are also to be reduced. But most of the plants have neither placed the orders for setting up pollution control units nor given any contracts for retrofitting the existing units. According to industry estimates, a number of plants are spewing out about 100 mg/Nm3 of particulate matter, which has to be reduced to 30 mg/Nm3 by either setting up new Electrostatic Precipitator (ESP) units or retrofitting the existing ones. An ESP unit is capital intensive, sometimes costing about ₹10 crore.Many old plants simply don't have the space to set up the units. Some plants might have to reconfigure the whole production process, so as to comply with the pollution control norms. Established cement players are simply dragging their feet on the matter. This year the cement plants will go into a semi-shutdown mode during the monsoon season for maintenance and overhaul operations. But since the orders have not been placed with ESP equipment suppliers, the cement companies will not be in a position to comply with the June 30, 2016 deadline. "This year's monsoon season is the only time window, the plants will get for adding or retrofitting ESPs. Setting up ESP units requires large number of labourers and extensive civil works at the plant. But none of the processes have kicked in," said an industry watcher. UltraTech, ACC, Ambuja and Cement Manufactures Association did not comment for this story.

Move over Beijing, New Delhi has the world's worst air pollution

Date: 15th April, 2015 Source: The Weather Network

According to air quality levels measured in 2014 by the World Health Organization (WHO) in 1,600 different cities around the globe, the Indian capital city of New Delhi was found to be the worst. The WHO indicates the air pollution is 10 times higher than acceptable standards. The city was found to have the highest levels of particulate matter, also known as PM 2.5, known to be most harmful to human health. PM refers to small solid or liquid particles floating in the air. These particles can be made up of different substances, including carbon, sulphur, nitrogen and metal compounds. Cancer, heart disease and other chronic respiratory problems can all be an outcome of traffic-related air pollution. Reports indicate PM levels were found to be 50 percent higher on Delhi's roads during rush hour than during ambient air quality readings.

"Delhi is a very green city," Kamal Meattle, a Delhi-based air pollution activist told CNN. "But even the greenest areas of Delhi have extreme pollution levels." Experts say the city's burning of bio-mass, industry emissions and coal-powered power stations can all be attributed to high levels of air pollution. According to CNN, there are roughly 8.5 million registered vehicles in the city and 1,400 cars are added to the city's streets each day.A national Air Quality Index (AQI) was launched recently by Prime Minister Narendra Modi. The AQI is able to monitor pollution levels in real-time across major urban cities. New Delhi is one of 10 cities where data is available. Last week The National Green Tribunal announced measures to try to combat air pollution in Delhi including an attempt to ban diesel-powered vehicles older than 10 years off the city's streets.

Air pollution: it’s time to prosecute BBMP officials, says court

Date:17th April, 2015 Source: The Hindu

Stating that it is now time to prosecute officials of the Bruhat Bangalore Mahanagara Palike (BBMP) for failing to take steps to check air pollution, the High Court of Karnataka on Thursday asked BBMP counsel to submit names of the officials who were supposed to implement directions of the Karnataka State Pollution Control Board (KSPCB) for clearing dust from roads and footpaths to check air pollution.

Also, the court directed the KSPCB counsel to submit a draft of the criminal complaint for prosecuting these officials under the provisions of the Environment (Protection) Act and the Air (Prevention and Control of Pollution) Act. A Division Bench comprising Chief Justice D.H. Waghela and Justice Ram Mohan Reddy issued the oral directions during the hearing of a PIL petition suo motu initiated by the court on city’s noise pollution. “You are giving same answer even after a year. Dust on the roads is not cleaned. Are you ridiculing our orders,” the Bench asked BBMP counsel. The Bench also asked the KSPCB to show some guts to take action against government servants for failing to implement its directions. The Bench asked the authorities to popularise public transport system so that people stop using own vehicle.

Study shows air pollution in Kaushambi 'alarmingly high'

Date: 17th April, 2015 Source: The Times of India

GHAZIABAD: Air pollution in Kaushambi is alarmingly high, according to a study by the UP Pollution Control Board's (UPPCB). The level of suspended particulate matter (SPM), released by local factories, is higher than permissible limits, while oxides of sulphur and nitrogen - byproducts of burning fossil fuels and vehicular emissions - are within it.

The results of the analysis, conducted by UPPCB on April 9 and 10, were disclosed on Thursday on the request of Kaushambi's RWAs. The Kaushambi Apartments' RWAs (KARWA) had earlier complained to various authorities about rising pollution in Kaushambi due to its proximity to bus depots and a landfill site.

For the study, all the air samples collected by the board were from within the township. Average levels of PM 10 and PM 2.5 - ultrafine particulate matter with sizes less than 10 microns and 2.5 microns respectively - were found to be many times higher than permissible limits. "Compared to the average figures for Ghaziabad as a whole, the levels are lower in Kaushambi. Oxides of sulphur and nitrogen are well within permissible limits and pose no imminent danger," said a senior UPPCB official.

Extreme SPM levels in the air have had residents worried, because of a high incidence of respiratory diseases in the area. They had mailed an application to NGT, demanding appointment of a local commissioner to oversee the implementation of its orders regarding ban on diesel vehicles older than 10 years. "A number of residents have complained of respiratory diseases. Doctors attribute it to high levels of air pollution in Kaushambi. Local authorities, including the municipal corporation and the district administration, should be held liable if they fail to rein in pollution-causing factories, which have been found to be the biggest culprits," said KARWA president Vinay Kumar Mittal.

Insufficient air pollution data fails to provide exact information

Date:17th April , 2015 Source: PC Tablet

The air quality index failed to come up with pollution levels in around 28 locations in New Delhi due to lack of sufficient data on air pollution. The data generated in the last week shows that only six areas were monitored out of 11. Monitoring by the Delhi Pollution Control Committee (DPCC) and the Central Pollution Control Board (CPCB) showed moderate quality of air in some regions. Due to this, it was not possible to get the exact data on the highly polluted areas of Shahdara and ITO and the industrial zone located near the Delhi College of Engineering in the north of Delhi.

The air quality index is known to categorize the quality of air as satisfactory, good, poor, moderate or very poor. The evaluation is based on the presence of three highest pollutants in a particular region in a span of average 24 hours. Wrong Methodology of the Index- The methodology used by the index for calculating average presence of the three major pollutants in the air seems incapable of giving a clear picture. In particular, areas the index concluded that the air quality is moderate, however, the presence of a major particulate matter causing breathing ailments was found to be unusually high. This has put a question mark on the authenticity of the data provided by the index. Experts believe that this wrong picture was created

because there were some other pollutants such as nitrogen oxide and sulfur dioxide present in small amount in the air. They were responsible for bringing down the moderate category of the air quality.

How Can Air Pollution Affect Health?- The high amount of particulate matter in the air leads to air pollution, which can cause serious health problems especially in the elderly and children. Regular health ailments associated with air pollution include high incidences of respiratory diseases such as lung cancer, asthma, and several other lung diseases. Latest findings also suggest that higher content of pollutants in the air can also increase the risk of heart attacks and stroke.

Moench: Air pollution's effect on pregnant women and newborns is undeniable

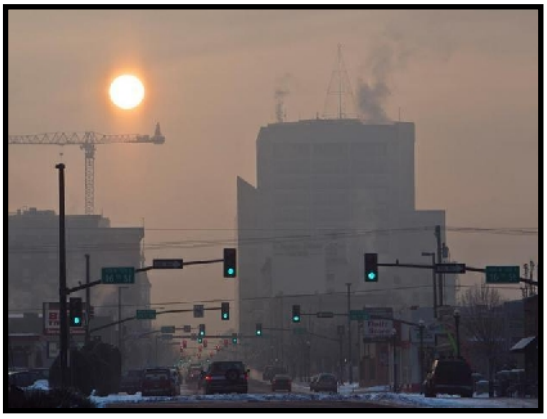
Date: 17th April, 2015 Source: The Salt Lake Tribune

On the Utah Department of Health "Pregnancy Risk Line" is this statement: "Research has not shown conclusive evidence of birth defects or other poor outcomes from exposure to poor air quality in pregnancy." UDOH's statement is as medically accurate as the 1947 ads featuring doctors pitching cigarettes as "good for you." UDOH recently acknowledged the statistical spike in perinatal deaths in the Uinta Basin, then mentioned everything but air pollution and environmental contaminants as possible explanations. Our taxes fund UDOH, and we deserve honesty, not political spin or a glaring lack of curiosity when precious lives have been harmed or lost. Let's set the record straight on what is "conclusive evidence." Hundreds of studies have been published confirming air pollution as a threat to the viability of a pregnancy and to the healthy development of the human embryo. Air pollution triggers the same harmful inflammatory cascade, and disease outcomes, as you would expect from diluted cigarette smoke. That's no surprise because chemically it is very similar. All organs can be affected, including what most people might consider their favorite ones — heart, lungs, brain and, in the case of a pregnant mother, the placenta and fetus. At least two biological pathways put the fetus at risk. The aforementioned inflammation releases chemical mediators that narrow the body's network of tiny blood vessels, including those that comprise the placenta. Studies in both animals and humans have proven that air pollution does in fact cause narrowing and increased tortuosity of placental vessels, hindering normal blood flow. It takes little imagination to appreciate that compromised blood flow to the baby can jeopardize normal development.
A second pathway is particulate pollution itself. Once inhaled and distributed throughout the blood, tiny pollution particles, and the harmful chemicals and metals attached to them, can penetrate any cell in the body. They can, and do, cross the placenta, enter the fetus, infiltrate the nucleus of cells where the chromosomes are, and irreversibly interfere with the exquisitely delicate and critical process of organ development, especially the brain. Having been exposed throughout intrauterine life to the same chemicals, and millions of the same particles that the mother inhales, babies are now born "pre-polluted." One study found that the average umbilical cord contained 287 different chemicals and heavy metals. Of those, 134 were known to cause cancer, 151 caused birth defects, 154 were endocrine disrupters and 158 were neurotoxins (many chemicals have more than one effect).Clinical studies are equally disturbing. Virtually every type of pregnancy complication is known to occur at higher rates in pregnant mothers exposed to more air pollution — miscarriages, still births, birth defects, premature births, low birth weight syndrome, hypertension, pre-eclampsia, premature rupture of membranes and even gestational diabetes.
After birth, the pollution threat to babies continues, triggering higher rates of respiratory related infant mortality and SIDS. Even brief air pollution exposure during critical developmental windows provokes chromosomal damage of several different types, "programming" the fetus to a wide range of chronic diseases decades later, including diseases of the heart, lungs, nervous system, and cancer.
Air pollution shortens placental telomeres (the "end caps" of chromosomes). Placental telomeres are highly predictive of a newborn's life expectancy. There is wide variability in the length of newborns' telomeres, most of which is related to environmental exposures, not genetic predisposition. Bottom line: maternal exposure to air pollution programs her baby to a shorter life span.

In lab animals, air pollution causes actual anatomic changes in the fetal and neonatal brain. A new study now documents that in humans. Just likes videos have changed the national conversation on tolerance for police shootings, recent MRI scans of damaged children's brains should change the conversation about our tolerance for air pollution. Science, logic, compassion and moral obligation are united in compelling us that what we have accepted in the past is no longer acceptable. The harm to ourselves is too great, the harm to the weak and vulnerable is even greater, and the harm to future generations can be irreversible. Utah Physicians for a Healthy Environment will be telling a more detailed version of this story in Vernal, Friday (April 17) at 7 p.m. at Vernal Junior High. We encourage the public and UDOH to attend. Brian Moench, M.D., is president of Physicians for a Healthy Utah.

Environmental groups urge EPA to force air pollution action in Treasure Valley

Date: 18th April , 2015 Source: Udaho Statesman



Ada and Canyon counties' proactive efforts to reduce pollution over the last decade kept the Treasure Valley within federal air quality standards going into 2013. That's when a shroud of warmer air settled above the two counties, trapping stagnant cold air against the Foothills for 11 days that January. The worst inversion since 1985 also built up chemicals created by automobile combustion, creating soot, known formally as pm 2.5, which stands for particles 2.5 microns or smaller.

Treasure Valley residents were breathing these microscopic particles into their lungs, causing people with chronic breathing problems and children with asthma to flood into doctor's offices, emergency rooms and hospitals, said Perry Brown, a pediatrician and co-director of the Cystic Fibrosis Center of Idaho. Soot levels soared to 100 micrograms per cubic centimeter, levels that were unhealthy even for people without lung issues. By the end of 2013, soot levels had exceeded the Clean Air Act's 24-hour standard multiple times, placing Ada County at the eighth-highest level of 408 areas monitored nationwide, said Bryan Hurlbutt, an attorney with Advocates for the West. That's why the group, Brown and the Idaho Conservation League want Idaho to step up its air pollution program in the Treasure Valley.

"Our air pollution problem is not just a theoretical situation," Brown said. "It's a real-life problem." AFTW and ICL petitioned the U.S. Environmental Protection Agency earlier this year to declare Ada and Canyon counties a "nonattainment area" for pm 2.5, which would mean noncompliance with the Clean Air Act. That could bring federal sanctions that could limit highway construction and new business development, and force new restrictions on existing businesses. The two groups say federal intervention is necessary because the state has cut funding for programs designed to reduce traffic congestion and has failed to keep ahead of increases in population and vehicles in the Valley.

"Over the past several years, the monitoring data has shown a decrease in air quality while efforts that had been put in place have been dismantled, eliminated or nonprioritized," including cuts to congestion mitigation funding and disbanding the Treasure Valley Air Quality Council, said Courtney Washburn of the Idaho Conservation League. "The good news is there are tools and technologies to improve our air. We just need the political will to put them in place."

Idaho Department of Environmental Quality staff acknowledge that the 2013 inversion, the second-worst in recorded history, sent soot levels over the limits. But they said many of the 24-hour violations in 2012 were due to forest fires and could be eligible for exemptions under the Clean Air Act. And even with the high levels during the inversion, Ada and Canyon counties' soot levels met the lower

annual standard of 12 micrograms per cubic meter of air, said Mary Anderson, a DEQ air program manager. "On a typical year we aren't really even close to (violating the standards)," Anderson said. Nothing is going to happen soon, Anderson said. EPA has acknowledged the petition but is busy on another airshed in region 10 now. Idaho officials are also awaiting a decision by EPA on strengthening the standard for ozone pollution, which could come later this year. The agency proposes to cut the allowable level of ozone from 75 parts per billion to a range of 65 ppb to 70 ppb. It also is asking for comments on a potential plan to drop the standard to 60 ppb. A lower standard likely would put the Treasure Valley into nonattainment. The three-year average for Treasure Valley ozone levels is about 70 to 71 ppb, and in 2008, the region narrowly missed violating the ozone standard. But since then Canyon County joined Ada County in vehicle testing and reducing volatile organic compounds that escape from gasoline during fueling. The Obama administration also has strengthened national vehicle emission standards, which has steadily reduced emissions. The progress the region made was demonstrated by a comparison of pollution levels during the last long inversion, in 1985. Particulate levels rose to 300 micrograms per cubic centimeter then, compared to 100 in 2013. But with the population of the Treasure Valley now exceeding 646,000, the miles vehicles travel has risen from 10.8 million on an average weekday in 2005 to 12.8 million in 2015, according to Community Planning Association of Southwest Idaho, the regional organization known as COMPASS. The new emissions standards have offset this growth so far, said DEQ Treasure Valley Airshed Manager David Luft. But eventually the growth will overwhelm the capacity of the airshed to clear out the pollution. Planning already has reduced the rate of growth of the miles people drive daily by placing shopping areas near housing, making communities more bike-friendly and making it easier for people to walk to the places they work and play. Pollution control efforts peaked in 2010 after the Treasure Valley Air Quality Council, a panel of business and community leaders established by the Idaho Legislature and appointed by Gov. Butch Otter, released an ambitious plan for curbing air pollution. Most of its top recommendations were put into place.

Air Pollution takes early toll on kids

Date:18th April , 2015 Source: Deccan Herald

Air pollution can be bad for children - starting even before birth, a new study suggests. Researchers studied exposure to polycyclic aromatic hydrocarbons, or PAHs, a form of pollution caused by burning gasoline, diesel fuel, home heating oil and coal. They found that prenatal exposure to these compounds was tied to changes in the structure of an offspring's brains and to intellectual deficits and behavioural problems in childhood.

The researchers measured PAH concentrations in the air and in the blood and urine of 40 mothers in their third trimester of pregnancy, as well as in their children's urine. They followed the children until they were seven to nine years old, performing magnetic resonance imaging tests on their brains. The results are in JAMA Psychiatry.

The higher the exposure to PAHs, the more reductions the children had in the white matter surface of the left hemispheres of their brains. The amount of damaged white matter correlated directly with higher scores on measures of symptoms of attention deficit hyperactivity disorder and other behavioural problems. Higher exposure to PAHs and white matter deterioration were also associated with lower scores on tests of processing speed, the ability to take in new information and respond to it. "Everyone is exposed to these compounds," said the lead author, Dr Bradley S Peterson, the director of the Institute for the Developing Mind at Children's Hospital Los Angeles. "Pregnant women and young children are very vulnerable to environmental insults to the developing brain, and these exposures are likely having devastating effects."

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172 building sites get notices for violating air pollution norms

Date:19th April , 2015 Source: Indian Express

The Delhi Pollution Control Committee (DPCC) has issued notices to 172 construction projects in Delhi for flouting norms on air pollution. It has directed these ongoing projects to submit compliance reports and the current status of construction. Calling them a major source of air pollution in the capital, the government in a statement said the projects will have to explain why consent to operate and mandatory approvals were not taken. "The parties concerned have been directed to submit reports on the current status of construction. They also have to submit reports on steps being taken by them to comply with the Ministry of Environment and Forests (MoEF) guidelines, 2010, on prevention of dust and garbage accumulation on their sites during construction. They will also have to submit adherence reports on directions mentioned in the orders of the National Green Tribunal," the statements read.

Officials said while these projects had obtained prior environmental clearance from the MoEF or from the State Environment Impact Assessment Authority (SEIAA), Delhi, the mandatory 'consent to operate' clearance was not sought from the DPCC. This is why action is being taken against them, a senior official said. "The existing situation of these projects gives rise to reasonable apprehension that they are either still in construction stage or have completed construction/are operational without the mandatory 'consent to operate' clearance," the official said. Environment Minister Asim Ahmed Khan has also directed officials of the department to follow up on steps being taken to penalise those responsible for burning of garbage, leaves and plastic in the open — another major source of air pollution. The minister has sought a report on steps that could be taken to reduce air pollution caused by open construction activity in the city. The minister said steps would be taken by involving departments like the PWD and other concerned departments to draw up a joint comprehensive plan. This will comprise of awareness programmes and punitive measures to check the growing sources of air pollution.

Air pollution from natural gas production surged in 2013: Search the database

Date: 20th April, 2015 Source: Penn Live

Air pollution from Pennsylvania's natural gas production increased significantly in 2013, but an industry-wide decline could help reduce emissions in the coming years. Emissions of sulfur dioxide, a contributor to acid rain, increased 57 percent from 2012 to 2013. Methane, a greenhouse gas, decreased 13 percent while volatile organic compounds, a major contributor to smog, increased 19 percent. "The increases were not unexpected," said John Quigley, acting secretary of the state Department of Environmental Protection. "The industry is growing, and each year we are expanding the types and number of facilities from which we collect data so that we have a more comprehensive understanding of air quality issues." In 2013, the number of well sites increased from 8,687 to 10,277, an 18 percent increase that resulted in greater emissions. The report also includes data from midstream facilities, which saw an 8 percent increase from 2012. However, the decrease in gas prices has resulted in many wells closing since the industry's peak in 2013. DEP Spokeswoman Susan Rickens said

the number of active wells currently sits sat 9,750. While 2014 data is still about a year from being released--the DEP collected the data in March and will spend about a year checking the numbers--that decrease is expected to correspond with lower emissions. In recent years, Rickens said the DEP had expanded both the types of contaminants and natural gas facilities it tracked. "Like with methane, we've only had that reported in the last two years," she said. "(The data) would not give us, scientifically, a clear picture of where it's going. We'd need more data to do that." So far, Rickens said, the DEP doesn't anticipate further expansion of the data tracked for the 2014 or 2015 years.

Dave Spiglemyer, president of the Marcellus Shale Coalition, said the methane decrease "reinforces the fact that our strong state-based regulations and innovative technologies are delivering meaningful environmental results." "Our industry remains squarely focused on continued improvements each and every day," he said. Quigley said overall emissions have decreased despite the surge in those related to natural gas production. "While we are experiencing some increases in emissions from the natural gas sector, overall, our air quality continues to improve due to emissions reductions from other point sources such as electric generating units," he said. The department is continuing to work to reduce emissions from the state's natural gas industry, Quigley said.

Air Pollution: The silent killer we need to talk about more often

Date: 20th April, 2015 Source: DNA

The issue of environmental conservation has gained in public importance because of the significant administrative measures (Air Quality Index) and judicial decisions (NGT rulings on diesel cars and construction projects) taken towards addressing environmental concerns. The focus however, has largely been on outdoor air pollution in India's major towns and cities – especially Delhi/NCR. Unfortunately, this overlooks two important realities about air pollution in India. First – indoor air pollution is as big a threat as outdoor air pollution from vehicular and industrial emissions, thermal power plants etc. Second – rural parts of the country are disproportionately affected by indoor air pollution. In terms of the economic costs, indoor air pollution is almost as detrimental to our economy as outdoor pollution. In terms of health costs however, indoor air pollution accounts for twice as many lives lost in India.

The causes of indoor pollution are several and varied and most of these are linked intimately to livelihoods and household habits in several parts of the country. In rural India, the use of biomass as cooking fuel is the primary cause of indoor air pollution. According to estimates from the last Census in 2011, biomass is used for cooking in 67 percent of all households in India, including 87 percent of rural households. This is far above the average of other regions like China, South-East Asia, Middle-East and Latin America, and about the same as Africa.

Source: World Energy Outlook 2014 – Traditional use of solid biomass for cooking
The other major concern is the rampant use of kerosene as a fuel for lighting and other purposes. Even today, about 43 percent of rural households and 31 percent of all Indian households use kerosene – often called the poor man's fuel, for lighting purposes. Its impact on health and environment can be threatening, particularly through the soot emitted from unvented kerosene lamps.

Steps have been taken by the government to curb indoor pollution. The real problem, however, lies in the scalability of models which were intended to replace traditional fuels like biomass and kerosene. For

example, the National Biomass Cookstove Initiative (NBCI) of the Central government, which is now being implemented under the 'Unnat Chulha Abhiyan' targeted dissemination of 27.5 lakh improved cookstoves/chulhas in the remainder of the 12th Five Year Plan period.

Past experience, though, suggests that the cookstove models disseminated have not proven to be sustainable. The guidelines for this scheme do talk about supporting R&D activities on the development of efficient and cost-effective designs, and to provide support for test centres for performance testing of such models. Encouragement for innovation and local stakeholder involvement will hold the key to the success of any such initiative. According to a Lancet study, the stakes are high as distribution of improved chulhas to a majority of rural households has the potential to reduce by 17 percent, the number of premature deaths and disability from respiratory infections, heart disease and bronchitis in 2020.

When it comes to the replacement of kerosene for lighting, the only long-term solution is to move towards universalisation of access to electricity. The present government is implementing its vision of 'Power to All' under the Deendayal Upadhyaya Gram Jyoti Yojana. However, the real benefit to health and environment will happen only if kerosene is replaced by renewable sources of energy – in particular wind and solar. The electrification of 1,500 villages in Chhattisgarh achieved in the last 10 years through the instalment of four to 15 kilowatt solar power mini-grids by Chhattisgarh Renewable Energy Development Authority (CREDA) under the Remote Village Electrification Programme of the MNRE is a case in point.
The challenge to the environment from indoor sources of air pollution is clearly much more than what is generally perceived. The solutions to the problem though, are not impossible to find. The key lies in encouraging innovation, spreading awareness to enhance stakeholder participation and creating effective policy incentives to encourage the use of renewable power. We owe this to ourselves and our health and wellness.

Air pollution may cause stroke: Study

Date:21st April, 2015 Source: The Times of India

NEW DELHI: Air pollution which is known to cause poor lung and heart health may also cause a stroke, a new research suggests. The findings of the research, which has been published in British Medical Journal, are based on an analysis of 103 studies, involving 6.2 million hospitalizations and deaths because of stroke in 28 countries. TOI spoke to India's top neurologists who said it was possible. "At AIIMS also, we have initiated a study to analyze the link between air pollution and stroke," said Dr Kameshwar Prasad, professor and head of the neurology department. He added that there has been a significant increase in stroke cases in the country which cannot be explained by unhealthy lifestyle and other identified risk factors alone.
Dr Shakir Hussain, chairman of Stroke & Neurointervention Foundation, said more than 50% of the stroke patients that he sees are below 45 years of age. "Of them, some are non-smokers, who have normal blood pressure and do not have diabetes. The role of environmental factors in triggering neural disorders cannot be ruled out in such cases. It requires detailed investigation," he said.

The doctors say vehicular emissions include ultrafine particles and gases such as carbon monoxide and sulphur dioxide which get into the bloodstream. "The pollutants cause thickening of the blood and also initiate formation of cytokines which trigger stroke," said Prasad. The AIIMS study, he added, would involve assessing the date and time of stroke in admitted patients and the level of air pollution in their localities. "Several studies conducted in other parts of the world, including the recent one from British Medical Journal, clearly show strong association between incidence of strokes and air pollution. In India, the pollution levels in cities are very high and if our study reveals a similar association then we would urge the government to take action," said Prasad.

He said role of pollutants is more prominent in ischaemic stroke cases in which the blood vessels supplying oxygenated blood to the brain get blocked. It constitutes nearly 85% of all stroke cases. The rest are

haemorrhagic stroke cases, in which bleeding from a damaged blood vessel in or around the brain damages or puts pressure on the brain tissue.

"In western countries, even 40 microgram per cubic metre of particulate matter is considered hazardous but the average presence of such pollutants in Delhi ranges from 150-200 microgram per cubic metre," said Dr Sundeep Salvi, director of Chest Research Foundation. Recently, National Green Tribunal banned all diesel-run vehicles over 10 years old in Delhi.

Here are 4 big pollution problems EPA has (mostly) fixed already

Date: 21st April, 2015 Source: Grist

Acid rain. Toxic leaded gas fumes. Dangerous DDT. Rampant air pollution. These environmental challenges once seemed impossible to meet, and they put our nation's air, water, and land at risk — not to mention our families' health. The dangers they posed were real, but you probably haven't heard about them in a while. There's a good reason for that: We put smart policies in place to fix them. So this Earth Day, here's a reminder of a few of the environmental challenges our nation has conquered with EPA leading the way, and a look at where we're headed next.

Acid rainCaused by air pollution mixing with water vapor in the atmosphere, acid rain was once poisoning our rivers and lakes, killing fish, forests, and wildlife, and even eroding our buildings. The 1990 amendments to the Clean Air Act gave EPA the authority to regulate sulfur dioxide and nitrogen oxides, the pollutants causing acid rain, from power plants. The EPA developed the first market-based cap-and-trade pollution reduction program, and guess what — it worked. Despite the doomsday warnings from some in the power industry that the regulations would cause electricity prices to spike and lead to blackouts, over the last 25 years, acid rain levels are down 60 percent — while electricity prices have stayed stable, and the lights have stayed on. Thanks to hard work by EPA, states, and industry, our nation has put policies in place to solve the problem over the long haul. Leaded gasoline- For decades, leaded gasoline threatened the air our kids breathed. Lead from polluted air was absorbed into their bloodstreams, endangering their brain development and risking consequences like permanent nerve damage, anemia, and mental retardation. So EPA phased out leaded gas. Back in the late 1970s, 88 percent of American children had elevated levels of lead in their blood. By the mid-2000s, that number had dropped to less than 1 percent.

DDT- The bald eagle once faced extinction. The culprit was DDT, a powerful pesticide that made birds' eggshells too weak for the chicks to survive, and also caused liver cancer and reproductive problems in humans. EPA banned the use of DDT in 1972, and since then, bald eagles have made a huge comeback — they were removed from the Endangered Species List in 2007 — and our families are safer from harmful chemicals. Air pollution- A newspaper headline once called the smog shrouding Los Angeles "a dirty gray blanket flung across the city." L.A. and many other cities were choked by severe air pollution — leading to asthma, respiratory illness, and certain cancers. But over the last 45 years, we've cut air pollution 70 percent, while our nation's economy has tripled. It goes to show that a strong economy and a safe environment go hand in hand. One recent study found that thanks to the strides we've made in cutting air pollution in just the last two decades, children's lungs in Southern California are 10 percent bigger and stronger today than they were in children 20 years ago. Last fall, we built on that success by proposing stricter standards for ozone pollution to protect those most vulnerable — children, the elderly, and those already suffering from respiratory illnesses like asthma. For our kids, that means avoiding up to a million missed school days,

thousands of cases of acute bronchitis, and nearly a million asthma attacks. Adults could avoid hundreds of emergency room visits for cardiovascular reasons, up to 180,000 missed work days, and 4 million days where people have to deal with pollution-related symptoms. Every dollar we invest in these standards would return $3 in health benefits.

Looking ahead …And now, EPA is taking action on another major environmental challenge: climate change. The carbon pollution driving it comes packaged with other dangerous pollutants like smog and soot that can cause asthma and certain cancers, especially for those living in the shadow of polluting industries. When we finalize our Clean Power Plan this summer, we'll not only cut carbon pollution from power plants, our nation's largest source, but we'll also reduce those other dangerous pollutants and protect our families' health. When we act, we also help safeguard communities from the impacts of climate change — like more severe droughts, storms, fires, and floods. Time after time, when science has pointed to health risks, EPA has obeyed the law, followed the science, protected public health, and fortified a strong American economy. We're doing the same thing today. Our track record proves that when EPA leads the way, there's no environmental challenge our nation can't meet. Gina McCarthy is administrator of the U.S. Environmental Protection Agency.

China's choking air pollution goes west: Greenpeace

Date:21st April, 2015 Source: Reuters

(Reuters) - China's choking air pollution is moving to the country's west, environmental group Greenpeace said, though air quality may have modestly improved in eastern cities such as Beijing in recent months. Provinces in central and western China, including Henan, Hubei, Hunan and Sichuan, are now among those with the worst PM2.5 levels in the country, a measure referring to particles smaller than 2.5 micrometres in diameter that are hazardous to health, Greenpeace said on Tuesday.

Facing mounting public pressure, leaders in Beijing have declared a war on pollution, vowing to abandon a decades-old growth-at-all-costs economic model that has spoiled much of China's water, skies and soil. But efforts to curb smog in China's eastern urban hubs have pushed many industrial polluters west. "Armed with this information, the government must now ensure that pollution is not simply relocated to other regions, and that the same strict measures enacted in cities like Beijing are actually enforced across the country," Zhang Kai, Climate and Energy Campaigner at Greenpeace East Asia, said in a statement on the group's website. The analysis was based on data provided by the Chinese government for the first quarter of 2015. China has sought to improve transparency and compel polluters to provide comprehensive and real-time emissions data, but doubts have arisen in the past about the accuracy of Chinese air pollution indices. China's vice minister for environmental protection in early April announced a two-year inspection campaign to root out fake air quality data and accused some local governments of manipulating the information to meet national standards. The Greenpeace analysis said Beijing still ranked in the top five worst polluted provincial-level regions in China, though the capital's PM2.5 concentration improved more than 13 percent in the first quarter of this year compared to the first quarter of 2014. Over the past seven years, PM2.5 levels in Beijing averaged nearly five times the recommended daily level set by the World Health Organization, according to data from a monitoring station at the U.S. embassy.

Noble Energy to Pay $73M Settlement, Cut Air Pollution

Date:24th April, 2015 Source: Texas Lawyer

No doubt most of the residents of the Denver-Julesburg Basin north of Denver think Noble Energy's agreement to cut hazardous air emissions from its local condensate storage tanks is a breath of fresh air. As part of the recent settlement with several governmental agencies over air pollution problems related to its

3,400 condensate storage tank systems located in the DJ Basin, Houston-based Noble Energy agreed to pay a $73 million settlement and also upgrade its pollution control equipment for the storage tanks. The energy company negotiated the agreement with the U.S. Environmental Protection Agency, the U.S. Department of Justice and the state of Colorado. "By working together with the federal government and the state of Colorado to reduce emissions we are doing the right thing," Gary Willingham, Noble Energy executive vice president of operations, said recently in a prepared statement. "We're implementing a serious action plan through which we will evaluate tank batteries throughout our DJ Basin operations, remove the tank batteries that should be removed, improve others and implement enhanced environmental strategies." Based on the EPA and Colorado's initial review of a relatively small number of older tank batteries, Noble Energy elected to expand the consent decree to identify additional opportunities to reduce emissions within the DJ Basin. "This first-of-its-kind settlement takes a basin-wide, systematic approach to address oil and gas emissions," said assistant attorney general John C. Cruden of the DOJ's Environment and Natural Resources Division. "Our nation's energy security and independence requires that oil and gas production be done safely, responsibly and lawfully. We look forward to continuing to work with states and the oil and gas industry to ensure that oil and gas emissions are minimized nationwide."

As part of the settlement, Noble Energy projected that it would probably spend an estimated $60 million on system upgrades, monitoring and inspections to reduce emissions, in addition to paying $4.5 million to fund environmental mitigation projects; $4 million on supplemental environmental projects; and $4.95 million as part of a civil penalty. "In accordance with the agreement's schedule, Noble Energy will evaluate, monitor, verify and report on the adequate design, operation and maintenance of certain aspects of its storage tank systems," said Steven Silvers, Noble Energy's senior adviser for corporate communications. "This process, which is anticipated to continue into 2019, will result in expenditures to upgrade storage tank systems. The system upgrade expenditures cannot yet be quantified but are not expected to be material for our operations in the DJ Basin." Virginia Sorrell, attorney with the EPA's Office of Civil Enforcement in the Air Enforcement Division in Denver, declined to comment about the case. Denee DiLuigi, who represents Noble Energy as the senior counsel in the company's Denver office, did not return a call seeking comment. A notice of the agreement between Noble Energy, EPA, the DOJ and the state of Colorado was recently filed with the U.S. district court in Denver. The consent decree will be published in the near future in the Federal Register and subject to public comment for 30 days. As far as the future impact of Noble Energy's proposed action plan pertaining to the tank batteries goes, the EPA estimates that modifications to the vapor control systems will reduce volatile organic compound emissions by at least 2,400 tons per year, and that significant additional reductions will be achieved with operational and maintenance improvements.

Air pollution may be supercharging airborne allergens

Date: 24th April , 2015 Source: The Weather Network

Have you noticed your allergies getting worse, or that more people are suffering from them, from year to year. According to new research, air pollution and climate change may be to blame. At the 249th National Meeting & Exposition of the American Chemical Society, taking place this week in Boulder, CO, researchers have presented evidence that air pollutants - specifically ground-level ozone and nitrogen dioxide - are capable of altering some of the most common and potent allergen around, making them even more potent.

"Our research is showing that chemical modifications of allergenic proteins may play an important role in the increasing prevalence of allergies worldwide," Christopher Kampf, one of the researchers involved in the study, said in a press release. "With rising levels of these pollutants we will have more of these protein modifications, and in turn, these modifications will affect the allergenic potential of the protein." The researchers used laboratory tests and computer models to show how a potent allergen protein, called Bet v 1 (found in the pollen of the major white birch), reacts various concentrations of ozone (O3, one of the two

main components of smog) and nitrogen dioxide (NO2, which is part of vehicle exhaust). Their model showed that if ozone oxidizes tyrosine, an amino acid that goes into making Bet v 1, it can result in a series of chemical reactions that ultimately links Bet v 1 proteins together. These longer proteins are potentially stronger allergens, since our immune system will will find them more irritating. At the same time, though, according to what the lead researcher, Ulrich Pöschl of the Max Planck Institute in Germany, told the Washington Post, these reactions also make the proteins more susceptible to bonding with nitrogen dioxide. When NO2 bonds with the Bet v 1, it alters some of the protein's basic characteristics, which can provoke an even stronger response from our immune system, especially in warmer and more humid conditions, when smog tends to be worse. According to the researchers, this alteration by air pollution, along with changes to Earth's climate (higher temperatures, increased humidity and longer growing season) may provide an explanation for why more people are suffering from allergies to pollen these days, and it may point to many more sufferers in years to come. "Scientists have long suspected that air pollution and climate change are involved in the increasing prevalence of allergies worldwide. But understanding the underlying chemical processes behind this phenomenon has proven elusive," says Ulrich Pöschl, Ph.D., of the Max Planck Institute in Germany, who led the study, according to NewsWise. "Our research is just a starting point, but it does begin to suggest how chemical modifications in allergenic proteins occur and how they may affect allergenicity."

Delhi HC appalled over government's lack of concern about air pollution

Date:24 April, 2015 Source: DNA

The court said it was not its or the Additional Solicitor General's (ASG) "job" to give an agenda of topics on the issue of air pollution for the government to deliberate upon, rather it was the duty of the officials and bureaucrats and asked what were they doing.

The Delhi High Court on Friday said it was "appalled" over how bureaucrats are unconcerned over air pollution in the national capital and how cutting of trees could lead to worsening of the situation and called for some "radical" steps to address the issue. The court said it was not its or the Additional Solicitor General's (ASG) "job" to give an agenda of topics on the issue of air pollution for the government to deliberate upon, rather it was the duty of the officials and bureaucrats and asked what were they doing.

"Not our or your (ASG) job to give agenda to government. It is their (bureaucrats) job to do so. Aren't they concerned about air pollution? What are they doing? Governments come and go... What are they doing? Sometimes it appals us. They are not moved by anything. Something radical has to be done," the court said. It made the remarks in response to ASG Sanjay Jain's submission that he will communicate to the government the agenda of topics to be discussed to come up with an action plan for Delhi and National Capital Region (NCR). He made the submission in response to the court's observation that the minutes of a meeting recently held between representatives of Delhi, Uttar Pradesh, Rajasthan and Haryana governments as well as the Centre on preparing an action plan to combat air pollution, lacked specifics. The court said the minutes were very general and vague did not talk of trees or pollutants and contained no details. "You all don't know how to prepare an action plan and by you all we mean the bureaucracy. We want an action plan which is clear-cut and which everyone can understand and we want you to implement it," it said. It asked the ASG to "impress upon" the central government to come up with an action plan with regard to air pollution in Delhi and NCR.

"The action plan shall address specifics with regard to nature of pollutants found in the air of Delhi," it said.The court said there was also a need for more monitoring stations, which at present number 17, and asked the ASG to meet with officials of Central Pollution Control Board (CPCB) on the issue. It gave one week to Delhi Development Authority (DDA), Public Works Department (PWD), Delhi Metro Rail Corporation (DMRC) and city government to file their reports and affidavits regarding cutting and

replanting of trees. The reports were to be filed today as per the court's direction of April 15. Meanwhile, Delhi government was asked to file an affidavit on the issue of who were the PWD officials who spoke to the media recently and what they had said with regard to the court proceedings. The affidavit was sought after the bench was informed that a newspaper report has quoted officials of the civic body in such a manner as to give the impression that the High Court is holding up or delaying development. On air pollution inside the court building, an issue highlighted by senior advocate Meet Malhotra on the last date of hearing, it said it will pass directions on May 15, the next date, based on a report given by the Registrar General. As per the Registrar's report, based on a survey carried out on April 21, the air quality inside the court building was beyond safe levels with the lobby and court room 2, where the matter is being heard, exhibiting the worst air quality. Both the lobby and court room two showed high levels of particulate matter. The explanation for the high concentration of particulate matter (PM) was the poor ambient air quality outside the court premises. Due to poor air outside, it is not able to dilute the air from within the court and thus the quality of air inside becomes concentrated with PM, Malhotra told the bench. He said more air purifiers are required to be installed within the court rooms as well as doing away with the floor carpets.

Air pollution bad for your brain too

Date: 26th April, 2015 Source: Zee News

New York: Long-term exposure to fine particle air pollution may cause subtle structural changes in the brain that increase risks of poor cognitive function and dementia, says a study. Fine particle air pollution - smaller than 2.5 micrometers in diameter (PM2.5) - may be the most common and hazardous type of air pollution. It comes from burning wood or coal, car exhaust and other sources. "Long-term exposure to air pollution showed harmful effects on the brain in this study, even at low levels, particularly with older people and even those who are relatively healthy," said lead study author Elissa Wilker, instructor of medicine at the Harvard Medical School.

Researchers analysed 943 adults who were healthy and free of dementia and stroke. The participants lived in the greater Boston area and throughout New England and New York -- regions where air pollution levels are low compared to other parts of the nation and the world. During 1995-2005, researchers used magnetic resonance imaging (MRI) to determine the effect of long-term exposure to air pollution on markers of brain structure. They found a two microgram per cubic metre of air increase in particulate matter (PM) 2.5 was associated with a 0.32 percent smaller total cerebral brain volume and a 46 percent higher risk of covert brain infarcts, a type of silent stroke. "The magnitude of association that we observed for brain volume was similar to approximately one year of brain ageing," Wilker said. Fundamental changes in the structure of the cerebral brain volume and smaller brain size are markers of age-associated brain atrophy. The small infarcts, typically located in deep regions of the brain, have been associated with neurological abnormalities, poorer cognitive function, dementia, and are thought to reflect small vessel disease, she concluded. The findings appeared in the journal Stroke.

Hong Kong's elderly face special air pollution risk, unique study finds

Date: 26th April, 2015 Source: South China Morning Post

A groundbreaking tracker study offers evidence for the first time that the fine suspended particles known as PM2.5 lead to a higher death rate among elderly people in the city. Conducted by a team from the University of Hong Kong's School of Public Health, the study successfully tracked more than 60,200 elderly Hongkongers for 10 to 13 years, from 1998 to 2011, and analysed the mortality rate in correlation to the levels of PM2.5 where they lived. There are participants from all 18 districts. Its results were published yesterday in journal Environmental Health Perspectives. "There have been studies on the lethalness of PM2.5 and other pollutants but no data at all in Asia … this study provides new evidence on mortality from the

long-term effects of being exposed to PM2.5 among the elderly," said HKU associate professor Dr Wong Chit-ming, of the School of Public Health, who led the study. "This refutes [claims] that perhaps Asians are less susceptible to the effects of PM2.5." The study - which used Nasasatellites to narrow down PM2.5 levels by square kilometre - was the first of its kind in Asia not just Hong Kong, and was rare worldwide in its scope and detail, Wong said. While most overseas studies compare different cities, HKU's examined Hong Kong in detail, and can therefore give more accurate results specific to the city.

The study is also relevant as Hong Kong grapples with a fast-ageing population. Every 10-unit increase in PM2.5 correlated to a 22 per cent hike in deaths by cardiovascular causes, a 42 per cent increase in coronary heart disease and a 24 per cent increase in strokes. The study took into account participants' individual variables - health records, income, education level and lifestyle habits such as smoking - as well as the socio-economic status of the communities in which they lived, Wong said. The variables were factored in to the calculations. There were around 16,000 deaths from natural causes during the study. The report stated that survival was highest among those who were exposed to the least amount of PM2.5, and "markedly lower" for those with high exposure. The World Health Organisation sets 25 micrograms per square metre as the maximum 24-hour average concentration for PM2.5. Hong Kong averages 40 to 50, while mainland readings often surpass 100.

Optimistic Futurist: Teaching about Earth Day in a polluted school

Date:26th April 26, 2015 Source: Salisbury Post

Since the passage of the Clean Air Act in 1970, America has become much healthier. According to the New England Journal of Medicine, our average lifespan increased almost three years between 1978 and 2001, and as much as 4.8 months of that can be attributed to cleaner air. For people living in more polluted areas, like Pittsburgh and Buffalo, clean air increased life expectancy by 10 months. Every dollar spent on that effort returned more than thirty in savings in medical and other costs!

Some would argue we should now turn our attention to other pressing national issues, like our education system. Critics complain that schools are not doing their job. Educators respond that the student body of today is nothing like those the parents remembered. And they are right. Ironically, a key hidden part of the education debate is air quality. The number of students with brain damage from air pollution is significant. According to the National Center for Health Statistics, over the past decade the number of children diagnosed with developmental disabilities increased by 1.8 million. Astoundingly, 10 to 15 percent of all babies being born in the U.S. now have some kind of neurobehavioral development disorder. Researchers have identified two major pieces of the puzzle. First, doctors at the Saban Research Institute at Los Angeles Children's Hospital found that the children of mothers who were exposed to certain kinds of air pollution from fossil fuels and industrial chemicals during pregnancy are five times more likely to have Attention Deficit Disorder (ADHD) and other learning issues.

Look at this image of a newborn's pollution-damaged brain, from the Saban study. A healthy brain should be all green. The purple area in this image shows damage in the part of the brain that helps with language, math, and logic. The second realization is that, in spite of overall progress made in cleaning up our nation's air, one major source of continuing brain damage is air pollution in and around schools. Kids are not little adults. As they grow, they go through a series of "windows of vulnerability" that pollution sneaks through. They also take in twice as much air per pound of weight as an adult – and their brain is a larger portion of their total weight. Students attending schools located within several hundred feet of busy highways have significantly higher damage to their brain than those further from the pollution.

The University of Michigan scientists found that, regardless of any birth defects they may have, children who lived in, or attended school in, areas of high pollution for the first five years of life also developed problems with concentration, reasoning, judgment, and problem solving. They also have lower IQ.

There are some things that concerned parents can do. You can set up an "Idle Free Zone" near your child's school. A kit of instructions, tools and training videos is available from www.momscleanairforce.org. A study done by Cincinnati Children's Hospital found such programs to be very effective in creating a safer environment for the kids. You can work with school administrators to install modern indoor air filters, which can reduce pollution by one half or more. Lawrence Berkley Labs found that every dollar spent on cleaning the indoor air in a school saved $33 previously lost through poor attendance of both students and staff. School systems can also install air filters on their school buses to protect the riders. The University of California at Los Angeles developed an on-board school bus filter system that reduced air pollution 88 percent. While riding on one of these buses, a child is inhaling air as clean as the air on the beach at Santa Monica. Washington State monitored kids who rode 188 school busses from 2005 to 2009. The kids who rode in buses with pollution-reducing equipment had a 6 percent reduction in absences — in addition to avoided brain damage. School boards can increase monitors near schools so we can spot at-risk students. And as a society we can stop burning coal to make electricity – statistically, every 12 jobs involved in that process results in the death of one American every year, and damages the lungs and brains of hundreds of thousands more. And talk about adding insult to injury – is it fair to blame the teachers for not doing their job well when their students with damaged minds do not do well on standardized tests? Francis Koster lives in Kannapolis.To see the sources of facts used in this article, and learn of other successful money and lifesaving programs that can be implemented locally to create a better future for our country, go to www.TheOptimisticFuturist.org

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The Irony of Air Pollution and the Quest for Life on Mars

Date:26th April, 2015 Source: Liberty Voice

There is constantly much debate surrounding the issue of air pollution and what can or cannot be done about it. A new study was just released stating that rotting of the brain could potentially be caused by city air pollution, an extremely unnerving and some feel disturbing statement. However, given the use air pollution has in regards to discovering/creating life on Mars, one cannot ignore the irony of the situation overall when it comes to the battle environmentalists and the like have been fighting to deal with the problem of air pollution. Air pollution has been proven to have quite damaging effects on the health of individuals exposed to it on a regular basis. Health problems endured from said exposure can include such short-term inflictions as bronchitis and pneumonia (as well as eye, nose and throat irritation and potential allergic reactions), while long-term effects can range between chronic respiratory disease and fatal lung cancer/heart disease.

The possibility of irreversible brain damage has, as was previously mentioned, also been brought up. Even though these dangers have been proven to occur in humans following prolonged exposure to air pollution, it seems to have recently come in handy regarding the aforementioned quest for life on Mars. In that, researchers are said to have been using the pollution to melt the planet's frozen matter in order to both give the planet more potential to be lived on, and also to better discover what may or may not be living there or what may have lived there previously. Air pollution is also incredibly deadly for Earth overall.

A poisonous gas ozone (O3) is a common chemical reaction due to said pollutants. This can not only create problems in terms of human health, but also holds potential for both animal life risk and vegetation damage. Algae growth in lakes and water bodies is caused by a process called Eutrophication, which is the carrying and depositing of Nitrogen found in some pollutants by the rain, which ends up on both rivers and soils. This growth is potentially harmful for any given living organism inhabiting these lakes. The irony of the matter lies with the fact that while so much is being done to inform the public of the dangers this pollution causes and to rally the population in terms of fighting back against the reasons behind it (heavy engine use in cars and trucks, as well as emissions from non-environment friendly transportation vehicles such as buses, etc), this danger is being used to potentially create another planet on which for humans to live. In essence, researchers are already preparing another planet for use after the one humans are currently

inhabiting becomes destroyed due to the dangers of air pollution. Instead of truly committing to the cause of diminishing air pollution and its adverse affects on the planet people already live on, scientists are using this problem to create new life on a currently uninhabited planet by way of making use of the existing problem on Earth. Although researcher's use of air pollution to discover and/or create new life on Mars is certainly ironic, no breakthroughs have been made in terms of progress on the matter. The pollutant problem down here on Earth, however, is still a very pressing issue that has yet to be solved.

China Needs 2 Trillion Yuan Annually to Combat Pollution

Date: 26th April , 2015 Source: Epoch Time

A report by China's central bank says that the country needs 2 trillion yuan (about $322 billion) every year for the next five years if it wants to counter the impact of pollution on the environment. The startling number is three percent of China's total GDP. The annual government budget sits at around 14.2 trillion yuan and the portion dedicated to the environment was 1 trillion yuan in 2014. But even these numbers may not cover dealing with the ull extent of environmental pollution in China. "Spending a few trillion yuan would only mitigate the level of pollution, but to really solve the pollution issue in China, a few trillion won't do. China needs hundreds of trillions," according to Frank Tian Xie, a professor at the Business School of the University of South Carolina, in an interview with Radio Free Asia.

Chinese author Zheng Yi, based in the United States, said that resolving just heavy metal pollution would be an enormous economic burden. "Currently the method to tackle the problem of land pollution is digging the soil that has been polluted, however deep the pollution might be. The polluted soil is then transported and buried elsewhere. There are millions of acres of land in China that have been polluted. It is simply impossible to dig up a few meters of the soil from all these polluted places," Zheng said in an interview with RFA. Official Chinese statistics indicate that one-fifth of all agricultural land has been polluted by heavy metals to differing degrees, and that about 10 percent has been severely polluted. As for groundwater and coastal water pollution, Zheng Yi says that money can't solve those problems. Only nature, over thousands of years, can repair such contamination. One attempt the regime is making to mitigate air pollution is to reduce reliance on coal power plants to generate electricity, and go nuclear instead. According to the People's Bank of China report, authorities have earmarked 930 billion yuan (about $150 billion) for the construction of nuclear power plants. Rapid economic development in China over the last thirty years has come at the massive expense of environment, says Zheng Yi. It's been bad for the country, but a bargain for the rich and powerful—and it's unclear if the efforts to clean it up won't also be hijacked by vested interests, he says. "It is like selling your family's wok. You benefit at the expense of your parents, and you can use the money to buy candy," Zheng said. "Similarly, taxpayers' money is used to fight environmental pollution. And the beneficiaries of tackling pollution are the rich and powerful people in China."

Disaster of air pollution in human life

Date: 26th April, 2015 Source: The Nation

IQRA IQBAL - "If our nation wants to reduce global warming, air pollution and energy instability we should invest only in the best energy options. Nuclear energy is not of them (Mark Z Jacobson)." Air pollution occurs when the air has gases, dust, fumes or odor in the harmful amount, which could be harmful to the health or comfort of humans and animals or which could cause damage to plants and materials. Most

of the air pollution results due to burning of fossil fuels, such as coal, oil, natural gas, and gasoline to produce electricity and power our vehicles. Carbon dioxide (CO2) is a good indicator of how much fossil fuel is burned and how much of other pollutants are emitted as a result. Smog throws harmful effects to the environment. Studies have shown signs of lungs diseases in dolphins due to high concentration of harmful air particles. Air pollution increases the risk of cardiovascular diseases, irritation in the throat, nose, lungs, eyes, breathing problems and asthma. Children and old people are more sensitive to air pollution. In large cities, over 80% of fatal pollutants that cause lungs damage come from cars, buses, motor cycles and other vehicles on the road."The health effects of air pollution imperil human lives. This fact is well documented (Eddie Bernice B Johnson)."

According to WHO, "Air pollution has become the world's single biggest environmental health risk that is linked to around 7 million or nearly one in eight death in 2012" We should avoid using harmful chemical products inside and outside of our homes. We should properly recycle all household water and garbage. Natural honey bees wax candles should be used. We should plant more trees as they absorb carbon dioxide. We should use renewable energy sources and public mode of transportation.

Air pollution caused form gases, dust particles, smog, acid rain and other sources is damaging to health. We can prevent our environment from air pollution by limited needs of energy which can reduce air pollution. As a result we can maintain our lives and survive easily. "The value of life will suffer a solution if you don't fight air pollution (Cupid)." The writer is a student of BS (Environmental Science) at NFC IET Multan.

'Monsoon getting warped by land-use change, pollution, China growth'

Date:27th April 27, 2015 Source: Hindustan Times

The Indian monsoon - long known for its steady and gentle falls - is succumbing to "human-induced" changes to become more abrupt, according to a new multinational study led by a climate scientist from the state-run Indian Institute of Tropical Meteorology (IITM) in Pune.

Two studies, steered by monsoon investigator R Krishnan of the IITM and his international partners, have presented the first evidence of how pollution and change in patterns of land use are impacting India's main rain-bearing system. As opposed to historically softer and evenly spread rains, the monsoon now features more localised, extreme and sharper falls, with abrupt "start-stop" cycles and "significant rise" in monsoon breaks or long pauses during a season. Some of these impacts may have been brought on by sweeping economic progress in neighbouring China, with its copious aerosol emissions in the past 50 years, evidence suggests. "We found that the monsoon is now more characterised by intense precipitation at the expense of moderate events," Krishnan told HT.

His team concluded that pollutants such as black carbon and aerosols as well as changing land-use patterns like deforestation have weakened the monsoon. "China's development could be affecting the monsoon. Its aerosol use is now well recognised," said Krishnan. Even more worrisome are findings that the monsoon has been declining in the Western Ghats, Jharkhand and Chhattisgarh by 6-7%. Krishnan and his team also stumbled upon a vicious cycle. A weakening monsoon circulation has quickened the warming of the equatorial Indian Ocean which, in turn, has contributed to a weakening of the monsoon. "Our studies show the Indian Ocean has significantly warmed in 50 years by about 0.6 degrees," Krishnan said. "Although the frequency of extreme rainfall events have increased in certain parts of the country, it is the decreasing trend in moderate-to-heavy monsoon rainfall events that poses an enormous long-term concern for one of the most densely populated regions of the world that heavily depends on the monsoonal rains," the authors wrote in Climate Dynamics.

The new findings portend problems India isn't currently prepared to address. Two-thirds of Indians rely on rain-fed farm income. The monsoon replenishes 81 nationally important water reservoirs critical for

drinking, power and irrigation. Such changes could prompt a shift in farm belts, hamper food security and affect livelihood of millions. During the studies, Krishnan, along with M Sugi of the Meteorological Research Institute in Japan, applied a Japanese model to track the monsoon's changes. While one of the studies is under peer review (a necessary academic step), the other one has been published in the prestigious Climate Dynamics journal.

Plant flares emit more pollutants than previously thought, the EPA reports

Date: 27th April, 2015 Source: Power Source

A new U.S. Environmental Protection Agency formula for calculating the amount of pollutants released by flares at refineries and chemical plants nationwide shows that those emissions are four times higher than previously thought. The EPA said last week that the court-ordered update of a decades-old method used by the government and individual industrial facilities to calculate pollution releases will provide more accurate estimates of carbon monoxide, nitrogen oxides and volatile organic compounds released by the flaring or burning of waste gases at those facilities. The change was triggered by a 2013 lawsuit against the EPA by Environmental Integrity Project, a Washington, D.C., environmental enforcement advocacy organization. The EPA said the new formula does not apply to, and should not be used by, the expanding oil and gas development sector, a grouping that encompasses thousands of wells and compressor stations that occasionally flare gases, or gas processing facilities that regularly flare. An example of the latter is an ethane "cracker" that Shell Chemical Appalachia, a division of Royal Dutch Shell, is considering building along the Ohio River in Monaca, Beaver County. The Environmental Integrity Project said it was disappointed by the exclusion of the oil and gas sector and is considering further legal action. According to the lawsuit, EPA studies show that flaring releases pollutants at much higher levels than those used in an outdated guideline, which was based on 30-year-old data and hadn't been updated every three years as the Clean Air Act requires.

Calculations based on the new formula, according to Environment Integrity Project, indicate that an estimated 500 flares at approximately 100 refineries nationwide could be releasing up to 52,800 tons of volatile organic compounds annually instead of the 13,200 tons estimated by the EPA under the old formula. It also means that the public health toll from smog producing VOCs, which can cause respiratory problems and include carcinogens, is likely more than $120 million a year instead of the $30 million estimated under the old formula. "The VOC air pollution plume from flares is four times larger than we thought, and that's too big to ignore. It multiplies their contribution to health problems," said Eric Schaeffer, executive director of the Environmental Integrity Project.

The EPA did not release information about how the new formula would impact permitting for those facilities. Two industry trade groups, the American Chemical Council and the American Petroleum Institute, declined to comment on the new guideline, but during the public comment period on the new formula they expressed concerns it could produce emissions estimates that exceeded facility permit limits and could result in requirements to control emissions under federal and state operating permits.

Mr. Schaeffer, a former head of the EPA's enforcement division, said the new emissions estimates likely will mean that more refineries and chemical plants will be required to obtain air pollution control permits and limit emissions. He also said oil and gas facility flares could emit even more pollutants because of combustion inconsistencies.

"If the pollution released by petrochemical plants is four times higher, the flaring pollution from oil and gas operations is not going to be lower," he said. "They're going to be higher because they don't get a clean burn." The EPA declined to say when it would establish a new emissions factor for the oil and gas industry. Bob Schell, who heads the EPA group that developed the refinery flare emissions factor based on field tests in Texas and Arkansas, said he is not aware of any oil and gas facility test data under consideration by the

EPA. Susan Rickens, a state Department of Environmental Protection spokeswoman, said the new emissions factor will provide the state regulator with better estimates of chemical plant and refinery pollutant releases from flaring, and the state will begin using the new formula in its emissions inventories and permitting process. "Changing the emission factors will have an impact on the calculation of actual emissions from these units that have not had [individual] emission testing done on them," Ms. Rickens said.

"The owners and operators of the affected units must demonstrate compliance with the existing regulatory standards." According to the DEP, there are 182 industrial facilities in Pennsylvania classified as either chemical plants or refineries, and 68 industrial flares. Some of those facilities operate multiple flares. Sixteen chemical or refinery operations are in Allegheny County, but none regularly flare waste gases. According to the EPA, its emissions factors are used by industrial facilities to estimate and report their emissions, but facilities can also use actual emissions stack testing to report their emissions. The EPA, in turn, uses those industry emissions reports to calculate local, regional and national emission inventories that identify and quantify individual pollution sources and establish emissions control targets. Emissions from flaring can contain carbon particles, also known as soot, unburned hydrocarbons, carbon monoxide, nitrogen oxides, sometimes sulfur dioxide and volatile organic compounds. How much of those pollutants are emitted depends on the degree of combustion efficiency. Properly operated flares achieve at least 98 percent combustion efficiency, but Mr. Schaeffer said petrochemical facility flares have an average combustion efficiency of 92 percent.

Air pollution needs multi-pronged solution

Date: 27th April, 2015 Source: Air Quality News

Ahead of the Supreme Court judgement and General Election, Caroline Watson, partner at environmental behavioural change charity Global Action Plan, explains the need for a 'multi-pronged' approach to tackling air pollution. This Wednesday (April 29) the Supreme Court is set to rule on a case, bought by ClientEarth, that could force the government to institute drastic measures to combat the UK's illegal levels of air pollution. The case is a lively reminder that air quality is no longer solely an environmental issue. It is a matter of public health of national, and indeed international, significance. Emerging economies, such as India and China, understand that tackling poor air quality will not only lead to a more sustainable planet, but a healthier, safer and more productive population. The UK is lagging behind in this. We haven't seen any stringent clean air legislation since the Clean Air Act of 1993.
Air pollution currently accounts for at least 4,000 premature deaths in London alone, and efforts to reduce this have so far proved ineffective, there clearly is no panacea to reducing its deadly impact but something must be done. What we need is a multi-faceted approach that utilises ambitious and imaginative legislation to reduce pollution alongside a wholesale shift in our attitudes to how we approach poor air quality. As part of this, the government should spearhead the creation of local clean air zones with lower speed limits, traffic restrictions and better public transport links that would reduce traffic and associated pollution. In addition punitive measures announced by the Mayor of London and, most recently, Westminster borough council, to fine those motorists who contribute most to the problem. There are imaginative and effective projects underway that if scaled up could have a large impact. In London, Barts Health NHS Health Trust is using the reach and influence of the health sector to work with both patients and the wider community to reduce emissions and exposure to air pollution.

We haven't seen any stringent clean air legislation since the Clean Air Act of 1993. Further efforts should also be made to educate businesses, pedestrians and motorists on the impact their choices have on air quality. The City of London are one such municipality who are leading on this agenda, supporting Cleaner Air

Action Days to engage motorists and help them make small changes to their behaviour that can cumulatively have a huge impact. Part of this initiative is to simply bust the myths that surround air quality and engine idling. Turning off an engine and restarting it after a minute or longer actually causes less pollution than keeping the engine idling and uses less fuel. In other words, it is better for the driver and vehicle, better for the environment, and better for the surrounding population. Similarly, advances in vehicle technology mean that turning the engine on and off no longer has any detrimental impact. In fact, idling dirties an engine with incomplete combustion causing wear and tear. Again, switching off the engine is better for the car engine, better for your wallet and better for everyone's health as well as for the environment. Ultimately, national politicians can continue to bluster and puff about air pollution over the course of the election, or they can help spread such practical and positive initiatives across the capital and the UK. Only then will we see real progress on tackling the deadly impact of poor air quality and reducing the disgrace that leads to thousands of people dying prematurely each and every year.

Londoners demand David Cameron and Ed Miliband tackle London's 'toxic' air pollution

Date: 28th April, 2015 Source: Standard.co.uk

Londoners today demanded David Cameron and Ed Miliband do more to tackle "toxic" air pollution blighting the city. Ahead of a Supreme Court judgement on Britain's failure to meet a key EU air quality standard, nearly seven out of ten Londoners accused political leaders of not doing enough or ignoring the problem altogether of "silent killer" fumes on the capital's streets. Ninety per cent of Liberal Democrat supporters voiced this view, as did nearly three quarters of Labour backers and 72 per cent of Londoners intending to vote Conservative on May 7.

The stark findings in a YouGov poll for The Standard piled pressure on the Prime Minister, Labour leader, Nick Clegg and Boris Johnson to dramatically step up action to clean up London's air. "It's not surprising that so many Londoners think politicians aren't doing enough to tackle air pollution," said Green leader Natalie Bennett. "The Government's inaction on air pollution is inexcusable, and follows a general trend from the Establishment parties of side-lining issues such as climate change and air quality." Most of the country's pollution black spots are in the capital and scientists say thousands of Londoners are dying prematurely a year due to filthy air.

Tomorrow the Government will be in the dock when senior judges deliver a landmarkruling, in a case brought by campaign group ClientEarth, over the UK missing deadlines to cut nitrogen dioxide levels. Levels in London are only set to fall within EU limits after 2030 and the Supreme Court judgement could force ministers to take more decisive action.

Coalition rifts were laid bare today over measures in recent years to reduce levels of NO2and particulate pollution in London, which is partly blamed on older diesel vehicles. The Conservatives stressed Mayor of London Boris Johnson had been driving forward "the most comprehensive and ambitious measures in the world" to improve London's air quality, with the cleanest large bus fleet of any city and taxi age limits taking thousands of the oldest and most polluting cabs off the road.

"This has meant that emissions of particulate matter has reduced by 15 per cent and oxides of nitrogen by 20 per cent and the numbers of Londoners living in areas of poor air quality has halved," said a Tory spokesman. The Mayor's ultra low emission zone, due to be enforced from 2020, would be"transformative"

for London's air quality, he added. But Lib-Dem Climate Change Secretary Ed Davey said: ""We've been let down by Boris and the Conservatives who simply haven't seen this as a priority.

"Air pollution is now a serious health risk and Liberal Democrats want to see swift nationwide action." Shadow environment minister Barry Gardiner said London was faced with a "public health crisis". Labour's plan to improve air quality is focussed on devolving power and supporting town halls "to take action against this silent killer," he added. The survey also showed Lib-Dem backers were the most dismayed about political parties' stance on air pollution, with 27 per cent of them believing they were ignoring the problem altogether.

More Labour supporters, 30 per cent, thought political leaders were talking about pollution but not doing anywhere near enough. While 44 per cent of Londoners intending to vote Conservatives said the parties were taking some action but not doing enough.

One in 14 Ukip backers said "too much action" was being taken on pollution in the capital. Tanya Abraham of YouGov: "Hardly any Londoners think political parties are taking enough action around air pollution in the capital. Campaigners will be hoping these figures bring more focus on this subject. Whether politicians will do anything about it remains to be seen, however."

Air pollution costs Europe $1.6tn a year in early deaths and disease, say WHO

Date: 28th April, 2015 Source: The Guardian

The financial cost of air pollution in Europe stands at more than $1.6tn (£1.5tn) a year, a study by the World Health Organisation (WHO) has found, equating to about a tenth of the GDP of the continent. While air pollution has long been known to be a major environmental burden, the costs in human and economic terms have not been categorised before. The costs come in the form of 600,000 premature deaths each year, and the sickness caused to hundreds of thousands of other people from preventable causes, such as pollution from small particles that come from the exhausts of diesel vehicles, and nitrogen dioxide, a gas that can inhibit breathing in vulnerable people. The figures are from 2010, the latest year for which full data is available, and cover the whole of the European region, including non-EU states such as Norway and Switzerland, and are compiled by the WHO Regional Office for Europe and the Organisation for Economic Co-operation and Development (OECD).

Zsuzsanna Jakab, regional director for Europe at the WHO, said: "Curbing the health effects of air pollution pays dividends. The evidence we have provides decision-makers across the whole of government with a compelling reason to act." In many east European countries, the WHO data shows, the economic costs of dirty air are more than 10% of their GDP. On absolute economic costs, the top 10 list is dominated by major economies including the UK, Germany and Italy.

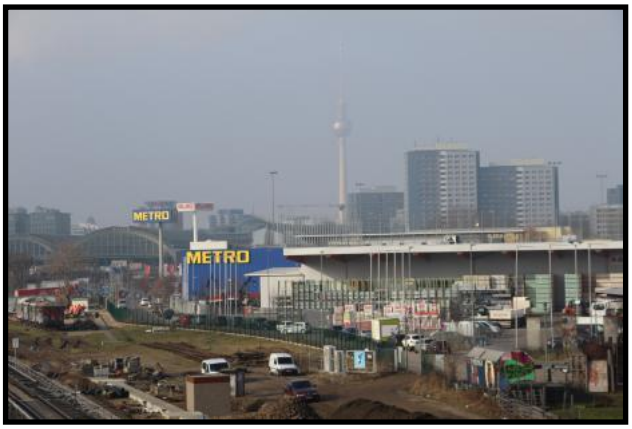
In the UK, air pollution has become so bad in London that the European Union is to levy fines on local government, reflecting years in which the extent of pollution has been in excess of EU standards. The Supreme Court is expected to issue judgment on Wednesday on a case brought against the UK government for its breach of EU pollution limits.

The WHO report found that air pollution was the single biggest environmental health risk in Europe, with the damage from outdoor risks such as diesel exhaust pollution accounting for 482,000 deaths in 2012 from heart

and respiratory diseases alone. The deaths or sickness of at least one in four Europeans can be traced to environmental pollution, according to the organisation. In March, the European Environment Agency warned that hundreds of thousands of people would die prematurely over the next two decades from air pollution because of governments' failure to act. However, the issue of air pollution has attracted little political attention in the UK, and has played little part in the current general election campaigns by the major political parties.

German cities show excessive air pollution levels

Date: 28th April, 2015 Source: Eractive



In many cities, air pollution from fine dust particles and nitrogen dioxide exceeds the maximum threshold levels, according to a new report from the Environment Ministry. Residents of Stuttgart are currently exposed to the highest pollution levels in the Federal Republic, areport published by the German Environment Ministry showed. The study was conducted in response to an inquiry from the Green Party faction regarding certain regions that are known to exhibit high levels of pollution. Air pollutants are harmful to health and can be fatal in the long-term. To reduce these risks, Germany has set threshold values for certain substances. But these levels are being exceeded more and more frequently in many parts of the country. According to the research, Stuttgart often had an annual nitrogen dioxide level that was more than double the acceptable threshold value. Cities with pollution levels just below Stuttgart's were Munich, Reutlingen, Düren, Limburg and Freiburg. Fine dust particles pose another serious problem. Here, the maximum is 40 µg up to a particle size of ten micrometres per cubic metre of air. Stuttgart exceeded this limit on 91 days in 2013. After Stuttgart, Reutlingen follows in second place, followed by Markgröningen, Tübingen, Gelsenkirchen, Hagen and Leipzig. Fine dust remains a significant threat. Only 35 violations of the fine dust threshold are permitted per year. Particles in fine dust are suspected to contribute to diseases like asthma, cancer and cardiovascular illness. Not long ago, researchers at the Institute for Diabetes Research at the Helmholtz Centre in Munich were even able to provide evidence that air pollutants can accelerate the development of type 1 diabetes in children. Residents in Fichtelberg bei Oberwiesenthal are exposed to the highest ozone pollution. There, the threshold was exceeded on 46 days in 2013.

"The environmental and health burden is devastating in many places," said Bundestag MP Peter Meiwald. Apparently the federal government's regulations are failing on many points, he argued. Meanwhile, most authorities and institutes consider it unlikely that the problem can be solved in the near future. The Umweltbundesamt (Federal Environment Agency) recently expressed doubt "over whether the EU threshold value for even smaller particles PM2.5 in urban residential areas, to take effect in 2020, can even be complied with".
Jürgen Resch, CEO of Deutsche Umwelthilfe (German Environmental Relief) criticised the German government for acting too fast in its attempt to control fine dust and nitrogen dioxide pollution. "Other countries model how it can be done," Resch indicated. In Switzerland, all construction vehicles and locomotives are required to be equipped with particle filters, he pointed out. Germany does not have a regulation of that kind, the politician criticised.

The politician also said cities like Madrid or Stockholm also have much higher standards for buses, for example. "It is shocking, at how many recording points the threshold values are being exceeded," said Green Party politician Bärbel Höhn. Almost every state of Germany has critical regions, she indicated. EU law

requires states to reduce emissions. At the end of last year, the European Commission cautioned Germany over excessive air pollution due to fine dust – particularly in Stuttgart and Leipzig – and threatened to take legal measures against the country if the German government did not act. EU law requires member states to contain their emissions. But which individual measures the member state chooses to take, is up to national governments. Still, if Germany does not comply with threshold values soon, the Commission could be entitled to initiate an infringement procedure before the European Court of Justice.

The weird way that air pollution impacts how we think about innovation

Date: 28th April , 2015 Source: The Washington Post

When it comes to the decision of where to launch their businesses, innovators now have another factor to consider: air quality. According to a new medical study from researchers at Beth Israel Deaconess Medical Center and Boston University School of Medicine, long-term exposure to air pollution has the potential to damage the brains of some city dwellers.

The air pollution research, based on studies of older residents (age 60 and over) from New England and New York, found that long-term exposure to even a small amount of ambient fine particulate matter may pose a risk to brain structure and cognitive function in middle-aged and older adults. As the researchers highlight, air pollution in the range commonly found across metropolitan regions in the Northeast can lead to smaller brain size and "silent" strokes. While the exact mechanism causing this brain damage is still unknown, it's thought that inflammation in the lungs from inhaling fine particulate matter found in the air of urban environments leads to broader systemic inflammation, including inflammation in the brain. If nothing else, this new research study helps to build the case against cities with poor air quality. After all, previous studies have found that air pollution shortens life expectancy, increases the risk of anxiety and stroke, and leads to slower cognitive development in children.

As a result, air quality could become just the latest quality of life argument tipping the scales in favor of smaller tech hubs. Other factors in the past that have been used to sway entrepreneurs and innovators to relocate their businesses away from mega-cities to smaller tech hubs include faster commute times and greater access to the great outdoors for recreational purposes. Even simple steps – making bike lanes more accessible to city-dwellers, for example – can help to make a city more attractive.

If South Dakota can use "oxygen" as part of a cheeky new branding campaign to attract tourists and potential residents, why can't smaller cities and tech hubs use "clean air" as a way to attract entrepreneurs, coders and R&D professionals? Some of America's smaller tech hubs are already doing a great job of attracting smart, innovative people by pitching the whole quality of life issue. Portland (or Portlandia, if you prefer) has emerged as an up-and-coming West Coast alternative to California as a place where young innovators want to live and work. In the center of the country, Silicon Prairie, centered in Lincoln, Nebraska, has used the allure of green, open spaces to attract young entrepreneurs to relocate away from densely populated urban hubs.

Air Pollution May Make Your Brain Age Faster, Study Says

Date: 29th April, 2015 Source: Time

Air pollution can also increase your risk of a stroke.
Long-term exposure to air pollution may cause your brain to age more quickly and put you at higher risk for a stroke, a new study suggests. Exposure to higher levels of air pollution may be linked to lower total cerebral brain volume, according to a study published in the May issue of Stroke, which analyzed health data from nearly 1,000 men and women over 60 who did not have dementia and had not had a stroke.

Total cerebral brain volume naturally decreases as humans age, resulting in declines in ability to learn new things and retrieve information, but the researchers found that air pollution exposure may be linked to premature brain aging and higher risks for certain brain strokes.

The findings add new knowledge to the impact of air pollution on the structure of the brain, a link that has remained largely unclear in research.Specifically, a 2 microgram per square meter increase in PM2.5 (particulate matter in the air that is less than 2.5 micrometers wide) was associated with a 0.32% lower total cerebral brain volume, the study said. To put that in context, brain volume decreases at about 0.5% per year after age 40, and PM2.5 levels can vary widely across the world. For example, the PM2.5 in Beijing is about 175 micrograms per square meter, while the PM2.5 in New York City is about 30 micrograms per square meter.

Wildfires in Chernobyl Exclusion Zone Prompt Radiation Fears

Date: 29th April, 2015 Source: The Moscow Times

Ukraine's emergency services appealed for calm Wednesday as wildfires raged in the exclusion zone surrounding the Chernobyl nuclear power plant in Ukraine that went into meltdown in 1986. "Levels of background radiation are normal … don't panic! Everything is in order," Ukrainian emergency services head Zoryan Shkiryak was cited by Russian media as saying, adding "the situation is 100 percent under control." There had been concerns that wildfires in areas contaminated by the Chernobyl accident would release radioactive elements back into the air that would travel with the smoke and contaminate new areas, potentially posing an increased cancer risk to the inhabitants of those areas. A 30 kilometer radius around the old power plant marks the exclusion zone, an area in which parts of land exceed the International Atomic Energy Agency's radioactive contamination standard. Ukrainian Prime Minister Arseniy Yatsenyuk said the blaze was under control and had been contained to an area 20 kilometers from the plant, The Associated Press reported.

Environmental organization Greenpeace on Wednesday expressed concern that the Ukrainian government could be downplaying the extent of the fire. The AP cited officials as saying the blaze had swept through 400 hectares (1.5 square miles) of woodland on Tuesday. Greenpeace said in a statement that the affected area — including woodland, drained peat bogs and fields — extended some 10,000 hectares.

Sunday marked the 29th anniversary of the Chernobyl disaster that caused the premature deaths of at least 28 people from acute radiation sickness, increased the incidence of cancers in areas of today's Ukraine and Belarus and contaminated vast areas of land, according to the UNSCEAR report on the accident. Scientist Nikolaos Evangeliou, author of the 2014 paper "Wildfires in Chernobyl-contaminated forests and risks to the population and the environment: A new nuclear disaster about to happen?" told The Moscow Times on Wednesday that "the [radiation] risk for the general population is negligible." Evangeliou said reports suggested that the fires were only affecting a small area of the exclusion zone and that they were far from the most highly contaminated areas.

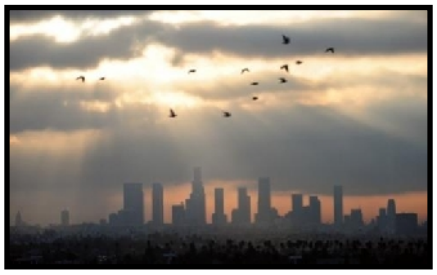
The only people whose health is potentially at risk as a result of the radiation in this fire are the firefighters and anyone else inhaling the smoke at the site of the fire, Evangeliou said. Evangeliou's model shows that dangerous levels of radiation — high enough to induce cancers in the general population — could spread across Europe, particularly Ukraine, Belarus and parts of Western Russia, if the entire Chernobyl exclusion

zone were on fire. A combination of increasing periods of drought and a lack of funding to prevent and fight fires in the exclusion zone — now 70 percent forest — means Evangeliou's worst-case-scenario model may not be so extreme in the years to come. "Chernobyl forest staff, including firefighters, have been cut by almost 40 percent during the past two decades … and half of the wildfires usually occur outside the [fire] detection radius," Evangeliou wrote in a 2015 report, adding "only 20–30 percent of the required prevention measures in the CEZ [Chernobyl exclusion zone] are executed annually due to lack of funding." The report also expresses concern over the "dramatic reduction of the forest road network available for fire engines" in the exclusion zone, rendering many areas virtually inaccessible to firefighters. Greenpeace forestry expert Alexei Yaroshenko told The Moscow Times earlier this month that the Bryansk region in western Russia had been badly contaminated as a result of the Chernobyl meltdown.

Two scientists from Moscow State University — Alexei Shcheglov and Olga Tsvetnova — who studied contaminated areas of Russian soil for nearly three decades following the Chernobyl disaster told The Moscow Times that now "the risk of [radioactive] contamination spreading as a result of wildfires is significantly less than it was in the beginning [1986] because most of the radioactive material has sunk to the mineral layers of the soil which, as a rule, do not burn during fires."

The 10 most polluted cities in the U.S.

Date: 30th April, 2015 Source: The Washington Post



California has had a rough go this year. The state's historic drought is impacting the lives of Californians, and now the drought is exacerbating California's air pollution, according a new report by the American Lung Association.

[Droughtshaming: California drought vigilantes humiliate wasteful neighbors] But Californians are not alone. More than 4 in 10 Americans live in counties where the air is unhealthy to breathe due to ozone or particle pollution. That's almost 138.5 million people, or 44 percent of the U.S. population, according the association's 16th annual "State of the Air" report, which studied air quality data collected from 2011 through 2013. The report also ranks U.S. cities by air quality based on measurements of particle pollution and ozone pollution.

Particle pollution is quite dangerous and made of fine particulates of chemicals, metals, acids, soil and dust that are small enough to infect the bloodstream and trigger asthmatic attacks.

According to CBS, the number of Americans living in unhealthy areas has slightly decreased from last year's report, but overall the report is mixed. Although some cities saw improvements, others had more "episodes of unhealthy air," according to the association. The "best progress," the association said, came in the eastern half of the country, where cleaner diesel fleets and cleaner power plants led to a continued reduction of year-round particle pollution.

The West did not fare as well. "Many cities, especially in the West, had record numbers of days with high short-term particle pollution," Janice Nolen, the association's vice president for national policy and advocacy, told the Palm Springs Desert Sun. California, in particular, scored low on air quality due in part to the drought, which causes warmer weather that results in increased levels of ozone or smog. "Heat is one of the ingredients that is key to making ozone," Nolen told CBS.
"As we are seeing temperatures increase across the nation, it means that we have a harder time cleaning up ozone," she added.

"Overall, we have made great improvements but we do know we are still facing challenges, especially challenges created by climate change and some of the impacts warmer climates have on creating more ozone and particle pollution." Nolen said.

Here's a look at the nation's most polluted cites, according to the American Lung Association's report.
Top 10 U.S. cities most polluted by short-term particle pollution:

1. Fresno-Madera, Calif.
2. Bakersfield, Calif.
3. Visalia-Porterville-Hanford, Calif.
4. Modesto-Merced, Calif.
5. Los Angeles-Long Beach, Calif.
6. San Jose-San Francisco-Oakland, Calif
6. Salt Lake City-Provo-Orem, Utah
7. Logan, Utah-Idaho Metropolitan
8. Statistical Area
9. Fairbanks, Alaska
10. Pittsburgh-New Castle-Weirton, Pa.-Ohio-W.Va.

Top 10 U.S. cities most polluted by year-round particle pollution:

1. Fresno-Madera, Calif.
2. Bakersfield, Calif.
3. Visalia-Porterville-Hanford, Calif
4. Modesto-Merced, Calif
5. Los Angeles-Long Beach, Calif.
6. El Centro, Calif.
7. San Jose-San Francisco-Oakland, Calif.
8. Cincinnati-Wilmington-Maysville, Ohio-Ky.-Ind. Metropolitan Statistical Area
9. Pittsburgh-New Castle-Weirton, Pa.-Ohio-W.Va. Metropolitan Statistical Area
10. Cleveland-Akron-Canton, Ohio

Top 10 most ozone-polluted cities:

1. Los Angeles-Long Beach, Calif.
2. Visalia-Porterville-Hanford, Calif.
3. Bakersfield, Calif.
4. Fresno-Madera, Calif.
5. Sacramento-Roseville, Calif.
6. Houston-The Woodlands, Tex.
7. Dallas-Fort Worth, Tex.-Okla. Metropolitan Statistical Area
8. Modesto-Merced, Calif.
9. Las Vegas-Henderson, Nev.-Ariz. Metropolitan Statistical Area
10. Phoenix-Mesa-Scottsdale, Ariz.

Nearly Half the U.S. Population Still Breathes Polluted Air, Report Says

Date:30th April, 2015 Source: Inside Climate Change

High ozone levels and particulate matter plague 138 million Americans, despite recent improvements, American Lung Association-backed study shows.More than 138 million people, or nearly 44 percent of the nation, live in areas plagued with dirty air for part of the year, according to a new report. Although the numbers show an improvement over recent years, too many people are still at risk of being exposed to toxic air, concluded the "State of the Air" study by the advocacy group American Lung Association. Every year, the association grades the air quality of cities and counties across the nation, using the most recently available data. Regions are graded A-to-F on two major forms of air pollution: ozone and particulate matter. Both are spewed out of coal-fired power plants and tailpipes. Ozone, or smog, is the nation's most pervasive form of air pollution and can lead to myriad health problems, from shortness of breath to lung cancer.

This year's report, published Wednesday, revealed local improvement on ozone between 2011-2013, but it was a mixed bag. At the project's webpage, you can check out whether your city ranks among the cleanest, or dirtiest.

Los Angeles remained the top city affectedby ozone—as it has for 15 out of the 16 years that these reports have existed. The city experienced 194 "orange" days (unhealthy for sensitive groups such as children), 20 "red" days (unhealthy for everyone) and three "purple" days (really unhealthy for everyone) during those three years. California also had eight of the top 10 counties suffering from the effects of ozone pollution. Ozone is more common in warmer areas, such as Southern California. Despite the progress to clean up California's air, and elsewhere, climate change "will make it harder to keep [ozone levels] down as we move forward with warmer temperatures," because hotter weather drives ozone formation, said Janice Nolen, assistant vice president of national policy at the American Lung Association.

The Environmental Protection Agency's standard for ozone is 75 parts per billion. The Obama administration is considering whether to strengthen that standard, lowering it to levels between 60-70 ppb, which scientists say is more protective of people's health. The American Lung Association weighed in on this debate in the report, advocating for the lowest, or more protective, standard.

Ozone forms when chemicals such as nitrogen oxides (NOx), volatile organic compounds (VOCs) and carbon monoxides (CO) waft from power plant smokestacks, factories, tailpipes and other sources, then interact with sunlight.

Vehicles and power plants are also the main sources for particulates—small particles floating around the air that can aggravate asthma and affect the heart and lungs. According to the report, the eastern half of the nation experienced an improvement in year-round particulate pollution, thanks to improvements in car fuel efficiency and reduced emissions from power plants, the result of the shift from coal to natural gas and clampdown on pollution. For example, cities such as Birmingham, Ala., Little Rock, Ark. and Wheeling, W.Va., experienced their lowest year-round particulate levels since 2000.

Meanwhile, on the other side of the country, a handful of cities in California saw an uptick in both annual and short-term particulate pollution. According to the study, increased heat and drought conditions are partially to blame in many of these cities.

Oil and Gas Drilling a New Culprit. Air pollution, especially ozone, isn't a problem affecting just urban areas in the summer. For the first time in the "State of the Air" report, Utah's rural Uintah and Duchesne counties were both among the top-25 worst counties for ozone. (In 2013, both counties had a combined population of approximately 55,000; Los Angeles had a population of nearly 4 million.) These two counties also have the most oil-and-gas producing wells in the state.

According to research published last year by the National Oceanic and Atmospheric Administration, oil-and-gas emissions are the leading cause of wintertime ozone in Utah's Uintah Shale region. Here's how it works. During the winter months, parts of Utah experience what's called an "inversion," where a layer of cold air gets trapped beneath a layer of warm air. The release of volatile organic chemicals from oil and gas extraction and production activities then react with the atmosphere and form smog, in particular when snow cover is present, according to Steven Brown, one of the NOAA study authors.

Scientists are also investigating the impact of the oil-and-gas boom on summertime ozone in both Texas and Colorado. According to the American Lung Association's study, many of Texas's heavily drilled counties, such as Denton, Dallas and Tarrant, also made the list of top 25 counties impacted by ozone. In sharp contrast, Bismarck, the capital of North Dakota, the second-leading oil-producing state in the nation, was named one of the country's six cleanest cities due to strong winds and low temperatures, according to Nolen from the American Lung Association. Clarification: This story has been updated to more accurately reflect the process of winter ozone formation in Utah.

Drought making California's air quality worse, American Lung Assn. says

Date: 30th April , 2015 Source: LA Times

Despite increasingly aggressive clean air and fuel standards, years of drought are taking a toll on California's air quality, the American Lung Assn. says in a new report. The portion of California's Central Valley from Fresno to Madera was the most polluted region in the nation on any given day in 2013 with microscopic particulates, or soot, thanks in large part to the changing climate and drought, according to an annual report on air quality released Wednesday by the American Lung Assn.

"Continuing drought and heat may have increased dust, grass fires and wildfires" that have hurt the Central Valley's air quality in short-term particle pollution, the report stated. "The impact of climate change is particularly apparent in the West, where the heat and drought create situations ripe for episodes of high-particle days."

The report evaluated metropolitan areas based on recorded levels of ozone, the main ingredient in smog, and also measured particles, or soot, that tend to build up in colder, winter months. It looked at the annual average for cities and the worst on average in a 24-hour period. The report used data gathered between 2011 and 2013. In both time frames, a swath of California's Central Valley topped the rankings for unhealthy particulate pollution.

The Fresno-to-Madera region was the most polluted year-round for the second year in a row and the worst in a 24-hour cycle. Bakersfield was ranked second, the area from Visalia to Hanford was third and the area from Modesto to Merced was fourth for short-term and annual particle pollution. Los Angeles County actually performed worse in the 24-hour rankings this year than it did the previous year, the report noted.

Related: L.A. heat making air quality worse

Despite great strides in recent years, L.A. County again topped the nation's list of metropolitan areas with the worst smog for 2013, according to the report. L.A. County has ranked the worst for smog among metropolitan areas in all but one of the association's 16 reports. Despite the high rank, the report said the city "exemplified" progress in reducing smog. Its three-year average for 2011-13 was its best since the report began and showed a one-third reduction in the number of unhealthy air days.

Ranking fifth on the list of smog-polluted areas nationally, according to the report, was the area from Sacramento to Roseville. Smog forms in warm, sunny weather with little wind. More than 138 million people, or 44% of the nation, live in areas with unhealthy air, according to the report. Still, the situation has improved over the last 10 years.

"Even the more polluted cities had significantly fewer unhealthy ozone days than they had a decade ago," the report states. Poor air quality can most adversely affect the young and old, those with lung disease and asthma, heart disease and diabetes. The report said that the Environmental Protection Agency's current ozone air quality standards are "woefully inadequate" and called for the government to adopt stricter standards proposed by the EPA last year.

For the youngest and oldest, air pollution may have serious health consequences

Date: 30th April, 2015 Source: The Guardian

The effect of air pollution on climate change is well-documented, but two new studies show that it may also pose surprising dangers to public health.On Wednesday, California Governor Jerry Brown announced an ambitious plan to reduce the state's carbon emissions. His proposal – which would cut emissions by 40% below 1990 levels within the next 15 years – is aimed at curbing the potentially catastrophic effects of global warming, such as rising sea levels and super droughts. But while air pollution is bad for the planet, two studies released this week show that it's also having a detrimental effect on public health. One report, released on Wednesday, studied the impact of air pollution on fetal development. Researchers found that women who were in their final stage of pregnancy during the 2008 Beijing Summer Olympics – when China drastically cut down on air pollution – gave birth to heavier babies than those born during the same period a year earlier or later.

According to the study, babies of women who were in their eighth month of pregnancy during the event, which was held in August 2008, were – on average – 23 grams larger at birth compared to those born in 2007 and 2009. There weren't any significant differences in weight for babies of women who were in their first seven months of pregnancy during the games.

The study credits cleaner air for the bump. Beijing, which the study's authors described as "one of the most heavily polluted cities in the world", was forced to combat air pollution as a condition for hosting the Olympics. The city temporarily closed down factories, halted construction, and reduced the number of cars on the road. As a result, air pollutants like nitrogen dioxide and sulfate decreased between 18% and 59% during the 47 days of the games, the report found.

"The results of this study demonstrate a clear association between changes in air pollutant concentrations and birth weight," David Q Rich, an epidemiologist with the University of Rochester Medical Center and lead author of the study, said in a statement. "These findings not only illustrate one of the many significant health consequences of pollution, but also demonstrate that this phenomenon can be reversed." Growing old on smog But smog isn't just putting society's youngest members at risk: another study has found that long term exposure to air pollution can lead to premature aging of the brain.

The report, published in the May issue of Stroke, analyzed data on 943 men and women over the age of 60. It found that those exposed to a form of pollution called PM 2.5 – a fine particulate matter that enters the lungs and blood – had smaller total cerebral brain volume, a sign of brain atrophy. People naturally lose cerebral brain volume as they get older, but these findings indicate that air pollution may speed up the process. "The results suggest that exposures to air pollution may be associated with subtle but potentially harmful effects on the aging brain," said Elissa H Wilker, the study's lead author, and a researcher at Boston's Beth Israel Deaconess Medical Center.

Wilker added that more studies are needed to investigate the effects of long term exposure to air pollution over time. But with 3 million deaths worldwide each year attributed to air pollution, Jerry Brown's push to reduce carbon emissions is more pressing than ever.

MAY 2015

Green Tribunal Bans Throwing of Waste Into Hindon Canal

Date: 03rd May , 2015 Source: NDTV

New Delhi: The National Green Tribunal has banned throwing of all kinds of waste into the Hindon canal, saying its pollution is a matter of "serious" concern. A bench headed by NGT Chairperson Justice Swatanter Kumar said the "prohibitory" orders will equally apply to persons and public authorities including Uttar Pradesh as it flows through the state. Slamming the authorities for not cleaning municipal solid waste from the canal and "shifting" responsibility in this regard, the green panel directed them to ensure that clean and decent environment is provided to the residents living along the canal.

The tribunal also constituted a committee of officers and asked it to submit a status report, including remedial measures which were needed. "From the records before us it is evident that all public authorities without exception are shifting responsibility on one pretext or the other. It is unfortunate that in a matter of environment and public health, the approach of the authorities should be such.... "We restrain and prohibit any corporation, authority, public body or any of its workers/officers from throwing any municipal solid waste and other waste into the Hindon canal," the bench said.

The tribunal constituted a committee of officers nominated by DDA-Vice Chairman, Commissioner of East Delhi Municipal Corporation, PWD, Delhi, Delhi Jal Board, Uttar Pradesh government and Uttar Pradesh Pollution Control Board.

"This committee will conduct inspection of the area in question and submit its status report including the remedial measures that are required to be taken for ensuring that no municipal solid waste or other waste is thrown into the canal," the bench said. It directed all the parties to appear before the DDA-Vice Chairman on May 12 at 3 pm while posting the matter for next hearing on May 25. Advocates Balendu Shekhar and Vivek Jaiswal, appearing for EDMC, assured the bench that the municipal body will ensure the compliance of the order. The tribunal's direction came while hearing a petition filed by Vasundhara Enclave resident JP Sharma seeking directions to remove municipal waste from the canal. He alleged that besides municipal waste, construction waste and building debris are also dumped into the canal resulting in water and air pollution.

Ahmedabad's air 2nd worst, Faridabad tops the list

Date: 04th May 04, 2015 Source: The Times of India

AHMEDABAD: Sunday proved to be an exception, nationally, on the Central Pollution Control Board (CPCB) daily air quality index (AQI) list. Ahmedabad displaced Delhi in the rank to become the second city with a poor ambient air quality in the country.

The AQI index defined the city's air quality to be "very poor" along with Faridabad. The AQI score for Ahmedabad was 304, while that of Faridabad was 341. Delhi on the other had an AQI score of 259 and was rated "poor" by CPCB. Since the last two days the CPCB has been releasing a daily air quality bulletin for 11 cities across the country.

The AQI is decided on ambient concentration values of air pollutants and their likely health impacts which are commonly called health break points. The pollution parameters whose concentration is measured in ambient air include particulate matter that are of size 2.5 microns (PM 2.5), PM 10, nitrogen dioxide, sulphur dioxide, carbon monoxide, ozone, ammonia and lead. The pollution parameter is measured over a period of 24 hours and the data is revealed by the CPCB the following day.

High Court Weighs EPA Mercury Rule

Date: 4th May, 2015 Source: C & EN

The Environmental Protection Agency's first-ever regulation limiting releases of mercury and other toxic air pollution from power plants is facing its final legal hurdle. The Supreme Court is considering whether EPA went too far when it finalized a rule to protect public health that the agency estimates will cost electric utilities and their customers almost $10 billion per year.Mercury is a potent neurotoxin; tiny doses can harm children's development and pose risks for fetuses of pregnant women. Coal-burning power plants, which are the largest source of mercury in the U.S., are facing a series of EPA regulations that require owners to invest in pollution controls or shut down aging facilities.

The justices are evaluating industry and state arguments that EPA violated the Clean Air Act by failing to consider the potential financial burden before it decided to issue those emission limits. "Congress did not intend for EPA to act with deliberate indifference to cost when answering the basic regulatory question of whether it is appropriate to regulate," the plaintiffs' brief asserts. EPA's Mercury & Air Toxics Standards, which began to take effect in April, require power plants to reduce their emissions of mercury by 90%. The pollution control technology needed to strip mercury out of the plants' releases to the air will also reduce emissions of acid gases such as hydrogen chloride by 88% and particulate-forming sulfur dioxide by 41%—providing what the agency calls "cobenefits." EPA believes that the regulation will produce between $37 billion and $90 billion in public health cost savings per year.

That means lower health care costs for downwind residents, fewer lost workdays, and a reduction in early deaths. Up to 11,000 people die prematurely as a result of power plant pollution each year, according to the agency.The high court is expected to issue a ruling in the case, Michigan v. EPA, by the end of June. The decision could set an important precedent on whether the agency needs to consider the potential costs before it decides whether regulation is warranted under the Clean Air Act.

When Congress amended that federal law in 1990, it directed EPA to aggressively control emissions of mercury and more than 180 other hazardous air pollutants. The statute says the agency "shall regulate" the major sources of these pollutants where it is "appropriate and necessary." EPA concluded that it was both appropriate and necessary to regulate mercury from power plants based in part on studies of Americans who rely on fish for a substantial part of their diet. Mercury pollution from these facilities may be making fish unsafe for human consumption in 65% of the U.S. waters that receive atmospheric fallout of the metal, according to the agency.

EPA also says the acid gases and microscopic particles emitted by electric utilities can cause asthma, lung problems, and heart disease. In December 2011, the agency finalized new standards requiring about 1,400 generating units at 600 power plants, most of which burn coal and are in the South and upper Midwest, to

install high-tech scrubbers and other devices to remove the pollutants. At the time, the Energy Information Administration reported that 64% of the facilities had already installed pollution control equipment to comply with the new standards.

"By affirming these vital emission standards, the Supreme Court would also help level the playing field for the two-thirds of coal-fired plants that have already upgraded their plants," says Graham McCahan, a staff attorney at the Environmental Defense Fund, an advocacy organization. But industry groups such as the National Mining Association and nearly two dozen states assert that EPA's regulation amounts to a prohibitively expensive "overreach" by the Obama Administration. They argue that the benefits of controlling the utility emissions of mercury amount to only $4 million to $6 million annually and that the rest of the benefits come from the reduction of particulate pollution, which is regulated by other EPA programs.

A three-judge panel of the U.S. Court of Appeals for the District of Columbia Circuit upheld the new standards last year. But 21 states, the mining association, and the Utility Air Regulatory Group, a utility lobbying group, petitioned the Supreme Court to hear the case. They contend that the Clean Air Act required EPA to take into account compliance costs when it was deciding whether to regulate toxic air emissions from power plants. "EPA has expressly refused to consider the cost of its regulation, which will result in rate increases for citizens across the country, and threatens the reliability of the electricity grid by forcing the closure of many power plants," says Michigan Attorney General William D. Schuette. Supporters of the rule hope the justices will lean toward giving EPA deference to interpret the Clean Air Act as it did when it decided to consider only public health risks in determining that the rule was necessary. EPA has said it took the cost of technology into account at a later stage in the regulatory process when it crafted the specific emission standards. During arguments before the high court last month, U.S. Solicitor General Donald B. Verrilli Jr. defended the agency. He called it "certainly appropriate for EPA to list power plants for regulation based solely on health and environmental hazards." The relevant section of the Clean Air Act, Verrilli pointed out, does not mention costs anywhere in its text.

The Court's four-member liberal wing largely voiced support for EPA's approach. For instance, Justice Elena Kagan said the argument that the agency must consider costs despite the law's silence on the issue is at odds with a 2001 Supreme Court decision. In that case, Whitman v. American Trucking Associations,the justices unanimously agreed that EPA is prohibited from considering cost when setting national ambient air quality standards for ground-level ozone and other common air pollutants. Congress has often explicitly required EPA to consider the cost of its regulations but said nothing to that effect in the Clean Air Act's provision on power plant emissions, Kagan said. "Congress knows how to require consideration of costs," she remarked. "To get from silence to this notion of a requirement seems to be a pretty big jump." Justices Ruth Bader Ginsburg and Sonia M. Sotomayor both signaled that the Court should defer to an agency's interpretation of an ambiguous statute as long as the agency's reading is reasonable.

Air Pollution Decreasing Our Life Span

Date: 05th May , 2015 Source: Indian Express

BENGALURU:Experts say air pollution is cutting short our life span and adversely affecting our health. Dr Nagendra Prasad Komerla of the Bangalore Allergy Centre said, "Air pollution causes both acute and chronic effects in the form of short-term allergies or respiratory disorders, as well as chronic illnesses. Ambient air pollution is an established cause of morbidity and mortality just like tobacco smoke." A study published in the Economic and Political Weekly in February 2015 said, "Over half of India's population live in areas where fine particulate matter pollution is above India's standards for what is considered safe". This decreased life expectancy by three years, said the study. Another study published in PNAS in May 2013 shows the effects of increasingly polluted air on life expectancy in China. The analysis

said long-term exposure of an additional 100 g/m3 of total suspended particulates (TSPs) kills people three years earlier.

Dr Komerla cited studies that showed significant links between increasing urban air pollution and pollen allergies. A study cited by Dr Komerla in Oncology on July 9, 2013, said prolonged exposure to air pollutants causes lung cancer. Another study published in Thorax in October 2014 showed that when pregnant women were exposed to air pollution, babies were born with defective and decreased lung function. Dr C N Manjunath, director of Jayadeva Institute for Cardiovascular Science and Research Hospital, had recently told Express, "Severe air pollution can lead to heart disease... studies in the United Kingdom have indicated the same...Various studies have linked heart disease to air pollution as it has carbon dioxide, sulfur dioxide, nitrogen oxide, lead and volatile oxygen compounds." The BMJ in 2014 reported after a study on 777 children between the ages of 2 and 18 that there is a significant relation between pollen and asthma, he said. Dr Vaman Acharya, Karnataka State Pollution Control Board chairman said, "Suspended particulate matter that is less than 2.5 PM is very small and fine. These get embedded in the lung tissue, cross over into the blood or lymphatic system and take months or years to be excreted. While they are there in the system, they cause different health problems."

Air pollution 'increases allergy risks' in babies

Date: 05th May, 2015 Source: The Telegraph

Living near a busy road could increase the risk of babies developing allergies as they grow older, according to new research.Exposure to traffic fumes increased the likelihood of infants becoming allergic to food, mould, pets and pests, a study found.

Researchers in the Canadian study said the study was the first to find a link between exposure to air pollution in the first year of life and an increased risk of sensitivity to allergies. The researchers used data from 2,477 children and assessed them at about one year of age for sensitivity to ten allergens including cat, dog, dust mites, cockroach, fungus, milk, egg, soy and peanut. Of the participants, one in six infants were sensitive to at least one of the allergens. Overall, children in areas with higher pollution were 16 per cent more likely to develop allergies.

Feeding peanuts to babies protects from peanut allergies, scientists find Babies fed by bottle 'could be more prone to allergies'Time to see red over air pollution The effect was strongest among children who were not in daycare, with experts suggesting that exposure to other children could protect against the increased risk of allergies. Professor Michael Brauer, of the University of British Columbia, said: "With the increasing rates of allergies amongst children in Canada and elsewhere, we were interested in determining if air pollution from traffic might be partially responsible.

"This is the first study to find a link between air pollution and measured allergic sensitization during the first year." The researchers did not find a link between mothers exposed to air pollution during pregnancy and allergy risk in their children.

Lead researcher, PhD candidate Hind Sbihi said: "Understanding which environmental exposures in early life affect the development of allergies can help tailor preventative measures for children. We also found children who attended daycare or with older siblings in the household were less likely to develop allergic sensitization, suggesting exposure to other children can be protective." Vancouver had the largest proportion of children to develop sensitivity to allergens (23.5 per cent), compared to Toronto and Edmonton (17 per

cent each), and Manitoba (9 per cent). The study also found that children who live with furry pets and no attached garage were more likely to have no sensitivity to allergens.

Exposure to traffic related air pollution was assessed by estimating nitrogen dioxide levels at each child's home address. The researchers also evaluated the time each child spent away from home including daycare attendance and the type of the home's ventilation system.

State comptroller slams Environment Ministry's air pollution monitoring deficiencies

Date:05th May, 2015 Source: The Jerusalem Post

State Controller Joseph Shapira slammed the Environmental Protection Ministry's handling of stationary air pollution sources – such as power plants, quarries and industrial sites – in his latest report on Tuesday. Calling on the ministry to better streamline its monitoring systems and take action against violators, Shapira argued that the ministry did not optimally use the tools it had available for monitoring and regulating stationary air pollution sources. He criticized the office for failing both to update regulations on the subject and to finish classifying factories according to potential damage level. He also faulted the ministry for not making efficient use of its computer systems to support supervisory and enforcement procedures, adding that the ministry "does not maintain tight control in this area." Describing air pollution from stationary sources as "an environmental hazard that could endanger the health of the people exposed to it," the comptroller accused the ministry of failing to make the most of the powers that the 2011 Clean Air Law had granted it.

From March through October 2014, the State Comptroller's Office examined the ministry's supervision of these stationary sources, particularly looking at the monitoring of factories with high emissions levels. In addition, the office evaluated the ministry's use of computerized information systems for the supervision of environmental clauses in business licenses. By the end of the audit, three-and-a-half years after the Clean Air Law went into effect, neither of the two environmental protection ministers who served in that time had sought Knesset approval for new air pollution prevention regulations as the law required, the comptroller said. Meanwhile, he went on, the ministry's process of reclassifying factories according to their emissions levels was not yet complete as of October 2014. From 2011 through 2013, many geographical districts within the Environmental Protection Ministry did not meet their supervisory targets, and in 2013 particularly, spot inspections at polluting factories dropped 15 percent, the report said. During that year, samplings in Haifa factories were not conducted at all, the state comptroller continued.

"Thus, the ability of the Environmental Protection Ministry to maintain proper control over periodic samplings of localized emissions of pollution caused by factories was very impaired," Shapira wrote. In addition, the report said, from August to November 2012 and from April 2013 through January 2014, about 21% of factories that were supposed to conduct their own periodic samplings failed to do so. As a result, 46% of chimneys at all factories requiring such testing did not undergo their checks as required. "During these periods, nearly all the district offices of the ministry failed to take enforcement measures against the factories," the comptroller wrote.

He stressed that the ministry must swiftly take action against any factories that failed to transfer required data from period sampling, as well as reduce the number of plants that were exempt from this

requirement. With the aim of "protecting health and quality of human life," the state comptroller called on the Environmental Protection Ministry to prioritize its programs that "continuously and closely track and monitor sources of stationary emissions." He wrote that "in order to implement this important mission, the ministry must learn lessons from this report, take actions to correct the deficiencies raised here, streamline its supervisory systems and optimally use enforcement measures granted to it against violators of the law and its provisions – and the sooner the better." In response, the ministry retorted that the report demonstrated "where cutback policies in the struggle against air pollution are leading." Such governmental policies, the ministry argued, were "endangering the lives of thousands of people in Israel." The ministry specifically referred to its National Program to Prevent Air Pollution, which had its budget cut from an original total of NIS 690 million to only NIS 140m. Under the Clean Air Law, the government had until January 2012 to approve a multi-year, comprehensive prevention program. While the ministry prepared its NIS 690m. plan at the end of 2011, the government only approved a much-reduced NIS 100m. version in August 2013.

The government also eventually authorized an additional NIS 40m. for the program in a separate decision. The National Program to Prevent Air Pollution is entirely unrelated to another Environmental Protection Ministry program that likewise recently hit the chopping block: the National Plan for the Reduction of Greenhouse Gas Emissions. This program, approved with a NIS 2.2b. budget in 2010, was frozen by the government in mid-2013. "Despite the cuts, as a result of vigorous inspection and enforcement, the Environmental Protection Ministry succeeded in bringing about a reduction of dozens of [percentage points] in air pollution from industrial emissions, and factories are required to abide by stringent European standards," the ministry said. Bringing up the issues of air pollution in the Haifa Bay area, which was a source of media buzz in recent weeks following Health Ministry statements on the subject, the Environmental Protection Ministry stressed that airborne contamination in that region had dropped by 70% in six years – a trend that it said was expected to continue. Regarding the classification of factories according to their environmental impact, the ministry said it had completed this process and that its officials regularly performed spot checks of chimneys at industrial plants with potentially high air pollution. It added, though, that such checks were subject to the limitations of its budget and resources: Without a budget in 2013, the rate of checks went down, but with a budget in 2014, the ministry was able to sample emissions at 257 factories. "The ministry works continuously for the improvement of environmental regulation in industry, and a year ago, the government even approved – at the initiative of the Environmental Protection Ministry – the decision to promote an integrated environmental licensing law in accordance with the most advanced European standards in the field," the ministry statement said.

Air Pollution Can Put Your Baby at Risk of Developing Allergies

Date:05th May, 2015 Source: NDTV Food

A new study done by researchers at the University of British Columbia found that when babies are exposed to outdoor air pollution in the first year of their life, it can increase their risk of developing allergies. This could be allergies to food, mould, pets or pests. The study was published in the journal 'Environmental Health Perspectives' and said that the sensitivity to allergens was linked with exposure to traffic-related air pollution during the first year of a baby's life. (Air Pollution May Harm Your Child's Brian) According to Michael Brauer, senior author and professor at the University of British Columbia (UBC) in Canada, "This is the first study to find a link between air pollution and measured allergic sensitization during the first year. The study also found that children who live with furry pets and no

attached garage were more likely to have no sensitivity to allergens." (Air Pollution in Indian Cities Can Trigger Asthma) Hind Sbihi, author of the study and doctoral candidate at the UBC noted, "Understanding which environmental exposures in early life affect the development of allergies can help tailor preventative measures for children. We also found that children who attended daycare or those with older siblings in the household were less likely to develop allergic sensitization, suggesting that exposure to other children can be protective." Researchers collected and analysed data from more than 3500 families and their infants in Canada. They were tested for sensitivity to ten allergens, including cat, dog, dust mites, cockroach, fungus, milk, egg, soy and peanut. And closely monitored to determine how genetic and environmental factors can result in allergies. They discovered that infants are at a higher risk of developing allergies. And that there is no link between pregnant mother's being exposed to pollution and the risk of their children getting allergies. With inputs from IANS.

County's air pollution level decreasing, new report says

Date:06th May, 2015 Source: Chesterfield Observer

County residents can breathe a little easier in knowing air pollution levels are improving in the region, according to the American Lung Association's 2015 State of the Air report. Chesterfield earned a grade of "C" for its ozone pollution levels this year – a noticeable improvement over last year's "F" grade. The county retained an "A" grade for short-term particle pollution levels. The association's annual report assigns grades to counties for ozone and particle pollution based on the U.S. Environmental Protection Agency's (EPA) color-coded Air Quality Index. The 2015 report is based on data collected from official EPA pollution monitors during 2011, 2012 and 2013. "The difference observed [in this year's report] was the consequence of there being five fewer high ozone days in Chesterfield County in 2013 than in 2010," explained Kevin M. Stewart, director of environmental health with the American Lung Association of the Mid-Atlantic, in an email. "Why that should be is a good question," he continued. "I can tell you that some broad reasons for the decline were likely to have been reduced air pollution from sources even hundreds of miles upwind, such as dirty coal-fired power plants, and a somewhat cooler, wetter summer in 2013 that would have retarded ozone formation." Motor vehicles, power plants, gas stations, chemical plants and refineries are common contributors to ozone pollution (also known as smog). Ozone is formed when nitrogen oxide and hydrocarbons combine with heat and sunlight, creating a highly reactive gas molecule that is harmful to breathe. Ozone pollution levels are highest during the summer. The county averaged five "orange days" for ozone pollution annually during the study period, compared to seven in last year's report. A day is rated as "orange" when ozone pollution reaches unhealthy levels for sensitive groups, such as young children, older adults and people with lung disease. There were no "red days," where ozone pollution levels were high enough to impact the health of everyone. Chesterfield averaged two such days in the 2014 report. The State of the Air report also assigns grades for particle pollution (commonly known as soot), a mixture of tiny, airborne solid and liquid particles that come from industry, mining, construction and other sources. The county did not have any "orange" or "red" days for short-term particle pollution levels during the evaluation period. This is the fourth year in a row the county has received an "A" for short-term particle pollution. The county did not receive a grade for year-round particle pollution levels this year due to insufficient data. Cause for improvement? There's no single source that can be blamed for the region's air pollution. A combination of sources, both local and from afar, influences ozone levels. According to data from the EPA, about 70 percent of the state's ozone pollution blows in from out of state. Last year, the U.S. Supreme Court upheld the EPA's Cross-State Air Pollution Rule, which will require more than 20 states in the eastern half of the country to reduce nitrogen oxide and sulfur dioxide emissions that are blowing across state lines and contributing to unhealthy pollution levels.

"People who live downwind of these major polluters need this decision because the ozone and particle pollution in their communities threatens their lives," the association said in a statement following the court ruling. Studies have shown that about one-third of Virginia's ozone pollution stems from industry and

power plant emissions. Another third comes from motor vehicle emissions, with the remainder originating from various sources, such as construction and yard equipment and volitile organic compounds leaching from paints, solvents and other products. Locally, two of the state's largest contributors of air pollutants are taking steps to reduce emissions that lead to higher ozone levels in the region. Chester is home to the Chesterfield Power Station, Dominion Virginia Power's largest fossil-fueled plant. The coal-fired plant supplies about 11 percent of the electricity used by Dominion's 4 million customers. Dominion has spent more than $3 billion in recent years on new environmental controls at its facilities in Virginia and other states. "Dominion commissioned a new scrubber at the Chesterfield Power Station in 2011," said Rob Richardson, a Dominion spokesperson. "That follows the addition of a scrubber that was added in 2008. All four coal units at Chesterfield Power Station are attached to a scrubber. This air pollution control equipment reduces particulate emissions and nitrogen oxide emissions. It also continues to reduce sulfur dioxide emissions by over 95 percent and nitrogen oxide emissions by 90 percent."

Dominion also has converted three of its coal-fired power plants in Hopewell, Altavista and Southampton to use biomass as fuel, and its Bremo Power Station in Bremo Bluff transitioned from coal to natural gas last summer. A coal-fired unit in Chesapeake closed late last year, and another in Yorktown is anticipated to close next April. Honeywell's Hopewell facility also is in the midst of a $100 million upgrade of its emission controls. "Honeywell will install eight emission control systems … on four production lines at the plant," says Peter Dalpe with Honeywell's Performance Materials and Technologies division. "These systems will reduce the plant's nitrogen oxide emissions into the environment by roughly 6,000 tons per year." The upgrades should be completed by 2019. Nationwide results- According to the association, more than 138 million people in the United States – nearly 44 percent of the nation's population – live in areas with unhealthy levels of either ozone or particle pollution. Nationally, this year's State of the Air report showed mixed results, with many cities experiencing strong improvements in air quality, while others had increased episodes of unhealthy air. In 2013, the World Health Organization's International Agency for Research on Cancer concluded that outdoor air pollution causes lung cancer. It also aggravates symptoms in people who suffer from asthma, allergies and chronic heart and lung conditions.

Digital display boards to give spot pollution levels

Date: 09th May, 2015 Source: Times of India

INDORE: Long-cherished dream of Madhya Pradesh Pollution Control Board (MPPCB) to keep track of pollution levels in city areas online is soon going to materialize. Digital display board will be installed in traffic-prone areas which display real-time pollution status.

Apart from Indore, digital boards will be installed in Ujjain, Jabalpur, Bhopal and Gwalior as a pilot project. Boards will be installed under Continuous Air Quality Monitoring Station (CAQMS) scheme at a cost of Rs 1.5 crore. According to MPPCB officials, the system is currently running in around 75 cities across the country. Member secretary, MPPCB, AA Mishra said, "It is an ambitious scheme of government ofIndia under which digital boards have to be installed. The work will be completed within this financial year. Purchase of digital boards is under process. It will be completed soon".

In 2012, Central Pollution Control Board (CPCB), gave green signal for the installation ofelectronic display board. The system will have sensors to measure the quantity of suspended particles in air such as sulphur dioxide, nitrogen dioxide and other harmful elements. Measurements on the board will also be updated online and be functional 24X7. Indore is one of the most polluted cities in the country and it essentially needs a proper system to measure pollution levels. Installation of new system will help raise awareness on air pollution. MPPCB currently has three air pollution-measuring units in the city at Kothari Market, Vijay Nagar and Sawer Road respectively. Measurement centres being manually operated have filter papers which

absorb harmful elements in air and get checked in laboratory later. However, laboratory reports come after 24 hours and are not revealed to the public. Indore: Long-cherished dream of Madhya Pradesh Pollution Control Board (MPPCB) to keep track of pollution levels in city areas online is soon going to materialize.

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Household air pollution weakens lung immunity

Date: 10th May, 2015 Source: Zee News

London: Household air pollution can cause weaknesses in the immune function of the lung even in healthy people, which can lead to higher rates of pneumonia, a new research has found. "Our cell based research has shown that HAP (household air pollution) exposure goes hand in hand with a reduced immune capacity to deal with lung infection. Vulnerable groups such as women and children in low income countries are most likely to be affected," said Jamie Rylance, respiratory specialist at Aintree University Hospital in Britain.

Three billion people worldwide are exposed to HAP from the fuels they burn to cook, light and heat with at home. Frequently, charcoal, wood and food waste are burned and generate high concentrations of smoke particles. This exposure is associated with increased risk of pneumonia, particularly in low and middle income countries where bacterial pneumonia is the biggest cause of infant mortality.

This risk is well known, but the reasons are not. The new research offers an explanation. In the southeast African country Malawi, the research team examined healthy volunteers who had frequent exposure to HAP. Using a telescope test, the team took samples of the immune cells from the lung airways. These "alveolar macrophages" are a major defence against infection and clean up the lung airways by ingesting inhaled particles and bacteria.

Macrophage cells produce toxins which kill the bacteria they have taken up in a process called oxidative burst. The study measured the smoke particle content of the macrophage cells. More smoke exposure was associated with a weaker killing response. The study was published in the American Journal of Respiratory Cell and Molecular Biology.

These are the 8 air pollutants destroying the atmosphere

Date: 11th May, 2015 Source: Business Insider

Back in school, you'll have learned that the air in our atmosphere is composed primarily of nitrogen, at 78%, and oxygen, at 21%, with a number of other trace gases.It's to these trace gases we're looking today – more specifically, at how human activity can result in the release of air pollution in to the atmosphere. Here, we examine a number of different chemical compounds that contribute to atmospheric pollution, their specific sources, and their effects. It'll come as no surprise to learn that one of the primary sources of atmospheric pollutants is our continued reliance on the burning of fossil fuels for a large proportion of our electrical energy. Carbon dioxide, also produced by natural processes, is the obvious gas produced in this case, produced as a combustion product. However, other pollutants are also produced.

Sulfur dioxide is formed as a result of the sulfur impurities in coal and oil, whilst particulate matter and heavy metals can also be released. Another obvious source of pollutant release is that of vehicle emissions. Pollutants from road transport again include carbon dioxide, but also include carbon monoxide, as well as nitrogen oxides, formed by direct combination of nitrogen and oxygen in combustion engines. The purpose of catalytic converters in cars is to try and remove nitrogen oxides, and carbon monoxide, converting the majority of them into less harmful gases. Cars have also previously been a large contributor to heavy metal pollution, as a consequence of the use of leaded petrol, though this is no longer used in many countries. The agricultural industry is another that contributes pollutants to the atmosphere. Some of this is a consequence of the use of manure and fertilisers, which can release ammonia, whilst some chemicals used as pesticides can also wind up in the atmosphere – these are known as persistent organic pollutants (POPs). POPs can also be generated in industrial processes; for example, waste incineration can lead to the production of dioxins.

The effects of these different pollutants are varied. Carbon dioxide's effects have already been extensively documented elsewhere, of course – there's an excellent NASA site detailing the evidence linking it to anthropogenic global warming here – so we'll instead focus on the other pollutants detailed. Carbon monoxide's effects are also well known – it's a gas that, in sufficient quantity, can cause toxic effects and death in humans. If we breathe it in, it binds strongly to the haemoglobin in our red blood cells, diminishing the oxygen-carrying capacity of our blood. From the perspective of atmospheric pollution, it's one of the handful of gases that can react with other atmospheric chemicals to help form ground-level ozone. Ozone might not immediately spring to mind as a pollutant. After all, it's present in the higher levels of our atmosphere, and this ozone layer helps shield us from harmful UV radiation. However, ground-level ozone is an entirely different prospect. It is a major component of the smog that occasionally plagues areas of the globe, and can also cause health effects such as irritation, coughing, and chest pains.

Ground-level ozone isn't directly generated by human activities. However, it can be produced as a result of the reactions of different human pollutants in the atmosphere. Primarily, the reactions of nitrogen oxides with volatile organic compounds, in the presence of sunlight, can produce ozone. These volatile organic compounds (VOCs) can have a range of human sources, but are also produced naturally by vegetation, and other natural processes. VOCs can additionally undergo other reactions with nitrogen oxides to form peroxyacyl nitrates, respiratory and eye irritants present in smog. Particulate matter in the atmosphere can also be a factor in smog. This matter can be composed of a huge number of chemical entities, and is generally split into three categories: coarse particles, with a diameter between 10 and 2.5 micrometres; fine

particles, smaller than 2.5 micrometres; and ultra-fine particles, smaller than 0.1 micrometres. As well as contributing to smog, some of these particles have been linked with human health effects, as the smallest can be breathed deep into the lungs.

Some particulate matter is directly emitted, for example as a result of fossil fuel combustion. Others are generated in the atmosphere from reactions between different atmospheric species. One other atmospheric pollutant that can contribute to the formation of particulate matter is ammonia. Released from manure and fertilisers in agricultural settings, ammonia can react with other pollutants, producing these tiny particles. Ammonia can also have other effects, such as eutrophication. This is when soil or water becomes over-enriched with nitrogen, causing over-promotion of growth, a particular issue in aquatic environments.

A final environmental effect that pollutants can have is the production of acid rain. This is primarily a consequence of sulfur dioxide emissions, though nitrogen oxides can also contribute. They can react with water in the atmosphere, in the case of sulfur dioxide producing sulfurous acid as an intermediate, which can then react further with oxygen to form sulfuric acid. This can cause acidification of aquatic environments, as well as corrosion of some building materials. It's clear then, that there are a wide range of atmospheric pollutants – so what are we doing to combat them?

A number of environmental agencies worldwide have identified six 'criteria pollutants', which are regulated, and measures of which can be used to gauge air quality. These are carbon monoxide, lead, nitrogen dioxide, lead, particulate matter, and sulfur dioxide. There are broad regulations and limits in place to try and reduce the release of these pollutants; however, some countries have failed to meet these emission limits. Just last week, the UK was criticised for failing to meet nitrogen dioxide emissions below required levels.

Beijing is winning the battle with air pollution... So can someone tell dirty Delhi the secret?

Date: 11th May, 2015 Source: Mail Online Data

Until last year, Beijing was the pollution capital of the world. That ignominy now falls on Delhi, where pollution levels have been jumping off the charts while the smog around the Chinese capital lifts slowly. So what did the Chinese government do right in its war against pollution, and what are the lessons the Narendra Modi government can learn from the Xi Jinping dispensation? On January 12, 2013, the air quality monitoring station at the US Embassy in Beijing recorded very high pollution levels. On a scale of 1 to 500, the index stood at a 'beyond hazardous' reading of 755. All of Beijing resembled an airport smokers' lounge. The embassy officials described the situation as "crazy bad". Alarm bells were pressed. 'Airpocalypse' was declared. And the lives of the citizens changed forever. Organised protest is strictly barred in communist China. But such was the fury of citizens that pollution protests went viral.

Fuel Tech Awarded Air Pollution Control Orders Totaling $8.3M

Date: 11th May, 2015 Source: Pollution Online

Fuel Tech, Inc. (NASDAQ:FTEK), a world leader in advanced engineering solutions for the optimization of combustion systems and emissions control in utility and industrial applications, today announced the receipt of multiple air pollution control (APC) contracts from customers in Europe and China. These awards have an aggregate value of approximately $8.3 million. In the UK, a commercial contract for Fuel Tech's Advanced NOxOUT® Selective Non-Catalytic Reduction (ASNCR) technology was received for multiple large coal-fired units burning both coal and biomass. Fuel Tech received this contract following the demonstration of our new ASNCR technology last year at this same plant location. The ASNCR system

utilizes proprietary state-of-the-art injectors and injection controls in combination with advanced temperature measurement techniques to provide nitrogen oxide (NOx) reduction efficiency well beyond conventional SNCR in difficult furnace environments. Equipment delivery is expected to occur in the fourth quarter of 2015. In addition, an order was received for SNCR technology for a refinery unit in Italy with delivery scheduled for the third quarter of 2015. Fuel Tech's ASNCR solution targets utility and industrial unit owners faced with the challenge of having to meet increasingly stringent regulatory requirements, and further enhances our portfolio of cost-effective environmental solutions. As an example, on units burning municipal solid waste, ASNCR has achieved NOx reduction levels of approximately 80%, which is a significant improvement over conventional SNCR systems where NOx reduction can range from 50 to 70%. Moreover, at the original NOx outlet level, the ASNCR system reduced reagent consumption by 20%. Through the utilization of advanced control and injection systems in conjunction with more accurate boiler data, ASNCR optimizes urea injection to improve NOx reduction performance and minimize reagent costs.

In China, two orders were received for multiple ULTRA™ systems that will be installed on utility and industrial coal-fired units being retrofitted with NOx reduction technology. Fuel Tech's ULTRA process provides for the safe and cost-effective on-site conversion of urea to ammonia for use as a reagent in the selective catalytic reduction (SCR) of NOx, eliminating the hazards associated with the transport, storage and handling of anhydrous or aqueous ammonia. Equipment deliveries are expected to occur in the third quarter of 2015.Vincent J. Arnone, President and Chief Executive Officer, commented, "We are excited about our commercial contract utilizing our new ASNCR technology, which was developed through our internal New Product Development initiative. We believe that all combustion units in a variety of market segments could potentially benefit from this next generation of our SNCR technology. ASNCR could also be applied to our existing large installed base of SNCR customers through system upgrades to provide additional NOx reduction or lower reagent operating costs. These contracts in the UK and Italy are a testament to our belief in the growth of the European market for our products and services as impacted nations within the European Union commence their compliance with the Industrial Emissions Directive, which requires implementation dates in 2016."

Mr. Arnone continued, "Our ULTRA technology simplifies on-site ammonia generation for SCR applications of all types. We are pleased to see that our air pollution control product line continues to play a role in assisting China in its endeavor to reduce harmful air pollutants." About Fuel Tech- Fuel Tech is a leading technology company engaged in the worldwide development, commercialization and application of state-of-the-art proprietary technologies for air pollution control, process optimization, and advanced engineering services. These technologies enable customers to produce both energy and processed materials in a cost-effective and environmentally sustainable manner. The Company's nitrogen oxide (NOx) reduction technologies include advanced combustion modification techniques - such as Low NOx Burners and Over-Fire Air systems - and post-combustion NOx control approaches, including NOxOUT® and HERT™ SNCR systems, ASCR™ Advanced Selective Catalytic Reduction systems, NOxOUT-SCR®, NOxOUT CASCADE®, and I-NOx™ Integrated NOx Reduction Systems, which utilize various combinations of these systems, along with the ULTRA™ process for safe ammonia generation.

These technologies have established Fuel Tech as a leader in NOx reduction, with installations on over 900 units worldwide, where coal, fuel oil, natural gas, municipal waste, biomass and other fuels are utilized. Fuel Tech's technologies for particulate control include Electrostatic Precipitator (ESP) products and services include ESP Inspection Services, Performance Modeling, Performance and Efficiency Upgrades, along with complete turnkey capability for ESP retrofits, with more than 60 major rebuilds on units up to 700 MW. Flue gas conditioning (FGC) systems include treatment using sulfur trioxide (SO3) and ammonia (NH3) based conditioning to improve the performance of ESPs by modifying the properties of the fly ash particle. FGC systems offer a lower capital cost approach to improving ash particulate capture versus the alternative of installing larger ESPs or utilizing fabric filter technology to meet targeted emissions and opacity limits. Fuel Tech's particulate control technologies have been installed on more than 125 units worldwide. The Company's FUEL CHEM® technology revolves around the unique application of

chemicals to improve the efficiency, reliability, fuel flexibility and environmental status of combustion units by controlling slagging, fouling, corrosion, opacity and operational issues associated with sulfur trioxide, ammonium bisulfate, particulate matter (PM2.5), carbon dioxide and NOx. The Company has experience with this technology, in the form of a customizable FUEL CHEM program, on over 110 combustion units burning a wide variety of fuels including coal, heavy oil, biomass, and municipal waste.

Delhi pollution: Protective eyewear for Delhi traffic police soon

Date:12th May, 2015 Source: The Indian Express

With alarm bells ringing about Delhi's air quality, traffic policemen in the city will soon get protective eye glasses that will shade their eyes from road dust. Delhi traffic police has sent a requirement of around 2,000 such glasses in their first batch, tenders for which will be floated soon, a top official said. Explaining the need to procure these glasses, special commissioner of traffic, Muktesh Chander, said, "Traffic police personnel spend hours on the road and this makes them especially vulnerable to road dust. Studies have established that road and construction dust contributes to air pollution, which creates problems like eye allergy, especially in the dry heat. These will have covering from the sides and top, to protect their eyes from dust." Chander said the glasses can be fitted over routine looking glasses also. "We have tried one sample pair and they seemed like a good idea because they provided instant relief to the eye, and can be fitted over routine glasses," he said.

India, China need to talk on air pollution: Expert

Date:13th May, 2015 Source: Business Standards

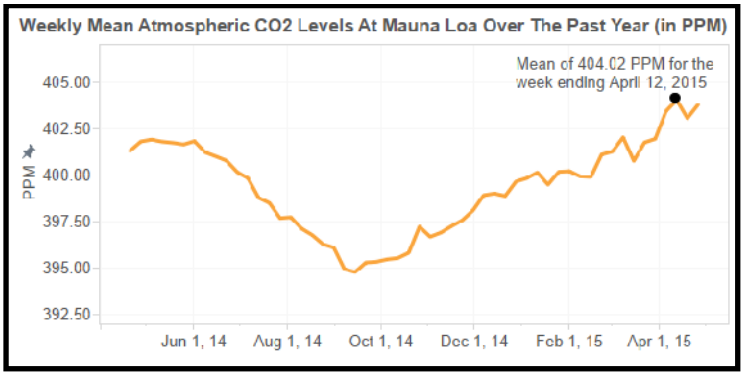
India and China need to strike up a dialogue on common problems such as air pollution, an expert on China's environmental issues said, ahead of Prime Minister Narendra Modi's visit to the neighbouring country. "This (air pollution) is a common challenge both the countries are facing and because China is developing so fast they are in front of you in terms of energy development and the problems that are created," Jennifer Turner, director of China Environment Forum at Woodrow Wilson Centre and manager, Global Choke Point Initiative, told IANS on Tuesday here. "And now they have done lots of engagement with researchers, international NGOs to address these problems so they are starting to turn. Why can't India and China learn from each other because their challenges are so similar."

She was speaking at a seminar on 'Global Choke Point: Water-Energy-Food Confrontations in China, US and India' organised by the Indian Chamber of Commerce here. Turner said children in both countries have common lung function indicating poor lung health. "Air pollution is linked to health and this could be a talking point for the countries," she said, adding a dialogue could become important for negotiations during the forthcoming 21st Conference of Parties (COP) in Paris. Discussing the 'Choke Point' project, a multimedia and convening initiative uncovering how energy is impacting water in China, US and now India, she said India has to get its policies right for the success of its renewable energy sector. "They (China) have got a lot of the policies right but there is still the pollution because of the electricity. You have the goal of 100 gigawatts of renewables. I don't know if India has the policy in place to make that happen," she said. In addition, she also drew attention to water pollution and wastage of water. "China and US are going with the renewable power driven closed loop waste water treatment (a zero discharge method) big

time. India can also look into that," she said. In order to upscale and make such innovations affordable, Turner said "policies have to be given correct incentives".

As global carbon dioxide breaks records, India faces dilemma

Date:13th May 13, 2015 Source: Mid-Day



During the week of April 6 to 12, 2015, average carbon dioxide (CO2) levels touched 404.02 parts per million (ppm), the highest-ever in recent human history—and 15% above the levels scientists say is ideal for Earth, 350 ppm. February, March and April had monthly average CO2 levels higher than 400 parts per million (ppm), the first time in recorded history all three months have reached such levels, according to the keystone Mauna Loa observatory in Hawaii, USA. These rising levels have growing relevance for India, as it struggles with a farm crisis brought on by uncertain rainfall, attributed increasingly to climate change, as IndiaSpend recently reported.

India is the world's third-largest emitter of CO2, the chief greenhouse gas. A renewed push for industrialisation will have to be balanced against further climate change. The 400 ppm mark is a milestone when it comes to CO2 levels in the atmosphere, and the first day to record such levels was May 9, 2013. "Current [atmospheric] CO2 values are more than 100 ppm higher than at any time in the last one million years (and maybe higher than any time in the last 25 million years)," said Charles Miller, Principal investigator at NASA's Carbon in Arctic Reservoirs Vulnerability Experiment after the 400 ppm threshold was passed. "Even more disturbing than the magnitude of this change is the fact that the rate of CO2 accumulation in the atmosphere has been steadily increasing over the last few decades, meaning that future increases will happen faster." Ever upward—global CO2 levels- April 2014 was the first month in human history with an average CO2 level above 400 ppm. April 2015 recorded a level of 403.26, nearly two points higher than the same month last year. In other words, the records being set by CO2 levels are being consistently reset.

The observatory in Hawaii has been recording CO2 levels since 1958, and annual CO2 levels have risen by 82.58 ppm since then to reach 398.55 ppm in 2014, that's an increase of 1.47 ppm per year. Why this matters to India- The rising CO2 levels have been linked by the UN's intergovernmental panel on climate change (IPCC), in a 2014 report, to rising ocean and land temperatures as well as rising sea levels over the past 35 years. As to how rising CO2 levels have affected or would affect India specifically, it is not clear. Claims in a 2007 IPCC report that the Himalayan glaciers would melt away in the near future have proven to be not credible. However, as we said, a series of studies have shown that unseasonal rain and erratic weather unsettling the Indian farmer—and the nation's agriculture, economy and politics—are no aberrations. Disquieting data bring domestic pragmatism As the world's third-largest contributor of greenhouse gas emissions, India may be in a unique position to affect atmospheric levels of CO2. While its total emissions are rising, its per-capita emissions at 1.9 metric tons are close to a third of the global average, a quarter of China's and an eighth of the USA's.

The Worst Media Myths About EPA's Move To Cut Woodstove Pollution

Date: 15th May , 2015 Source: Media Matter

The Environmental Protection Agency is updating its air pollution safeguards for new wood-burning stoves and heaters, with the initial pollution reductions taking effect on May 15. Conservative media have frequently fear-mongered and misinformed about these standards, so here's a handy guide to rebutting the most egregious media myths that are sure to resurface in the days ahead. EPA Protections Will Cut Pollution From Woodstoves New Standards Will Reduce Harmful Pollution From Wood-Burning Stoves By Nearly 70 Percent. In February, the Environmental Protection Agency (EPA) finalized its rule to dramatically reduce particulate matter pollution from new wood-burning stoves and heaters. The EPA estimates that the protections will cut dangerous particle and volatile organic compound pollution from stoves and heaters by nearly 70 percent, and reduce their carbon monoxide pollution by 62 percent. On May 15 -- 60 days after it was entered into the Federal Register -- the first round of pollution reductions took effect. It is the first time that woodstove emissions standards have been updated in 27 years. [EPA.gov Fact Sheet, 2/4/15; Federal Register, 3/16/15] MYTH: EPA Is "Banning" Majority Of Woodstoves Heartland Institute: "The Vast Majority Of U.S. Wood-Burning Stoves Are Now Banned." The industry-funded Heartland Institute claimed in a blog post that "[t]he vast majority of U.S. wood-burning stoves are now banned under Environmental Protection Agency (EPA) rules that were finalized in February." [Heartland.org, 5/13/15; Media Matters, 2/3/15] Right Wing News: EPA Move Will "Make Every Wood Burning Stove In America Illegal." Conservative blog Right Wing News wrote that the EPA is moving to "make every wood burning stove in America illegal," going on to cite a statement from a furnace store owner who said "this is the death knoll of any wood burning." [Right Wing News, 2/24/14] FACT: The EPA Is Not "Banning" Consumers' Stoves; It's Updating Emissions Standards For Stoves Sold In FutureNew EPA Standards Do Not Affect Currently-Owned Stoves. The new standards for woodstoves apply only to stoves sold in the future, not to stoves currently used in homes. Even the Heartland blog that claimed stoves are "now banned" admitted as much later in the article: "Under the EPA rules, homeowners with existing wood-burning stoves can continue to use them." Woodstoves and heaters that do not meet the new standards may continue to be sold until December 31, 2015. [EPA.gov Fact Sheet, 2/4/15]

MYTH: EPA's Limits On Particle Pollution May Not Benefit Public Health Heartland Institute Cited Opponents Who Questioned Link Between Particulate Matter And Health Problems. The Heartland Institute blog claimed that the EPA's estimates of the public health benefits from the new standards "have come under fierce criticism." Heartland stated that Stonehill College professor Sean Mulholland has "cited literature questioning the link between particulate matter and mortality," and that Ron Arnold, executive vice president of the Center for the Defense of Free Enterprise, "says the link between particulate matter and health problems is not as clear-cut as the agency claims." Heartland then quoted Arnold questioning whether woodstove pollution is "causing" people to get sick, and attacking "predatory scientists" who make that connection. [Heartland.org, 5/13/15]

FACT: EPA Safeguards Will Prevent Asthma Attacks, Heart Attacks, And Premature Deaths - Smoke From Wood Heaters And Stoves Is Major Contributor To Air Pollution. The Associated Press reported in 2013 that EPA data shows emissions from wood-burning stoves and heaters comprise 13 percent of all soot pollution in the country. And in many areas, emissions from burning wood contribute over 50 percent of wintertime fine particle pollution, according to air quality and emissions data. In some areas in New Hampshire, for example, the state Department of Environmental Services reports that 80 percent of particulate matter pollution is connected to wood combustion. [Associated Press, 10/9/13; Air Quality and Emissions Data; Supporting Information for the Residential Wood Heater New Source Performance Standard, 8/14/13; New Hampshire Department of Environmental Services, 2012]

Many Studies Show Breathing Smoke From Woodstoves Poses Serious Health Risks. Residential wood burning exposes people to fine particle pollution, which poses serious health risks. The EPA has compiled

20 scientific studies detailing the links between particulate matter pollution and adverse health effects, including aggravated asthma, chronic bronchitis, heart attacks, and premature death. The new EPA standards will protect public health by reducing the frequency of these and other maladies. [EPA.gov, accessed 5/14/15; 2/4/15]

MYTH: EPA Standards Will Raise Energy Costs, Harm Rural And Low-Income FamiliesDaily Caller Promoted GOP Claim That Rule Will Be Expensive, Harm Consumers. The Daily Caller claimed that "critics" allege the rule will "rais[e] energy costs," and promoted opposition by Republican lawmakers who are "saying it would harm millions in rural America that rely on wood stoves to heat their homes every winter." The Daily Caller also quoted Sen. Steve Daines (R-MT) claiming the EPA is "hitting hardworking Montanans in their pocketbooks," and Wisconsin state Rep. David Craig, who said the rule will "hurt Wisconsinites, particularly low income families who rely on wood heat." [Daily Caller, 2/5/15]

FACT: Health Benefits Far Outweigh Costs, And Consumers Will Save Money On Wood

New Standards Will Produce Up To $165 In Health Benefits For Each Dollar Spent To Comply. The new standards will result in immense public health benefits to the American public, estimated at $3.4 to $7.6 billion annually, or $74-$165 for each dollar spent to comply. [EPA.gov Fact Sheet, 2/4/15]

Future Stoves Will Be More Efficient, Saving Consumers Money On Wood. According to the EPA, "wood heaters meeting the standards generally will be more efficient than older ones, meaning homeowners will be able to heat their homes using less wood." [EPA.gov Fact Sheet, 2/4/15]

Can Air Pollution Cause Behavioral Problems?

Date: 19th May, 2015 Source: Medscape

This is the Medscape Neurology Minute. I am Dr Alan Jacobs. Researcher Dr Bradley S. Peterson, from the Los Angeles Saban Research Institute, and colleagues have published a cross-sectional imaging study that evaluates the effects of prenatal air pollutant exposure to the ubiquitous polycyclic aromatic hydrocarbons (PAHs) on brain structure and cognitive and behavioral functions in urban school-aged children.

A retrospective cohort of 40 urban youths was followed up prospectively from the fetal period to ages 7-9 years. Morphologic measures of the brain surface and the white matter surface were obtained. The researchers detected a dose-response relationship between increased third-trimester PAH exposure and reductions of white matter surface in childhood.

The white matter reductions were confined almost exclusively to the left cerebral hemisphere. Those reductions were associated with slower information processing speed during intelligence testing and with more severe externalizing behavioral problems, including attention-deficit/hyperactivity disorder (ADHD) symptoms and conduct disorder problems.

The significant association of PAH exposure with slower processing speed was mediated by the magnitude of left hemisphere white matter disturbance.

The authors concluded that prenatal exposure to PAH air pollutants contributes to slower processing speed, ADHD symptoms, and conduct problems in urban youth by disrupting the development of left hemisphere white matter. This has been the Medscape Neurology Minute. I'm Dr Alan Jacobs.

EU adopts real-world vehicle emissions testing procedure

Date: 19th May, 2015 Source: Air Quality News

EU Member States approved European Commission proposals to introduce real-world driving air pollution emissions test procedures for motor vehicles in Brussels yesterday (May 19). The proposal was voted in "with clear support from Member States" in the EU's Technical Committee on Motor Vehicles "with two minor technical amendments" and is expected to come into force from September 2017, a Commission spokeswoman said. The Real Driving Emission (RDE) test procedure has been designed to assess vehicles' compliance with emissions regulations, as it has been shown that current laboratory testing of vehicle exhaust emissions does not accurately reflect – and largely underestimate – emissions levels from cars on the road.

Regulatory emission limits are currently assessed on a standardised New European Driving Cycle (NEDC) lab test, but the Commission said it was "well aware that, under real driving conditions, NOx emissions of diesel vehicles are significantly above regulated emission limits". According to the Commission spokeswoman, the new RDE procedure has therefore been developed in technical groups composed of experts from the Commission, Member States and industry, and the precise emissions limits in the tests and from when they apply will be decided later this year.

The Commission spokeswoman said: "At a later stage, we will present proposals to set the emissions limits applicable for RDE testing. These technical rules will remain under our constant review and will be adapted if necessary." But while environmental groups welcomed the adoption of the new procedure, the European motor industry said the RDE test regulation was "very incomplete" and did not provide enough time for vehicle manufacturers to adapt to the "very significant hardware changes to future vehicles" that would be needed under the new testing procedure.

ACEA- The European Automobile Manufacturers Association (ACEA) urged the Commission to agree to a two-step date framework to "allow the industry a proper lead-in time to apply the complex RDE regulation".

It also said that yesterday's decision was "by no means the end of the discussion" and that it was working with the Commission and other stakeholders on the development of a new RDE procedure as it agreed a better test was needed. Erik Jonnaert, secretary general of ACEA said: "ACEA calls on the Commission to urgently deliver a complete proposal for Real Driving Emissions by June or July at the latest for a positive decision in the regulatory committee. We need to make more progress on clarifying all testing conditions to ensure a robust RDE regulation could commence from September 2017.

Transport & Environment- NGO Transport & Environment (T&E), which represents round 50 organisations in Europe, welcomed the new regulatory procedure, which it said would be "the first regime to measure air-polluting emissions on the road". T&E said the new RDE tests received strong support fro German and the Netherlands but were opposed by the car industry which "unsuccessfully tried to weaken the new test rules". The organisation also said that the 80 milligram of nitrogen oxide per km limit agreed for diesel cars in 2007 should be met in full.

François Cuenot, air pollution officer at T&E, said: "T&E is delighted that the Commission and member states have taken this important step to tackle air pollution from diesel. Europe now needs to fully enforce the new rules from 2017 to bring an end to dirty diesels."

Study: Lower than expected air pollutants detected at Marcellus drilling sites

Date: 19th May, 2015 Source: State Impact

A Bradford County drill rig. An article in the journal Environmental Science and Technology, published today, says measurements of air pollution from Marcellus drilling and transportation sites in Bradford and Sullivan counties were lower than the researchers expected. The study, "Atmosphere Emission Characterization of Marcellus Shale Natural Gas Development Sites," also reports levels of methane emissions were higher than those indicated in previous research. Peter DeCarlo is assistant professor in the civil, architecture and engineering department at Drexel University and lead researcher on the report. "We had seen a lot of data from other natural gas or oil development areas and we had seen pretty high levels of pollutants," said DeCarlo. "So we went in expecting to see similar things in the Marcellus. The geology in the region is different in that [it produces] a lot of natural gas but we didn't see a lot of the air quality pollutants that we expected." The researchers used a more sophisticated measuring technique than is typically available to researchers or regulators such as those at the Department of Environmental Protection. The researchers used tracers to track the plume of emissions in order to measure levels of carbon monoxide, carbon dioxide, nitrous oxides, sulfur dioxide and particulate matter.

"We did very fast measurements over large spacial areas and downwind of the gas sites," said DeCarlo. DeCarlo says it's a much more expensive technique, but more effective than ambient air quality measurements, which can be impacted by weather and wind speed. The study looked at 17 separate measurements from 13 different facilities in the summer of 2012, which DeCarlo admits is a small sample size given the prevalence of drilling in Pennsylvania's Marcellus Shale. Industry did not grant access to the sites, so the measurements were made at the fence line. DeCarlo says although they did not detect high levels of air pollutants, gas production has had an impact in rural areas.

"Yes, it's impacting it in that the pre-drilling air quality was better," said DeCarlo. "It's less clean now, but the air is] still going to be better than [air quality] in a major metropolitan area." One aspect of diminished air quality that was detected at compressor stations included higher levels of ultra-fine particles. "It's not surprising that we saw those," said DeCarlo. "The question is are those going to impact health.

That's still getting debated in scientific literature." Albert Presto, a researcher and assistant professor at the Center for Atmospheric Particle Studies at Carnegie Mellon University, who was not involved in the study, says the report adds to a growing body of work on emissions from natural gas production in the Marcellus Shale. Presto is conducting his own research into emissions from Marcellus Shale sites. "We don't know enough about what the emission rates are from shale facilities, so all data is valuable in that context," said Presto.

Presto, like DeCarlo, says he thinks the bulk of the scientific literature focuses on air emissions from other shale plays in states like Colorado or Texas, which are different than Pennsylvania. "The data more or less conform to what I would expect," said Presto, whose own research may be published soon. "There can be big variations from well to well or compressor to compressor." The study was funded by the Electric Power Research Institute, a nonprofit research organization funded by the power industry.

IIT scientists back their study on air pollution after NGT criticism

Date: 20th May, 2015 Source: IndiaTodayin

A day after being criticised by the National Green Tribunal (NGT) for preparing a report that "lacked data and analysis", IIT-Delhi scientists who authored the study came out in support of it.The 13-page report concludes that diesel vehicles over 10 years of age form only seven per cent of the city's total car fleet. Also, their removal will lead to a mere one per cent reduction in Delhi's PM 2.5 (extremely fine particles that can lodge deep inside lungs) air pollution load. The Ministry of Road Transport and Highways (MoRTH) submitted this to the green court late last month to press for reversal of NGT's order to ban all diesel vehicles over 10 years of age in the Capital. Public transport- The NGT bench hearing the ongoing air pollution matter, however, ticked off the ministry on Monday saying, "Why has the report taken into account only private vehicles? Why hasn't it considered interstate diesel trucks and public transport? You have placed 100 pages before us without any data and analysisâ€¦ just because you are IIT does not mean you know everything," Justice Swatanter Kumar had said. One of the authors of the paper 'Understanding Role of Transport in PM 2.5 Emissions in Delhi', professor Dinesh Mohan, on Tuesday said, "We are not the only ones stating what we have. The government-appointed Mashelkar Committee Auto Fuel Policy Report itself says the number of cars in Delhi is exaggerated. The real number is 60-70 per cent of that on government record". "The Central Pollution Control Board data saying 60 per cent of air pollution in Delhi is caused by vehicles over 10 years, which NGT is relying on, goes back to 2010. Also, the study was not done with the most modern scientific methods available. Even a report done by some scientists from the University of Birmingham, by chemical analysing Delhi's air samples, say that the overall contribution of traffic to pollution in Delhi is 16.2-18.7 per cent. This was in November 2014," professor Mohan said.

Anumita Roychowdhury of the Air Pollution and Clean Transportation programme, Centre for Science and Environment, however, requested for a different perspective on this. She said, "One must not see this through the lens of one or 60 per cent. Burning of diesel produces a toxic cocktail of nitrogen oxides and volatile organic compounds. This is a class I carcinogen"."Also, people have a direct exposure to vehicular emissions as this source of pollution is in our immediate breathing zone. Older cars adhere to old emission standards and our current 'Pollution Under Check' norms are extremely lax," Roychowdhury said. A senior government scientist, who did not wish to be named, said, "It is strange how they arrived at the one per cent contribution of 10-year-old diesel vehicles to pollution figure. The only two known sources of Particulate Matter 2.5 are 'vehicles' and 'high temperature combustion'. There are hardly any air pollution-causing industries in Delhi. Those from other states don't always lead to pollution here cause of varying wind direction."

Honolulu ordered to fund 3.1MW PV plant for air pollution violations

Date: May 20, 2015 Source: PV-Tech

Authorities in Hawaii's capital, Honolulu, have been ordered to finance a US$16 million solar system as a penalty for failing to curb air pollution from a city landfill site. The US Environmental Protection Agency said the City and County of Honolulu had not installed the necessary measures to collect and control methane and other air pollutants from its Kapaa landfill site by a 2002 deadline.

Although a control system was eventually fitted in 2013, the EPA said in the interim substantial quantities of hazardous pollutants had escaped from the site, necessitating the penalty. "Air emissions from a closed landfill are toxic, and can contribute to global warming," said Jared Blumenfeld, EPA's administrator for the Pacific Southwest. "If the proper systems had been in place at the landfill, over 343,000 tons of methane, and 6,800 tons of hazardous air pollutants and volatile organics would not have escaped to the atmosphere."

In the settlement imposed by the EPA, Honolulu authorities will have to fund the solar project and pay a US$875,000 cash penalty. The EPA said the project would involve the installation of solar arrays totalling 3.1MW on 50,000 square feet of buildings and open space area at the city's waste-to-energy H-POWER facility by 2020. "This settlement holds Honolulu accountable for past failures to collect and control toxic gases and greenhouse gas emissions from the Kapaa Landfill, but it also lays the foundation for better environmental stewardship in the future," said assistant attorney general John C. Cruden for the Justice Department's Environment and Natural Resources Division. "Residents who call Oahu home will realise the benefits of this agreement – which includes clean solar power production and reduced reliance on fossil fuels – for many years to come."

Eating avocado reduces damage from air pollution, heart attack

Date: May 21, 2015 Source: The Guardian

Recent studies have associated air pollution to rise in chronic disease such as heart attack, strokes, diabetes, hypertension, cancer to mention but a few. But scientists have found that extracts of the leaves, fruits, seeds and bark of avocado can protect the body from the damages of air pollution. Botanically called Persea americana, avocado belongs to the plant family Lauraceae. Indeed, scientists have found higher levels of vitamin E may help protect the lungs from particulates – tiny particles of harmful smog.

$25 Billion Annual Market for Coal-fired Power Plant Air Pollution Upgrades

Date: 21st May, 2015 Source: Pollution Solution

Thousands of coal-fired power plants around the world will need to upgrade or replace air pollution control equipment in the coming years. This will result in an annual expenditure of over $25 billion. This does not include consumables such as dust bags or reagents (lime, ammonia, etc.). This conclusion was reached by aggregating information contained in a number of McIlvaine Company reports.

Major markets will be the U.S., Europe and China. However, there will be significant expenditures in Russia, Chile, South Africa, Japan, Korea, Taiwan and Australia. The drivers will be: New environmental regulations, Age and deterioration of existing air pollution control systems, Efficiency improvements, Availability of new technology. China will be the largest market due to its extensive fleet of coal-fired boilers, new tough regulations, and corrosion issues at existing power plants. Over 100,000 MW of FGD systems will be upgraded. Many of the existing precipitators will be upgraded or replaced with fabric filters. In some cases, wet electrostatic precipitators will be placed downstream of existing scrubbers. The U.S. has just implemented new air toxic rules. The enforcement of ambient air quality rules in the individual states may result in the Los Angeles level of stringency. Because it is impossible to site a new power plant, owners are upgrading old power plants. The cost of an upgrade is likely to be more than the air pollution control investment at a new power plant. Europe is maintaining a base fleet of coal-fired power plants. It continues to tighten emission limits. So upgrades are periodically required. Russia, Chile

and South Africa are among the countries which are tightening particulate limits and forcing power plants to install fabric filters. Removal of the precipitator internals and their replacement with bags is becoming increasingly common.

Air pollution may be hurting our brains

Date: 24th May, 2015 Source: Autoblog

A new study from European researchers found breathing polluted air diminishes cognitive abilities. Scientists have known for a while that reduced lung function can have harmful effects on our brains, and they've thought that pollution hinders our cognitive response through this lung connection. What's interesting about this latest study, which comes from a coalition of German and Swiss researchers, is they've found pollutants can hurt brain function independently of a connection to the lungs. "Our findings disprove the hypothesis that air pollution first decreases lung function and this decline, in turn, causes cognitive impairment by releasing stress signals and humoral mediators into the body," said Mohammad Vossoughi, a PhD student at the Leibniz Institute for Environmental Medicine. The result raises questions about how air pollution has such direct effects on the brain, and Vossoughi is careful to emphasize the need for future research. But he postulated that pollutants and particulate matter – small particles of smoke and dust from engines and exhaust - impact the central nervous system through our sense of smell. Researchers culled data from a previous study on aging that involved 834 German women. They tested the association between impaired lung function and cognitive decline.

Cars and trucks, of course, are a leading source of these pollutants. Estimates indicate that pollution spewed from vehicles kills about 53,000 people in the United States every year, according to research from MIT. That's more than the approximately 33,000 who die in car accidents. As European researchers further examine the causes of that direct link, their counterparts in Canada could suggest a solution. University of Toronto researchers released a paper on car pollution earlier this month that suggests 25 percent of the vehicles on the road are responsible for 90 percent of the pollution.

It's not only the cars' fault. It's how they're driven. "How you drive, hard acceleration, age of vehicle, how the car is maintained – these are things we can influence that can all have an effect on pollution," said Greg Evans, the study's author.

Research and Markets: Research on China's Air Pollution Control Industry 2015-2020

Date: 25th May, 2015 Source: Businesswire

DUBLIN--(BUSINESS WIRE)--Research and Markets

(http://www.researchandmarkets.com/research/w86889/research_on_air) has announced the addition of the "Research on Air Pollution Control Industry in China, 2015-2020" report to their offering. Bulletin on Total Emission-reduction Examination of Key Pollutants in China 2013 issued by Ministry of Environment Protection of PRC shows: the discharge of chemical oxygen demand, ammonia nitrogen, sulfur dioxide and nitrogen oxides dropped over the same period of last year. Bulletin suggested: in 2013, the total discharge of chemical oxygen demand was 23.527 million t, decreasing by 2.93% over last year; ammonia nitrogen was 2.457 million t, decreasing by 3.14%; sulfur dioxide was 20.439 million t, decreasing by 3.48%; and nitrogen oxides was 22.273 million t, decreasing by 4.72%.In addition, in petroleum refining industry, 18 sets of catalytic cracking units with total capacity of 31.5 million t newly build desulphurization devices, accounting to 18% of total capacity in China; conversion engineering of coal to gas newly adds gasconsumption for 2.6 billion m3, substituting raw coal for 4.9 million t.

Key Topics Covered:
1. Overview of Air Pollution Control in China
2. Market Development Overview of Air Pollution Control in Foreign Countries
3. Environment of Air Pollution Control Industry in China
4. Market Status Quo of Air Pollution Control
5. Major Air Pollution Emissions Industry
6. Development of Segment Market of Air Pollution Control in China
7. Competitive Landscape of Air Pollution Control Industry in China
8. Key Domestic Air Pollution Control Enterprises
9. Investment Analysis and Advice on Air Pollution Control Industry
10. Development Forecast of Air Pollution Control Industry in China

Companies Mentioned

Beijing Guodian Longyuan Environmental Engineering Co., Ltd
China BoQi Environmental Solutions Technology (Holding) Co., Ltd
Fujian Longking Co., Ltd
Tongfang Environment Co., Ltd
Yantai longyuan Power Technology Co., Ltd

Thai opinion: Business TAKES UP global fight against pollution, climate change

Date: 26th May, 2015 Source: Thai Visa News
Business TAKES UP global fight against pollution, climate change

BANGKOK: — A friend of mine is moving from Bangkok to Shanghai next month. To her surprise, the company is extending her pollution compensation of 3,000 euros (Bt110,000) to cover her two-year contract. She will be paid roughly 4.1 euros a day for breathing the polluted Shanghai air. That might not sound much, but if her firm wants to attract 50 expat employees to the city, the cost will be huge as it must also offer attractive salaries and expenses for accommodation and travel.

According to Numbeo, the world's largest database of user-contributed data about cities worldwide, Shanghai rates 85.77 on the air pollution index, placing it among the globe's most polluted cities. Within China, however, it is rated cleaner than Beijing, which scores 94.94 on the pollution index. (It's difficult to imagine how much my friend's firm would pay if she were stationed in Beijing.)
Of course, China is not the only country that is notorious for poor air quality. Several cities in Southeast Asia also feature high on Numbeo's index. Singapore's air is rated freshest at 38.67 while Ho Chi Minh City's is foulest, at 94.82. Bangkok is in the middle, at 79.08. While polution is usually treated as a public-health problem, business also carries a burden in the form of compensation packages for employees moved to cities where air pollution is greater than in their home countries. Rather than dealing with the symptoms by paying compensation, these companies should focus more on tackling cause of the problem.
Scientific studies show the burning of fossil fuel is the main cause of air pollution. Studies also confirm the connection between air pollution and climate change. As such, burning less fossil fuel should improve air quality, which should address climate change. The private sector is often attacked for selfish business methods that place profits above any efforts to preserve the environment at the global, regional and national levels. But a piece of good news came last week, at the Business and Climate Summit – hailed as the highlight of Paris Climate Week. Last Thursday, 25 business networks representing over 6.5 million companies from more than 130 countries made an unprecedented pledge to lead the global transition to a low-carbon, climate-resilient economy. There was recognition that leading businesses are already taking action to build the prosperous, low-carbon economy of the future. In all sectors, business has developed

solutions, continues to innovate and is preparing to accelerate the scale and pace of deployment. The Paris summit was a precursor to the UN Climate Conference (COP21), which will be held in Paris in December. COP21 is expected to bring a new global deal to limit the increase in global temperature to no more than 2 degrees Celsius.

The business sector's pledge is a strong signal that business is fully committed to a successful outcome to COP21 and, specifically, to a new global climate deal that works with business to scale-up investment in climate-friendly and climate-resilient technologies. At the Business and Climate Summit, the private sector called on businesses to develop and implement their own sustainability strategies.

Firms should set clear climate targets, develop innovative solutions and step up large-scale partnerships to accelerate transformational technology development. Particular focus needs to be given to the developing world, where funding mechanisms should be set up to fight poverty, while a leap is made towards a low-carbon development path. The fight against climate change requires that traditional investment flows be redirected and mobilised. Innovative mechanisms to leverage public finance and to use finance effectively in all economic sectors in developed and developing countries will be critical.

The private sector has set out powerful initiatives in this battle. Climate change brings natural disasters that can lead to huge loss of life and property all around the world. When a country, particularly in the developing world, is hit by a natural disaster, the purchasing power of its population drops, which takes a toll on both local and foreign companies operating there.

Hopefully, this unprecedented initiative by the private sector will both improve the quality of life of people around the world and spur further action from policymakers. In our era of globalisation, firms are posting an increasing number of employees overseas. Not all are paying compensation to cover the possible risks. And even if they are offered compensation, many employees will put their health first and turn down the posting. If the world is left to get on with business as usual, global business will eventually suffer.

DIY Arduino Air Pollution Monitor

Date: 26th May, 2015 Source: Geeky Gadgets

If you have ever wondered what the air quality is around living or work space, a new Instructables has been published that enables you to create a handy DIY Arduino air pollution monitor. The Arduino air pollution system focuses on measuring the components of the Environmental Protection Agency's Air Quality Index that includes : ozone, particulate matter, carbon monoxide, sulphur dioxide, and nitrous oxide. "We have yet to fully calibrate our device, but we have extracted data from sensor data sheets to make some preliminary estimations. The sensors used are relatively inexpensive and vary greatly from component to component so they need to be calibrated with known concentrations of the target gasses.

We have not yet had the opportunity do so. This device detects all of these pollutants except sulfur dioxide. The device also includes a town gas sensor to alert the user to gas leaks or the presence of flammable gases. Furthermore, a temperature and humidity sensor is included as these conditions can impact the performance of the gas sensors." Full instructions on how to build your very own DIY Arduino air pollution monitor have been kindly published to the Thingyverse website and can be accessed via the link below.

Indoor Air Purifiers Reduce Cardiopulmonary Effects Of Severe Air Pollution

Date: 31st May 31, 2015 Source: Medical Research

MedicalResearch.com Interview with: Dr. Renjie Chen PhD and Dr. Haidong Kan, PhD School of Public Health, Key Lab of Public Health Safety of the Ministry of Education, Fudan University, Shanghai, China MedicalResearch: What is the background for this study? What are the main findings? Response: Although several previous studies in developed countries with cleaner air have reported health benefits due to air filtration, no such interventional studies were conducted in a developing country with much severer air pollution problems. Our main findings suggested that even a short-term intervention (2 days) could significantly reduce indoor air pollution and improve cardiopulmonary health among healthy young adults. MedicalResearch: What should clinicians and patients take away from your report? Response: Our study demonstrated that the use of indoor air purifiers was a practical way to reduce the potential cardiopulmonary risks associated with outdoor particulate air pollution in a country with severe air pollution problems. Clinicians should advise their patients with cardiopulmonary diseases to stay indoors and use an air purifier when outdoor particulate air pollution level was beyond the national standard limit. MedicalResearch: What recommendations do you have for future research as a result of this study? Response: Future studies should further evaluate the potential health benefits of long-term air purification among more vulnerable populations, such as children, older adults, or patients with cardiopulmonary diseases. Besides, the effectiveness of other potential individual interventions (face mask and dietary supplements such as fish oil) should also be evaluated in future research.

JUNE 2015

Motorbike checks seek to curb air pollution

Date: 01st June, 2015 Source: Viet Nam News

Deputy Head of Viet Nam Register, Nguyen Huu Tri, speaks to Viet Nam News about the move to inspect motorbike exhaust fumesThis is not the first time that Viet Nam Register has proposed mandatory inspection of motorbike exhaust. Why do you re-start the proposal?In 2010, the Prime Minister gave the green light for developing a project on limiting motorbike exhaust levels in an attempt to reduce air pollution. However, the project could not be implemented for various reasons. Firstly, it's a complicated social issue as it involves millions of motorbike users who opposed the move, citing that they are already paying many fees. Secondly, Viet Nam underwent an economic slowdown in the past few years and State-budget spending tightened, plus inadequate public transportation hindered the efforts to limit the number of private vehicles. Viet Nam Register recently created another proposal, with a road map for controlling motorbike emissions starting from 2018. We expect that better communication and economic condition can help realise the proposal. Motorbike is still the most popular mode of transport in Vietnamese cities, particularly Ha Noi and HCM City, where the number of motorbikes accounts for a quarter of the total number of motorbikes in the country. Motorbike exhaust fumes are a major source of air pollution in cities, but currently, Viet Nam does not require periodical checks on motorbike emissions. Viet Nam Register has proposed that motorbike owners conduct emissions checks on their vehicles every two years. The scheme, if adopted, will be launched in Da Nang in July 2018 and expanded to other major cities – Ha Noi, Hai Phong, HCM City, and Can Tho – two years later.

We expect to start gauging emissions from motorbikes over ten years old in Da Nang City from 2018, while motorbikes over five years old in the city will go through emissions checks from July 2019. Some people doubt the feasibility of the proposal, saying Viet Nam has yet to effectively manage exhaust fumes from about two million automobiles, while it has 40 million motorcycles.

Do you think it's just an ambitious plan to control motorcycle emissions?

Viet Nam has made achievements in limiting emissions thanks to emissions testing for automobiles. It's not a matter of number. We outline the road map to implement the project based on our ability. That is the reason why we have proposed a pilot run in Da Nang, before expanding to four other cities. Motorbikes in use for 10 years will be required to undergo emissions tests before those in use for five years. From the experiences of other countries, we know it is a long road to controlling motorbike exhaust fumes. For examples, Taiwan has about 13 million motorcycles and motorbikes in circulation. It kicked off a tests and maintenance programme with non-mandatory checks in 1993. Mandatory inspections were first carried out in eight cities in January1996, expanded to 15 cities later that year, and finally covered all the 23 cities by 2001. Since then, the country has strengthened its inspection system and upgraded computer networks.

Why do you base the criteria for undergoing emissions inspections on the age of motorbikes?

Many factors, such as technologies, driving skills, and maintenance, can affect a vehicle's emissions. Almost all of the vehicles are in good condition within the first three years in use. They are always tested before they are sold and manufacturers usually offer maintenance and post-sale services. We have proposed mandatory emissions checks for motorbikes in use for five years because those vehicles are likely to degrade if they are not maintained properly. Checks can encourage timely maintenance.

Motorbike owners complain that they are forced to pay many kinds of fees. Exhaust tests will be an additional burden on them. What do you think?

We have now submitted that a motorbike owner has to pay about VND 100,000 –150,000 (US$4-7) for testing motorbike exhaust fumes each year. The State will use this revenue to procure facilities and pay salaries to labourers working at motorbike-exhaust-fume verification centres. When a motorbike owner takes his/her vehicle to a centre to get an exhaust fumes test, the fee paid to the centre will become part of the maintenance fee. Viet Nam Register has proposed (to the Government) to spend part of environmental protection tax to cover exhaust fumes tests. So, drivers will not have to pay directly to maintenance agents. We are also seeking financial support from international organisations. It is scheduled to assign motorbike maintenance agents of major firms, including Honda, Yamaha, and SYM, to open centres for testing motorbike exhaust fumes. Maintenance agents are expected to meet the necessary standards of facilities for verifying motorbike exhaust fumes. A motorbike will be given a quality stamp right after a test and will be maintained to meet the requirements of motorbike exhaust fumes by agents.
To monitor these agents, we'll be observing them via cameras and the statistics of the numbers of motorbikes tested. We have yet to discuss the matter with agents and shall do it soon and hope to receive their cooperation. — VNS

Siam demands independent study on Delhi air pollution

Date:01st June, 2015 Source: Business Standards

Claiming vehicles contribute only partly to the poor air quality in Delhi, the Society of Indian Automobile Manufacturer (Siam) has demanded a comprehensive and independent study into the causes. The demand from Siam comes in the wake of the National Green Tribunal's order banning over 10-year-old diesel vehicles from plying in Delhi and the National Capital Region. The ban has been stayed till July 13. "The various official and non-official studies conducted over the years have shown widely varying results that were inconclusive and did not help in policy decisions," said Vikram S Kirloskar, president, Siam and vice-chairman of Toyota Kirloskar Motor.

There is no doubt that vehicles add to pollution as they burn fossil fuel, but their contribution has reduced over the past decade due to higher emission norms, he added. The Central Pollution Control Board (CPCB) Source Apportionment Study of 2011 found the transport sector contributes less than seven per cent of total particulate matter (PM10) in Delhi.

Studies and papers prepared by Indian Institute of Technology, jointly by international institutes like University of Birmingham, Central Road Research Institute and the Desert Research Institute of US, quantified the contribution of road traffic to PM2.5 emission in Delhi at 18.7 per cent in summers and 16.2 per cent in winters, Siam said.

Studies in Delhi have also found that on holidays and weekends, when significantly lesser numbers of vehicles ply on roads, there has been no significant difference to the level of PM2.5. Claiming vehicle density in Delhi (number of vehicles per kilometre of road) is much lower to Chennai, Mumbai and Hyderabad. Kirloskar said the low PM2.5 in these cities does not establish that vehicles are the major source of pollution.

He also argued that if vehicular emission was the main culprit, the adoption of Bharat Stage (BS) emission BS-IV norms from a non-BS era a decade ago and use of compressed natural gas should have improved the quality of air. Kirloskar said the argument that the benefits of higher emission norms have been lost due to an increase in the number of vehicles is also not credible since India produces only 2.5 million cars a year, while Europe makes nine million. Siam has argued that while people have a right to clean air they also have a right to mobility. "We cannot sacrifice one for the other. The stakes are too high."

Smog-Infused Desserts Offer an Edible Taste of Global Pollution Issues

Date:01st June 01, 2015 Source: GOOD

Most cities take pride in their local culinary and cultural offerings, but one rarely hears anyone brag about the richness, variety, or flavor of their hometown smog. And yet, every urban locale has its own subtle stench and particular blend of bilious, airborne dreck. In order to raise awareness of global pollution issues, a recent project by the Center for Genomic Gastronomy, the Edible Geography blog, and the Finnish Cultural Institute distilled the distinctive taints of cities around the world, using them as the basis of a unique line of edible treats. Setting up a food cart at the New Museum's Ideas City Festival this past Saturday, the project offered attendees a chance to try meringue cookies made with smog flavors like "London-Style Pea-Souper Smog," "Atlanta-Style Biogenic Photochemical Smog," and a cool, retro "Los Angeles in the 1950s Smog."

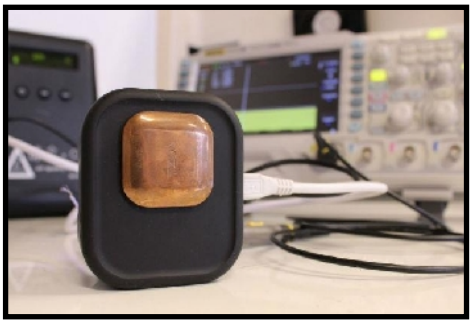
Sound kind of gross? It's supposed to. The idea is that most city dwellers don't think twice about breathing something into their lungs that they would be aghast at putting into their bodies by other means. According to a Guardian piece from last year, smog kills around seven million people worldwide each year. And Edible Geography's Nicola Twilley points out that in New York, at least, "air pollution levels are highest in neighborhoods that are majority non-white and low-income—a particularly insidious form of environmental injustice."

Each flavor of garbage air was lovingly crafted by smog experts, who recreated its special blend of noxious elements using precursor chemicals heated under ultraviolet lights. The smogs were then baked into meringue, a dessert mostly made of egg foam. According to the Finnish Cultural Institute, egg foams can contain up to 90 percent air (or in this case smog). "Most people ask 'Is it safe to eat?' and we reply 'Is it safe to breathe?'" Zackery Denfield, co-founder of the Center for Genomic Gastronomy told FastCo Exist. "We think that when people are laughing they are thinking, and we get a lot nervous laughter."

Aside from peddling confections of dubious deliciousness, the smog cart also offered passers-by field guides to doing their own smog harvesting and suggested food pairings for each smog option. And yes, according to Twilley, one can actually taste the difference between the different cities' smogs, which she describes as "equally disgusting." Normally, the idea of purposely making "disgusting" cookies would be an outrageous affront to the institution of dessert and everything good and pure that it stands for. But in this case, Twilley reminds us, these meringues were delivering an important message: Our hope is that the meringues will serve as a kind of "Trojan treat," creating a visceral experience of disgust and fear that prompts a much larger conversation about the aesthetics and politics of urban air pollution, as well as its health and environmental effects. Eat at your own risk!

A Wearable Air Pollution Monitor Could Affect Policy In The Developing World

Date:02nd June, 2015 Source: Tech Times



Here's a study from April by Columbia that links air pollution with a drop in children's IQs.Another was published last week by the University of Pittsburgh, linking unclean air with the risk of autism. A representative from TZOA forwarded them both to me following a discussion about the company's wearable air pollution quality tracker, but I can't really say I needed much convincing on that front. Airborne pollutants are having a profound impact on the health of the collective health of fellow breathers around on the

world — particularly those in developing nations, where air quality regulation is often far more lax in regard to both corporate polluters and indoor hazards. However, while not breathing isn't really in the cards for those of us determined to stick around, TZOA's primary focus is making users smarter about the air they breathe. The Vancouver-by-way-of-San Francisco company's titular first product is an "enviro-tracker" that clips onto a user's lapel or book bag, detecting the presence of particulate matter in the air — tiny particles that are small enough to make their way past the body's myriad lines of defense and wind up inside of breather's lungs. The device garnered a fair amount of press for the company, riding the wearable electronics buzz in the media, while offering a fascinating alternative to the standard smartwatches and fitness trackers.

The product fell short of its initial lofty Kickstarter goal of $110,000 (scoring a quite respectable $74k), but the company pressed on. At present, TZOA has 100 "ambassadors" testing the product in 25 countries around the world. The excitement surrounding the wearable pollution tracker's initial rollout also extends beyond a loyal consumer base, capturing the imagination of researchers looking for an affordable, scalable method for monitoring air quality in the developing world. At $99, TZOA is a fraction of the cost of more traditional monitors. TZOA has gone back to the crowdfunding well, this time eyeing Indiegogo in an attempt to fund both its consumer trackers and develop a more sophisticated $200 version aimed at researchers. Both devices operate in roughly the same fashion, sucking air in through a gap between two layers. Once inside, lasers are used to scan the particles, both counting and measuring them in the process.

"The size of the particles is the most important thing," TZOA co-founder and CEO Kevin Hart told TechTimes. "We're counting the number of particles in the air and we're telling you the size of the filter. They were looking at the concentration. They were looking at larger particles that can't be inhaled." It's slightly counter-intuitive. In this instance, the smaller the particle, the more potential damage it can do, as it's more likely to make it directly into a person's lung. At present, the devices aren't capable of actually identifying the makeup of the particulates — the company is working toward that functionality, along with various other features (including a fanless intake system), but in the interim, the system uses certain contextual clues to determine the nature of the pollutants. Geolocation, ultraviolet and ambient light sensors are present, helping the system to determine key details like whether the user was in- or outdoors when collecting a reading. Even more key to pinpointing the source is the contextual information provided by the user by way of the TZOA app. Users are a huge part of unlocking TZOA's future success. On the research side, they're lovingly referred to as "citizen scientists," collecting data that would otherwise be missed by more traditional rollouts.

"When you have five to 10 sensors that are located on rooftops, you're not figuring out what the problems are," explained Hart. "You're not putting them next to the sources. This could drive policy changes." Air pollution, as defined by TZOA, extends beyond the standard industrial output that immediately springs to mind. The category also includes naturally-occurring irritants like dust, pollen and mold as well as manmade carcinogens like asbestos. In some areas, indoor pollution can be as — and is sometimes more — harmful than the outdoor variety. In India, for example, 3.5 million deaths a year are associated with indoor pollution, according to numbers published last year by The Guardian.

Another 500,000 deaths, mostly in Asia and sub-Saharan Africa, are caused by outdoor air pollution from cooking. Indoor air pollution is a bigger killer than malaria or tuberculosis. That's four million global deaths caused largely by cooking, people in poverty cooking food indoors on stoves fueled by wood, discarded plant matter, coal and even animal waste.

A large-scale deployment of air monitoring devices could, by TZOA's reckoning affect both the decisions individuals make with regard to the air they breathe and the regulations implemented by governments. "This is a game changer in the air quality space," said Hart. "We're doing things that the government won't do."

Appeals Court Rejects Challenge to EPA Air Pollution Limits

Date:02nd June , 2015 Source: The Wall Street Journal

A federal appeals court on Tuesday upheld the Environmental Protection Agency's process for determining whether states are complying with air-quality ozone limits, ruling against states, industry groups and environmental organizations that challenged the rules.

Reports the Associated Press: The U.S. Court of Appeals for the District of Columbia Circuit rejected challenges from states, industry and environmental groups that claimed the agency was being either too strict or too lenient in determining which areas satisfied federal ozone restrictions. States including Mississippi, Indiana and Texas had challenged the EPA's finding that certain areas within their borders were violating the standard. A finding of noncompliance means states have to spend money to reduce ozone levels. Connecticut and Delaware argued that the EPA should have designated more than a dozen eastern states in violation, saying their air quality was being hindered by other states. "Virtually every petitioner argues that, for one reason or another, the EPA acted arbitrarily and capriciously in making its final [National Ambient Air Quality Standards] designations," states the 87-page opinion. "But because the EPA complied with the Constitution, reasonably interpreted the Act's critical terms and wholly satisfied—indeed, in most instances, surpassed—its obligation to engage in reasoned decision-making, we deny the consolidated petitions for review in their entirety."

Govt notification to advance BS4 triggers pollution debate

Date: 02nd June, 2015 Source: Money Control

In an effort to curb vehicular pollution, the government has issued a draft notification making Bharat Standard 4 norms mandatory from April 2017.In an effort to curb vehicular pollution, the government has issued a draft notification making Bharat Standard 4 norms mandatory from April 2017. But all this has done is add fuel to an already raging disagreement between the government, auto industry body Society of Indian Automobile Manufacturers (SIAM, and the National Green Tribunal, reports CNBC-TV18's Shweta Kothari. Vehicle manufacturers in India feel they are under attack. First, the National Green Tribunal came out with an order banning diesel vehicles which are over 10 years old from plying on roads in the Delhi-NRC region. But even as that order lies in limbo with the government challenging it, the government itself has gone ahead with a draft notification calling for passenger vehicles to conform to the stricter BS4 emission standards within two years. Environmental experts argue that this notification is one-sided, as it makes no such demand for commercial vehicles.

Experts say this draft notification on BS4 standards will only add fuel to the fire that's already raging over the National Green Tribunal's order which has been stayed. Remember, the stay came after the government quoted a study by IIT-Delhi, which said old vehicles only account for a negligible amount of air pollution. The Centre For Science & Environment (CSE) for instance is already up in arms over this argument. The CSE, which is in any case unhappy with the original NGT order saying it lacks teeth, alleges that the government is blatantly batting for the automobile sector. Says CSE's Sunita Narain, "The NGT is taking knee jerk action because government refuses to act. Government is listening to three large automobile manufacturers. These are the large three diesel manufactures Eicher, Mahindra and Tata who do not have the capacity to make these vehicles and are dragging their feet irrespective of the fact that you and I are suffering from really poor emission." Needless to say, the auto industry refutes these allegations. It says it is one of the few sectors to actually move towards embracing green policies -- and that it is not the main agent for worsening air quality. "We are overestimating the contribution of transport to PM2.5. Vehicles is

the only sector that made major improvements," says SIAM DG Vishnu Mathur. "Major developments have taken place in vehicle emission norm. We have to see why this has not bought change in air quality. We are only trying to address one source." Of course, India's green brigade is not convinced by any of these arguments.

It is clamouring for a wider net of stronger rules that will really curb emissions. So until more comprehensive studies on the causes, effects and deterrants to air pollution are carried out and used to formulate a more effective green policy, this debate is not likely to simmer down.

City night air heavy with pollutants

Date:02nd June, 2015 Source: The Times of India

BENGALURU: If you are taking a joyride or getting a cab home after work at midnight, think twice before sliding down the car window and breathing in deeply. That cool, pleasant breeze is probably bringing in pollutants as well. Air pollution is no longer at its worst only during the day-researchers have started observing midnight pollution as well.

Midnight pollution, an effect of meteorological conditions, is a phenomenon observed in highly populated cities with poor air quality such as Beijing and Delhi. Large amounts of respirable suspended particulate matter are released into the air during the day from vehicles. Most of these are pushed to the upper levels of the atmosphere due to high daytime temperatures. "But during night hours, especially around midnight, when the temperature drops, the suspended particles come closer to earth's surface," said Vaman Acharya, chairman, Karnataka state pollution control board.This has started bothering Bengaluru, he said.

A senior pollution control board official said data from monitoring centres shows that the pollutant levels at night are at least 1.5 times higher than the national particulate matter limit of 100 ugm3. "The phenomenon has been observed more in the last year. In some places in the city, the levels are double or triple the national limit. Central Silk Board, Victoria Hospital, AMCO Batteries along Mysuru Road and Graphite India in Whitefield are the places where pollution levels are high, even at night," he said. The official explained that the occurrence of midnight pollution is described by the 'inversion effect'. "As temperature and corresponding air pressure drops at night, pollutants start colliding and descending. These are charged particles. This usually happens between 11.30pm and 1.30am, with the effect peaking at midnight. The particles settle on the road and other surfaces. By morning, when temperature goes up and vehicle movement starts, they start disintegrating," he said.

Environmentalist Naveen KS said cleaning the road surface early in the morning is crucial."If the particles are not cleaned from the road surface, they start rising once traffic increases dur ing the day," he said. So what is the solution? Acharya explains that it can only be controlling the number of vehicles and tackling traffic congestion. "It has been observed that when movement of vehicles in the city is smooth, the concentration of suspended particles is less. The transport authorities should think about this," he said.

Times View- Aspiring to meet benchmarks set by global cities doesn't mean trying to compete with their abysmal air-quality standards as well.Bengaluru's air quality has deteriorated rapidly in the last decade, and midnight pollution is a wake-up call to the fact that our actions have lasting effects. The cars may be garaged at night, but the smoke they've spewed continues to poison us.Improving public transport, advocating environmentally friendly transport, and sensitizing citizens to the dangers of polluting are vital to keep the vision of a Garden City from going up in smoke.

Low-cost pollution detectors to tackle air quality

Date: 02nd June, 2015 Source: PHYS ORG

Pollution causes 30,000 people a year in the UK to die early yet most of us are unaware of the degree to which we are exposed to it. Low-cost pollution detectors could provide the answer. Rush hour can be maddening. Roads congested with traffic, public transport overcrowded, pavements heaving with people. But as well as the frustration, there's a sinister side to the commute to work: every breath you take could be adding to your risk of dying prematurely. Air pollution is the world's largest single environmental health risk, causing one in every eight deaths according to figures released last year by the World Health Organization. In the UK, 30,000 people die prematurely every year as a result of poor air quality, and it costs the NHS and wider economy many billions each year. Traffic is the main culprit; however, industry, domestic heating, power generation and burning are all contributors to pollution. And although the effects of pollution might be noticeable on a particularly smoggy day in a large city, decades of exposure to only slightly higher levels – a level we wouldn't even notice – can increase the risk of heart and lung diseases, stroke and cancer. "To work out the factors we should be worried about, and how we can intervene, we need to rethink how we measure what's going on," explains atmospheric scientist Professor Rod Jones. In the UK, the Automatic Urban and Rural Network provides valuable hour-by-hour assessments of air quality. But with only 171 monitoring stations at fixed sites nationwide, large areas of the country remain uncovered. Cost is the main limitation to developing a higher density network. With this in mind, Jones' team, together with industrial partners and other universities, has been developing low-cost pollution detectors that are small enough to fit in your pocket, stable enough to be installed as long-term static detectors around a city, and sensitive enough to detect small changes in air quality on a street-by-street basis. Their findings are now informing research projects aimed at improving air quality in major cities across Europe and North America. The detectors are based on electrochemical sensors developed by project partner Alphasense for industrial safety, where detection of toxic gases is needed at the parts-per-million level. Monitoring air quality, however, requires parts-per-billion sensitivity. "Rod and I had the confidence to believe that we could push our sensors to lower concentration levels, and yet keep sensor costs low," says Dr John Saffell, Technical Director at Alphasense.

Air purifier sales surge on rising pollution worries

Date:03rd June, 2015 Source: Business Standards

Since 2012-13, sales have more than doubled, encouraging manufactures to ramp up operations in the county The media's increasing attention on a surge in air pollution in urban centres, as well as courtroom battles on related issues, have indirectly led to an increase in air purifier sales in India. Since 2012-13, sales have more than doubled, encouraging manufactures to ramp up operations in the county. "The air purifier market in India is evolving," says Manish Sharma, president of the Consumer Electronics and Appliances Manufacturers Association (CEAMA) and managing director of Panasonic (India & South Asia). He adds media coverage of air pollution has helped spread awareness about availability of purifiers. Various advancements in technology have also had a positive impact on air purifier sales, he adds. Panasonic has a share of 12 per cent in this market.. Last year, the company's sales rose about 100 per cent compared to 2012-13. CEAMA says between 2009-10 and 2013-14, the market grew at a compounded annual rate of 33.4 per cent. Shuvendu Mazumdar, national product manager at Sharp India, says the company's air purifiers business has grown three times in 2014-15. Sharp India estimates this market — both organised and unorganised players — at about 125,000 units. Mazumdar says the demand for air purifiers is "sure to grow", as clean air is a necessity. The trend would be akin to the surge in "sales of

water purifiers in the past", he adds. Blueair, a Swedish air purifier manufacturing company operating in about 50 countries, accounts for four per cent of the Indian market. Robust growth of late led to the company forming a wholly-owned Indian subsidiary. Jonas Holst, international sales manager of Blueair, says cities such as Delhi, where air pollution levels are "alarming", are promising markets, as are Beijing or Shanghai.

In the past three years, Blueair's sales have grown more than 10 times in China. Blueair expects this country to be its second-most important market within the next five years, with 15 per cent market share. While Blueair's sales have traditionally been stable in "mature markets" such as North America, Japan, Europe and Korea, China contributes the most to its revenue now. Vijay Kannan, head of Blueair India, says apart from media and non-governmental organisations, awareness drives by various companies have also played a ey role in the rise in air purifier sales. CEAMA estimates the air purifier market to grow at a compounded annual rate of 56 per cent and touch 75,000 units by 2018, against the current 12,500 units.

Air pollution in Delhi: Expert suggests measure to reduce air toxicity over Delhi

Date:04th June, 2015 Source: The Financial Express

Dr B Sengupta, an environmental scientist and former member secretary of the Central Pollution Control Board on Wednesday enumerated factors that cause pollution in the air and suggested measures to reduce the toxic elements in the air for enabling fresh and cleaner environment in Delhi/NCR. He suggested that rather than phasing out diesel vehicles in Delhi/NCR, Diesel Particulate Filter (DPF) could be fitted into older vehicles, including heavy duty commercial vehicles to reduce emissions. But he said this is possible only ifGiving out measures to check the emissions by DG sets in Delhi/NCR at Amity University, Dr. Sengupta opined that power availability in Delhi/NCR has to be improved by providing grid supply, new commercial DG sets in Noida and Delhi should be based on CNG and existing DG sets should be retrofitted with requisite pollution control system to reduce Nitrogen Oxides and soot particles.

E.P.A. Takes Step to Cut Emissions From Planes

Date: 10th June, 2015 Source: The New Yark Times

The Obama administration said on Wednesday that it would take the first step toward regulating greenhouse gas emissions from airplanes, but it acknowledged it would most likely take years before stringent standards are enacted. The Environmental Protection Agency said that emissions from airplanes endanger human health because of their contribution to global warming. This finding does not impose specific new requirements on airlines yet, but it requires the agency to develop the rules, as it has done for motor vehicles and power plants. Given the extended timetable of the rule-making process, and the lobbying by the airlines that international regulations should apply to all the carriers, it is almost impossible that airplane emissions rules will be completed during the Obama administration. The legal obligation for completing work on the airplane pollution rules would then fall to the next president. The announcement represents the latest of Mr. Obama's major initiatives to combat global warming. Next week, the agency is expected to propose new rules on emissions from heavy-duty trucks, and in August it is expected to announce new rules to rein in power plant pollution. The E.P.A. said it would also wait for current international negotiations on limiting carbon emissions in the aviation industry before publishing its final rule. Those discussions, which are taking place within the International Civil Aviation Organization, a United Nations agency charged with aviation rules, began in 2009 and are expected to be completed in February 2016. Christopher Grundler, director of the E.P.A.'s Office of

Transportation and Air Quality, said the agency intended to work closely with international authorities on developing a standard for regulating airline emissions worldwide. But he did not say whether the agency's emissions standards would be more stringent than international ones. The agency said today it would be seeking public comments on those standards. "Our No. 1 goal is to secure a meaningful international standard," he said. "There are sound environmental reasons to do so. An international policy would secure far more greenhouse gas emissions reductions than a domestic-only plan." But environmental groups fear that International Civil Aviation Organization — which works in close consultation with airlines, as well as the E.P.A. — will propose a weak standard, and are already urging the United States to move faster with a stringent domestic standard.

"Airplane carbon pollution is skyrocketing, but the E.P.A. is still dodging responsibility for curbing this climate threat," said Vera Pardee, senior counsel and supervising lawyer at the Center for Biological Diversity. "Passing the buck to an international organization that's virtually run by the airline industry won't protect our planet from these rapidly growing emissions." Deborah Lapidus, director of the Flying Clean campaign, an effort by a coalition of environmental groups, said that the E.P.A. had authority to regulate domestic airline emissions immediately, and that such a standard would provide a road map for the international standards. United States airlines account for about a third of all aircraft global emissions. Without limits, aviation emissions are set to double by the end of the decade. "The airlines have a responsibility to do their part on climate change just like every other industry, and E.P.A. needs to hold them to that," Ms. Lapidus said. Republicans, for their part, also attacked the E.P.A. announcement, calling it another example of what they have criticized as Mr. Obama's regulatory overreach. "The sky is the limit when it comes to how much of the U.S. economy the E.P.A. wants to control," said Representative Lamar Smith of Texas, chairman of the House Science, Space and Technology Committee. "Such regulations would increase the price of airfare for Americans and harm our domestic carriers.

Over the last 50 years, the fuel efficiency of jetliners has increased by 70 percent. Incentives are already in place to make air travel more energy efficient." I.C.A.O. members are required to adopt any international standards completed by the international organization, according to the E.P.A. Wednesday's finding, the agency said, was part of its preparation for any domestic rules that are "of at least equivalent stringency as the anticipated I.C.A.O." carbon dioxide standard.

A final rule will also be legally binding and a future administration will have to act on it, unless challenged in court. But there is a strong legal precedent for these so-called endangerment findings to be upheld. The airline industry contends that it has already worked aggressively to reduce fuel use and increase efficiency, and that demands to do even more could raise costs. Already, airlines are looking into new technologies and alternatives like carbon-neutral — but expensive — biofuels.

In their drive to reduce fuel costs, airlines have turned to a variety of strategies, like taxiing with a single engine, fitting winglets to improve plane aerodynamics, or using lighter material for seats, galleys or in-flight magazines. Since every pound matters, some have cut back on the ice they bring on board. Each 5.5 pounds of weight reduced on an airplane means a one-ton reduction in carbon emissions per year, according to calculations by the International Air Transport Association. But making big cuts in greenhouse gas emissions is a hard task. The industry's efforts to improve fuel efficiency and reduce carbon emissions have been more than offset by the growth of the aviation sector around the world.

Aviation accounts for about 2 percent of global emissions, but it is among the fastest-growing sources of global greenhouse gas emissions as air travel becomes more affordable and more people travel around the world. By 2020, international aviation emissions could be 70 percent higher than in 2005, even if fuel efficiency improves by 2 percent a year, according to estimates cited by the European Commission.

Boreal peatlands not a global warming time bomb

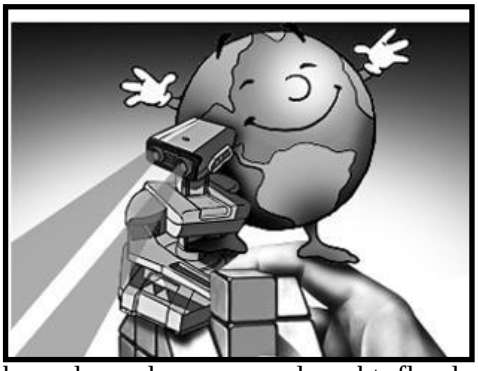
Date:10th June, 2015 Source: Science Daily

To some scientists studying climate change, boreal peatlands are considered a potential ticking time bomb. With huge stores of carbon in peat, the fear is that rising global temperatures could cause the release of massive amounts of CO2 from the peatlands into the atmosphere--essentially creating a greenhouse gas feedback loop.A new study by researchers at the University of South Carolina and University of California Los Angeles challenges that notion, and demonstrates that the effect of temperature increases on peat storage could be minor. Funded by the National Science Foundation (NSF) and published in Global Biogeochemical Cycles, the study instead points to the length of time peat is exposed to oxygen as a much more important factor in how it releases carbon into the atmosphere.

The researchers used the biochemical composition of a peat core collected from the James Bay Lowland in Canada to assess the historical relationship between climate and the extent of peat decomposition. The core is a record of peat accumulation over the last 7,500 years and contains two intervals (the Medieval Climate Anomaly and the Holocene Thermal Maximum) when temperatures were about 2°C warmer than normal, providing a natural analogue for modern warming. However, peat formed during these warm intervals was not extensively decomposed compared to peat formed during cooler periods. Instead, the most extensive decomposition coincided with drier conditions and longer oxygen exposure time during peat formation. This indicates oxygen exposure time was the primary control on peat decomposition, while temperature was of secondary importance. This was supported by comparing the extent of decomposition along a climate transect in the West Siberian Lowland, Russia. Cores from the northern end of the transect, which experienced longer oxygen exposure times, were more decomposed than cores from the south, which formed under warmer temperatures. The low apparent sensitivity of peat decomposition to warming has important implications for the future of the peatlands, as warming is unlikely to result in widespread carbon loss. Instead, the lengthening growing season is expected to stimulate plant growth, which combined with unchanging decomposition could increase the rate of carbon sequestration. Ron Benner, director of the Marine Science Program at the University of South Carolina and one of the study's authors, says the findings are important in understanding how Earth's changing climate will affect peatlands. "It is too early to declare peatlands and their massive carbon stocks are secure. Changing precipitation patterns could cause drier conditions, increasing oxygen exposure time and promoting decomposition," Benner said. "Thawing permafrost in arctic peatlands could also trigger the loss of previously inaccessible carbon. In addition, increasing atmospheric nitrogen pollution can allow rapidly decomposing vascular plants to outcompete the more recalcitrant Sphagnum (peat moss). However, the results of the study indicate the direct effect of increasing temperatures on decomposition will be relatively minor."

New global climate change projections released by NASA

Date:10th June, 2015 Source: The Economic Times



WASHINGTON: NASA scientists, including one of Indian-origin, have released a new dataset that shows how temperature and rainfall patterns worldwide may change through the year 2100 because of growing concentrations of greenhouse gases in Earth's atmosphere. The dataset shows projected changes worldwide on a regional level in response to different scenarios of increasing carbon dioxide simulated by 21 climate models. The high-resolution data will help scientists and planners conduct climate risk assessments to better understand local and global effects of hazards, such as severe drought, floods, heat waves and losses in agriculture productivity. "NASA is in the business of taking what we've learned about our planet from space and creating new products that help us all

safeguard our future," said Ellen Stofan, NASAchief scientist. "With this new global dataset, people around the world have a valuable new tool to use in planning how to cope with a warming planet," Stofan said. The new dataset is the latest product from the NASA Earth Exchange (NEX), a big-data research platform within the NASA Advanced Supercomputing Center at the agency'sAmes Research Center in Moffett Field, California. In 2013, NEX released similar climate projection data for the continental US that is being used to quantify climate risks to the nation's agriculture, forests, rivers and cities. "This is a fundamental dataset for climate research and assessment with a wide range of applications," said Ramakrishna Nemani, NEX project scientist at Ames. The NASA dataset integrates actual measurements from around the world with data from climate simulations created by the international Fifth Coupled Model Intercomparison Project. These climate simulations used the best physical models of the climate system available to provide forecasts of what the global climate might look like under two different greenhouse gas emissions scenarios: a "business as usual" scenario based on current trends and an "extreme case" with a significant increase in emissions.

MPs in bid to protect Hillingdon from 'disastrous impact' of air pollution

Date:14th June, 2015 Source: Get West London

Two Hillingdon MPs tackled air pollution at a Westminster Hall debate this week.Nick Hurd, Conservative MP for Ruislip, Northwood & Pinner, and John McDonnell, LabourMP for Hayes & Harlington, took part in the debate - led by Diane Abbott MP - to discuss the impact HS2 and a third runway at Heathrow would have on the borough. Despite criticisms on his role as Mayor of London, Boris Johnson did not attend in that capacity or as MP for Uxbridge & South Ruislip.Mr Hurd stood his ground against HS2 and offered a solution to help his constituents. He said: “The plans for the construction of HS2 will increase emissions of the most dangerous pollutants in my constituency by 40%. Is that not gross irresponsibility?

“We are being asked to host multiple construction sites, some of which will be in existence for 10 years. They will flood narrow suburban roads with HGVs. “The roads are already clogged and are surrounded by high-density housing. The area is home to clusters of schools, to which children walk. The impact will be disastrous.”Mr Hurd asked for support from Mr McDonnell on the issue, who added: “I have supported the concept of high-speed rail for many years, but we have discovered that HS2 would generate more traffic in our area, rather than reducing it and overcoming some problems at Heathrow.” HS2 plans will increase HGV traffic on Swakeleys roundabout by 1,672 movements per day and, on Harvil Road, there will be 1,360 new HGV movements per day.

Mr Hurd wants to “bury” the line, by extending the proposed tunnel so that it crosses the Colne valley. He added: “It can be done technically, and the London borough of Hillingdon’s report shows that it can be done for more or less the same price as the existing proposals.” Both MPs “stood shoulder-to-shoulder” on the issue of a third runway at Heathrow.Mr McDonnell said: “If Heathrow Airport is expanded, we will never be able to comply with air pollution limits, because of the extra air traffic and road traffic that will be generated as a result. “Therefore, the conclusion in Government must be that Heathrow expansion cannot go ahead.” Speaking after the debate, Mr McDonnell told getwestlondon: "The south of the borough is facing an air pollution crisis. "People are being made ill and some are dying and yet the council and the Mayor for London are doing nothing to address this issue.

"We need firm action now from Hillingdon Council against polluters and a commitment from the Government that there will be no third runway." The Labour MP criticised individual planning decisions in the borough, which were supported by Mr Johnson, the Planning Inspectorate and local councils.

He said: “The first example is the Conway bitumen plant development in my constituency. Constituents of mine, and constituents in Southall, wake in the morning and are nauseous and sick due to the overpowering smell of bitumen. “Yet, as a result of the local council’s not being effective in doing its duty, we have not been able to act.” Mr McDonnell is also concerned a new supermarket development in Hayes will be too close to the plant. He added: “In the same area, which is an air quality management zone, the Planning Inspectorate has allowed a huge out-of-town Asda shopping development with 500 car parking spaces. “With a bitumen plant pumping out emissions at one end of North Hyde Road and an Asdadevelopment at the other end, there will be some 10,000 traffic movements a day on that road.” The House of Commons debate took place on Tuesday morning (June 9).

Belgium and Bulgaria in the EU dock over poor air quality

Date:18th June, 2015 Source: Reuters

EU regulators are referring Belgium and Bulgaria to the bloc's top court over the quality of their air, which poses a major risk to health, the European Commission said on Thursday. It has also issued a final warning to Sweden that it needs to take action. Commission data shows about 400,000 premature deaths per year linked to air pollution in the European Union, but member states have systematically missed targets to reduce levels of harmful emissions and dust particles associated with respiratory disease and some forms of cancer. In Thursday's statement, the Commission said data showed Bulgaria had persistently failed to comply with legal limits on levels for PM10, or tiny particles, produced by traffic and industry, that can enter the lungs and bloodstream.Belgium's track record has improved, the Commission said, but not sufficiently, with excessive levels of PM10 and nitrogen dioxide and sulphur dioxide.

Sweden is also exceeding EU legal limits on pollutants and has been sent a warning, which if ignored could also lead to court action. The European Court of Justice in Luxembourg has the power to impose daily fines if member states are found to be in breach of EU law. Another nation previously singled out for failing to clean up its air is Britain, which has been given until the end of this year to submit new plans to the European Commission on how it will tackle levels of nitrogen dioxide. EU legal limits for various harmful pollutants are less stringent than levels set by the World Health Organization. The new Commission, in office since late last year, initially proposed to withdraw proposals put forward by the previous executive on narrowing the gap between the different standards. It encountered angry resistance from some member states and many in the European Parliament, forcing new air quality law back on to the agenda.

Ancient Teeth Show Signs of Indoor Air Pollution

Date:19th June, 2015 Source: Doctors Loungs

Teeth from Qesem Cave. Photo: Israel Hershkovitz, Tel Aviv University

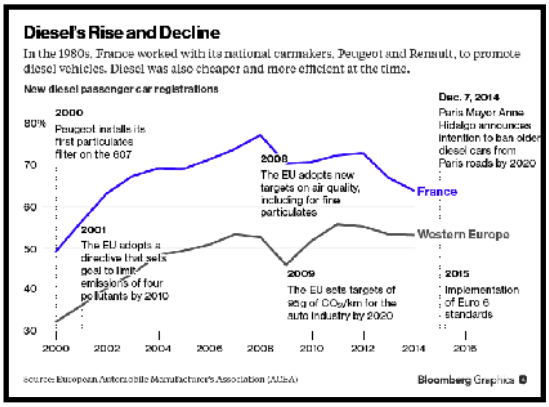
Researchers discover traces of charcoal, likely from cave fires, in tartar. FRIDAY, June 19, 2015 (HealthDay News) -- Tartar from 400,000-year-old human teeth reveals the earliest evidence of man-made air pollution, according to a new study. The tartar -- hardened dental plaque that is also known as calculus -- on teeth found at Qesem Cave near Tel Aviv, Israel, contains possible respiratory irritants, including traces of charcoal possibly from indoor fires used to roast meat. This air pollution may have posed a health threat to these early humans, the study authors said.The tartar also shows evidence of plants that may have been part of the diet and fibers that might have been used to clean teeth or were remnants of raw materials. "Human teeth of this age have never been studied before for dental calculus, and we had very low expectations because of the age of the plaque," said study co-author Avi Gopher, a professor in the department of archaeology and ancient near Eastern civilizations at Tel Aviv

University. "However, our international collaborators, using a combination of methods, found many materials entrapped within the calculus. Because the cave was sealed for 200,000 years, everything, including the teeth and its calculus, were preserved exceedingly well," Gopher added in an American Friends of Tel Aviv University news release. The study was published June 18 in the journal Quaternary International. This is the first evidence that the world's first indoor barbecues had health-related consequences, study co-author Ran Barkai said. "The people who lived in Qesem not only enjoyed the benefits of fire -- roasting their meat indoors -- but they also had to find a way of controlling the fire -- of living with it," Barkai said in the news release. "This is one of the first, if not the first, cases of man-made pollution on the planet," he added. "I live near power plants, near chemical factories. On the one hand, we are dependent on technology, but on the other, we are inhaling its pollutants. Progress has a price -- and we find possibly the first evidence of this at Qesem Cave 400,000 years ago." More information- The American Lung Association outlines how to protect yourself from unhealthy air.

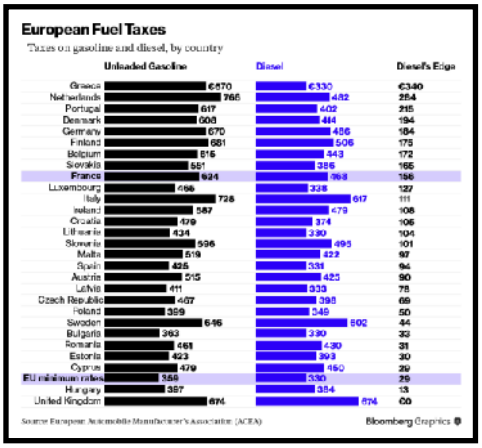
Paris Smog Obscuring Eiffel Tower Threatens Diesel-Car Dominance

Date:19th June 19, 2015 Source: Bloomberg Business

Famed Parisian landmarks such as the Eiffel Tower have been increasingly obscured in recent years by an oppressive smog. City officials have placed the blame chiefly on diesel exhaust, widening a Europewide attack on the fuel. To make good on promises to clear the air, Mayor Anne Hidalgo convinced the city council earlier this year to ban diesel vehicles made before 2011 from the French capital's streets by the end of the decade. She hasn't ruled out barring diesel engines from the road entirely and backs electric and hybrid cars for the future. "What's at stake here is the health of Parisians," said the mayor in e-mailed comments to Bloomberg. "I will never negotiate on their health."

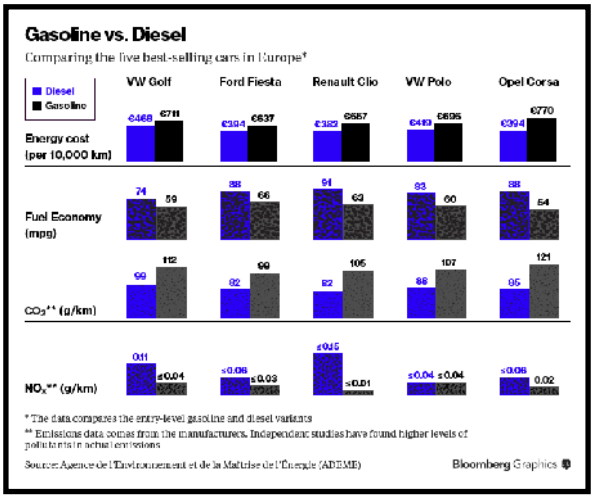


Paris's campaign isn't isolated and represents a harsh about-face for the region's automakers. London plans an ultra-low emissions zone, which will restrict older diesels, and the city's northern borough of Islington started charging diesel cars 96 pounds ($150) extra for a parking permit this month. Vienna, Berlin and Milan don't allow older diesel vehicles into the center of town. Backed by decades of government incentives, diesels account for more than half of new car sales in Europe, even as it plays only a marginal role in other markets. That's allowed companies such as France's PSA Peugeot Citroen and Germany's Volkswagen AG to develop leading technology for the fuel-efficient alternative to gasoline. The current backlash threatens that edge and opens the doors to competitors. Soot Filters- Diesel's problems stem largely from the nitrogen oxides and soot, or fine particulates, in the exhaust. The World Heath Organization's International Agency for Research on Cancer said in 2012 that diesel engine exhaust causes cancer. That year, outdoor air pollution probably accounted for 482,000 premature deaths, the WHO estimated in April.



In Paris, which will host the United Nations Climate Change conference later this year, road traffic is the main source of fine particulates, which can penetrate deeply into the lungs and play a role in asthma and other respiratory diseases, according to Airparif, a nonprofit organization that monitors air quality. While new diesels sharply reduce nitrogen-oxide emissions and have filters for the soot, the concerns remain. Part of the heightened scrutiny includes plans by the European Commission to expand real-world tests to diesel cars from trucks. Effective as early as 2017, the tests could add another hurdle for carmakers. Pollution scores when driving on hills and through stop-and-go traffic are sometimes much higher than lab results, according to a study last year by the International Council on Clean Transportation.

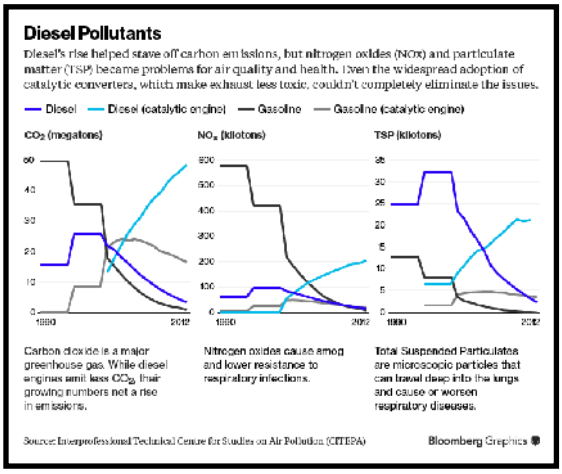
Environmental Must-Have- "If regulations get even tougher, some companies have said it will not be economical to sell any small-engine diesel cars in Europe," said Kristina Church, a London-based analyst at Barclays Plc. Peugeot and French counterpart Renault SA specialize in such vehicles and "would lose market share if they didn't sell them."



European automakers, which have invested heavily in the technology and rely on it to comply with environmental regulations, are firing back. "The industry cannot reach the carbon-dioxide emission targets without diesel technology," which is about 20 percent more efficient than equivalent gasoline vehicles, Carlos Ghosn, chief executive officer of Renault and president of the European Automobile Manufacturers' Association, said at a press briefing earlier this month.

The U.K.'s Society of Motor Manufacturers and Traders launched a campaign in March to "put the record straight," including a "myth-busting" web guide. Ecological Diktat- Peugeot, which counts on diesels for about 68 percent of European sales, set up a French-language blog to counter critics. One post notes that the newest particulate filters prevent 99.9 percent of emissions.

Adding to the effort to clean up the fuel's exhaust, the latest European standards, which went into effect in September, cap nitrogen-oxide emissions at 80 milligrams per kilometer, a 56 percent cut from the previous generation. Even so, public concern and falling government subsidies are starting to take a toll. In the first quarter, just 59 percent of newly-registered cars in France had diesel engines, down from 77 percent in 2008, according to the French carmakers' association CCFA.



But Paris's effort to get rid of older diesels does have its critics, including consumers like Maxime Lepissier. The 22-year-old soon won't be able to drive his Peugeot 505 into Paris after buying the 1989 turbo diesel eight months ago for about 1,900 euros ($2,140).

"It's like an ecological diktat," said Lepissier, who lives in Versailles and helps run an event agency. "How can young people afford the cleanest or newest cars? This is the kind of measure that punishes the poor and the young."

WHO pollution guidelines could save 2.1 million lives per year

Date: 19th June, 2015 Source: AOL

A team of environmental engineering and public health researchers designed a model to quantify how changes in outdoor air pollution levels would affect related deaths from causes including heart attack, stroke, lung disease, lung cancer and respiratory infections. The results, they say, are dramatic. "We're a bit surprised at how much it matters to clean up air pollution, even in comparatively clean places like the U.S.," lead author Joshua S. Apte of the Cockrell School of Engineering at The University of Texas, Austin, told weather.com. "The moral from the work that's quite interesting is how large the health benefits of cleaning up air pollution are."

Still, the developing world has an outsize effect. "A huge fraction of the global burden of disease for outdoor air pollution is from India and China alone," he said. "If those two countries alone met the [World Health Organization] targets for outdoor air quality ... worldwide [deaths] would be reduced by 70 percent." Currently, more than 3.2 million individuals die each year because of the effects of outdoor air pollution, according to WHO data.

In the past, Apte has examined air pollution in the developing world and how it affects population health. But the new data support the idea that developed countries could vastly benefit from following the WHO suggested guideline of 10 mg per cubic meter, as the maximum 8-hour concentration not to be exceeded, as well. Currently, the Environmental Protection Agency mandates a standard of 12 mg per cubic meter. There's emerging evidence that air pollution harms health at much lower levels than this current standard, Apte said — an area that requires more study.

"We need to know what the health effects are at truly clean levels," he said. The results shed light on the idea that air quality is paramount to improved public health, particularly as climate change increases concerns over ozone pollution in particular. But the results don't have a practical application just yet. "The other thing we need to take into account are what are the strategies that are economically feasible to achieve cleaner air," Apte said. "What's the least-cost, fastest way to get toward better and better outdoor air quality?" The journal Environmental Science & Technology published the paper, "Addressing Global Mortality from Ambient PM2.5," online on June 16.

All choked up: did Britain's dirty air make me dangerously ill?

Date:20th June, 2015 Source: The Guardian

Three months ago, a surgeon at Liverpool Heart and Chest hospital took a saw, ripped through my sternum, levered open my ribcage, cut into the aorta of my still-beating heart and stitched in a vein from my leg. The long, brutal operation was a great success. But it knocked me out and left me unable to walk more than a few paces. As I recovered, I got to asking how had I got into this mess. I had always, I thought, kept pretty fit: I could happily walk all day in the hills, chop wood, play cricket and dig deep. I ate good food and loved exercise. So what else was there in my lifestyle that

could have led to heart disease, Britain's biggest killer? The doctors routinely blamed my smoking for 20 years, though I had started late and given up more than 11 years ago. But there was also the fact that I had grown up, and then worked, in some of the most heavily polluted places in the world: Birmingham, Sunderland, Dhaka, Accra, Lagos, Jakarta, London and Paris, to name a few. Was it those lungfuls of foul air in Bangladesh, or in Birmingham in the 1960s? Was it covering smogs and pollution in Russia for the Guardian? Could heart disease be the price of living in a modern city? Appreciation that city life is not just fast, but possibly dangerous, dawned slowly. When young, I could easily ignore the stinging eyes, acrid smell and need to spit after walking or cycling for a few minutes in a busy street. The suspicion that air could be a killer only started seriously with the wheezing I experienced long after I had quit smoking, when climbing a mountain became harder and the pauses for breath longer. I was shocked, in 2009, to be diagnosed with angina. But I was knocked out when last year I was told I needed a heart bypass. That happened only to people who were really ill, didn't it? "See it as a precaution. Statistically, you'll live longer," said my cardiologist. "If you don't have it, you can expect a heart attack any time." In the worrisome months following the diagnosis and before the operation, I delved into the scientific literature. The links between air pollution and heart disease, only a generation ago uncertain, were now robust. Paper after paper showed how long-term exposure to air pollutants was now linked to high blood pressure, strokes and heart conditions like mine. But how much of my heart disease was self-inflicted and how much imposed? As people increasingly gave up cigarettes and heavy industry migrated to China and the east, were Europeans becoming more exposed to other sorts of air pollution? Were the streets of London or Paris more dangerous now than in the past? I asked Fintan Hurley, science director at the Institute of Occupational Medicine (IOM) in Edinburgh. "I think of air pollution as one risk factor among many that increases the risk of earlier death," he says. "Everybody is exposed. And largely it's involuntary. Active cigarette smoking has at least the appearance of being a choice. A person may have some choices about how much air pollution they experience, but basically, it's a risk factor imposed by society as a whole to which an individual contributes."

Air quality index not akin to air quality control, say experts

Date:21st June, 2015 Source: The Indian Express

While unplanned development, lack of political will and public concern have led to Delhi achieving the ignominious distinction of being one of the most polluted capitals in the world, experts warned that the government's focus on the recently launched air quality index (AQI) was not akin to air quality control. Almost a hundred experts from across the country gathered in Delhi on Saturday for a daylong seminar organised by the Indian Association for Air Pollution Control (IAAPC) with the aim of creating a roadmap to combat rising air pollution. This will be submitted to the Central Pollution Control Board (CPCB) and the Ministry of Environment and Forests.While enumerating the measures that were discussed during the seminar, former member secretary of the CPCB, Dr B Sengupta said, "The data quality that we have needs rapid improvement and calibration is required. The PM 2.5 AQI in a city like Kolkata is supposed to be 10 times less than a city like Delhi. This can't be because Kolkata is considerably polluted and something is wrong somewhere. With the MoEF planning multiple continuous monitoring stations for air pollution in India, calibration is required because otherwise there's no use," he said. His concerns were echoed by ecologist C K Varshney, who said, "I am not sure if the AQI is a very effective way of dealing with air pollution. It's a good measure but rather than feeling complacent about it, we need to remember that an air quality index is not the same thing as effective air quality control." He added that while there is scope for improvement in data quality, changes in policy, coordinate work from different agencies and seasonal assessment of Delhi's pollutants was also required. Noting that Delhi was one of the most polluted cities in the world, which is seriously affecting the health of

its citizens, secretary of IAAPC's Delhi chapter, Shyam Gupta said there was an "urgent need to formulate short-term as well as long-term policies and solutions". While concluding the seminar, Sengupta listed steps that had come out of the discussion and would be formalised as a roadmap after further discussion by IAAPC members. These included specific targets for CPCB and Delhi Pollution Control Committee to set for themselves in a time-bound manner, improvements in data quality, more health impact data, achieving short-term gains such as the installation of particulate filters onto diesel vehicles, transiting to BS V diesel and the control of emissions from coal-based thermal plants in the NCR. Mukesh Sharma of IIT Kanpur and the architect of the AQI said that while there was a need to improve mass transit, the multiplicity of authorities has led to paralysis of action to curb pollution in the capital.

Help us identify air pollution hotspots, Londoners urged

Date:22nd June, 2015 Source: London Evening Standard

Londoners are being invited to help create the most comprehensive picture of air pollution in the capital under a new project that aims to drive a shift to cleaner modes of transport.CleanSpace London is being set up later this year by former science minister Lord Drayson. It will identify pollution hotspots by collating data from thousands of sensors installed on mobile phone base stations and lampposts — as well as portable devices that Londoners carry with them. Drayson Technologies has pioneered uses for new wireless technology including cable-free charging for electric cars that will be used at next weekend's Formula E championship in London. Entrepreneur Lord Drayson is working on the project with Professor Frank Kelly, head of environmental health at King's College. It is part-financed by star fund manager Neil Woodford and hedge fund Lansdowne Partners. The Standard is running a series of reports on how green technology can help curb air pollution. On June 30 it will host a debate chaired by Newsnight presenter Kirsty Wark and sponsored by the energy efficiency group Engie.

Santiago Smog: Chile Declares Environmental Emergency Over Air Pollution

Date: 22nd June, 2015 Source: International Business Times

Extremely high level of air pollution in the Chilean capital of Santiago has forced authorities to declare a state of environmental emergency in the Santiago metropolitan area for Monday, the country's environment ministry said, in a statement. Pictured: A general view of the Chilean capital under a heavy layer of smog, in this June 28, 2006 file photograph.Extremely high level of air pollution in the Chilean capital of Santiago has forced authorities to declare a state of environmental emergency in the Santiago metropolitan area for Monday, the country's environment ministry said in a statement. The emergency measures, which will force more than 900 industries to temporarily shut down and about 40 percent of the capital's 1.7 million cars off the roads, are the first since 1999, according to media reports. "We're currently facing unusual conditions, with one of the driest Junes in over 40 years and really bad air circulation conditions in the Santiago valley in recent days, which has boosted the concentration of

pollutants," the ministry said in the statement. While the current restrictions are expected to be in place for 24 hours, they can be extended if there is no improvement in conditions. Moreover, it is not yet clear which industries would be forced to suspend operations on Monday. According to the ministry's statement, the declaration was necessitated by the levels of small breathable particulate matter known as PM2.5 shrouding the city. These fine particles can travel through the respiratory tract into the lungs causing short-term health effects such as lung irritation, coughing, sneezing, runny nose and shortness of breath. Long-term exposure to such fine particulate matter is linked to increased rates of chronic bronchitis and reduced lung function in addition to an increased risk of heart disease. Santiago -- a city of 6.7 million people -- has been shrouded in smog in the past, especially in the winter months when an increased use of wood-burning heaters significantly deteriorates air quality. However, lack of rain and winds this year has worsened the situation. Santiago, in particular, has consistently ranked high among cities with the worst air quality. "We call for people to respect the measures in order to help reduce the pollution of Santiago," the country's environment ministry said.

Kids' faces projected on air pollution send creepy, powerful message

Date:22nd June, 2015 Source: CNet

According to one report, 1.2 million people in China die prematurely from conditions related to air pollution every year. To underscore the issue, an air purifier company there called Xiao Zhu has taken a unique approach. It projected the faces of young children in various stages of distress on smoke streaming from smokestacks at night and recorded the results in the above video, titled "Breathe Again." The effect is super creepy and super effective. Seeing the incorporeal, pained expressions just hanging in the air definitely grabs attention and gets the point across that yes, kids are breathing in everything we pump into the air. In the video, Xiao Zhu puts the number of deaths from air pollution at 500,000 and ends the short video with the message: "Clean the air. Let the future breathe again." It's widely understood that environmental pollution is a serious health threat in China, so any campaign that calls attention to the problem is likely a like a good idea. Of course, the fact that it might help the company sell air purifiers certainly plays into the campaign. The campaign appeared on Designboom, where one fan of the antipollution video had this to say in the comments: "Excellent! There should be more of this. Images of poor people on bank buildings...much potential." How about you? Any other thoughts on how such a campaign could be used? Add your comments below.

In Santiago, Climate Change Fuels Choking Air Pollution

Date: 23rd June, 2015 Source: Climate Progress

Thick clouds of heavy smog hung low in Santiago on Monday, a day of exceptional filth in Chile's pollution-stricken capital city. The haze forced more than 1,300 businesses to close after authorities declared an environmental emergency, the first of its kind since 1999. Approximately 80 percent of the city's 1.7 million cars were forced to park, and 100 percent of the city's 7 million people were warned to avoid outdoor activity. The warning was prudent — one of the last times this happened, an outbreak of influenza sent 3,500 children to the hospital every day. Scientists have diagnosed Santiago with some of the "most serious air pollution problems in the world," and the reasons amount to a perfect storm of sorts. One is just business: The city is in the midst of an industrial boom, manufacturing everything from chemicals to textiles, which ultimately results in rising emissions. The second is location: Santiago is surrounded by mountain ranges, which trap smog in and refuse to let go. The third reason Santiago's pollution is so bad, though, is the most unpredictable. It's the

weather. For pollution to escape from within the clutches of the city's mountains, it needs to rain. And though June is supposed to be one of the wettest months of the year, it is currently the driest it's been in 47 years. This is just one of the big threats that human-caused climate change poses to Santiago. Under a worst-case emissions scenario, rainfall is likely to drop by 10 percent in the area by 2040, and by up to 30 percent by the end of the century, according to an analysis by the Center for Global Change at Chile's Pontificia Universidad Católica. Less frequent rainfall means fewer opportunities for smog to escape, meaning more opportunities for prolonged pollution events that threaten the health of thousands. Of course, the effects of climate change are almost never black and white — another study predicted that, while Santiago will experience prolonged drought, precipitation events will be more extreme when they do occur, leading to flash flooding that could threaten drinking water supply.

As it happens, Santiago may be experiencing some side effects of climate change now, which may be worsening its current smog situation. Central Chile, where Santiago is located, has been in severe drought for eight years. And though it's difficult to link specific extreme weather events to climate change, scientists have already linked this particular drought to the phenomenon, according to Reuters. That's bad news for the city, whose population is already experiencing a range of health problems amid frequent sitting smog. A 2014 study published in Science of the Total Environment found that airborne pollution exceeded European safety levels on three out of every four days. As airborne pollution increased, so did hospital admissions for cardiovascular disease, the Santiago Timesreported.

Santiago officials have implemented measures to reduce smog. Since the city's Atmospheric Decontamination and Prevention Plan was created in 1998, thousands of buses and trucks with inadequate pollution controls have been removed from the roads; dirt roads that sent particles flying into the air have been paved; open burning has been restricted; and regulations have been implemented to control industry emissions of sulfur oxides, nitrogen oxides, and particulate matter.

But scientists have acknowledged that this hasn't been enough. A 2014 study found that little had been done to reduce the major component of particulate matter in the city — soil particles. In Santiago, the study found, a lot of pollution comes when very dry soil particles fly away from construction sites and dirt roads, picking up and transporting other chemical compounds with it. Frequent rainfall, the study said, likely helps make sure the soil particles don't become dry enough to blow around.

Mumbai residents can now check air pollution level on a mobile app

Date:24th June, 2015 Source: Live Mint

SAFAR, or System of Air Quality and Weather Forecasting and Research, was launched in Mumbai on Tuesday

New Delhi: Residents of Mumbai will now be able to check air pollution levels on their smartphones. On Tuesday, SAFAR or System of Air Quality and Weather Forecasting and Research was launched by Union earth sciences minister Harsh Vardhan and Maharashtra chief minister Devendra Fadnavis. The system will provides location-specific current and three-day advance forecast on air quality parameters in terms of an air quality index, besides ultraviolet radiation and weather data. City dwellers can also access the details through the app or the website of SAFAR, which already offers air pollution data for Delhi and Pune.

The services will be provided jointly by the Indian Institute of Tropical Meteorology and the India Meteorological Department, both of which come under the earth sciences ministry.

Across Mumbai, there will be 14 LED digital display boards showing details of air pollution levels in the city. The mobile app shows air quality using a colour code, where green stands for good, yellow for moderate, orange for poor, red for very poor and maroon for severe air pollution. Each colour is also accompanied by a health advisory such as 'no cautionary action needed' or 'avoid all outdoor physical activity'. Apart from the air quality index for Mumbai as a whole, specific information is available for the localities of Bhandup, Colaba, Malad, Mazagaon, Worli, Borivali, BKC, Chembur and Andheri. The air quality index is made using factors such as particulate matter (PM10, PM 2.5), nitrogen dioxide, sulphur dioxide and ozone. Particulate matter (PM), which can include sulfates, nitrates, ammonia, sodium chloride, black carbon, mineral dust and water, are considered the most dangerous air pollutants. These can settle deep inside the lungs, making people vulnerable to cardiovascular and respiratory diseases, as well as lung cancer. Equally, ozone in the air is a major factor in asthma morbidity and mortality, while nitrogen dioxide and sulphur dioxide can also play a role in the onset of asthma, bronchial symptoms, lung inflammation and reduced lung function. Air pollution is a major cause for worry in India especially after a World Health Organization report last year reported that 13 of the 20 most polluted cities of the world were in India.

'My children are suffering but what can I do?' Delhi's polluted air, by the people who live there

Date:25th June, 2015 Source: The Guardian

For three years Mohammad Yunus, his wife Babli, five children and a handful of relatives have made their home on a patch of concrete in the middle of an eight-lane motorway, near a stretch of road named after Mahatma Gandhi. As lorries, buses and motorcycles roar past on either side of the family's cramped bit of south Delhi pavement, and a modern, concrete flyover carries several more lanes of traffic overhead, their evening routine unfolds. A young woman in a pink dress squats to kindle a fire from wooden sticks and plastic bottles, then breaks a lump of dough into pieces to bake into chapatti bread. A three-month-old baby and a toddler sleep on a dirty mat just a few feet from the curb. The incessant blaring of horns makes conversation difficult, but does not rouse the children.

Delhi's horrendous air pollution – the worst in the world, according to the World Health Organisation – is far from the only worry facing the Yunus family. But the poisonous fumes are doing them serious harm, and the children are particularly vulnerable to its health-wrecking effects. Babli Yunus has a thick, phlegmy, hacking cough that she says never goes away. Her son Toufiq, who looks about nine (no one at this encampment knows their precise ages), has had a fever for several days. "I keep thinking that my health is so bad, and my children are also suffering, lying around here. But what can I do?" Babli asks as one daughter, aged about three, leans back in her lap, playing with a dirty yellow comb. "This child has a cough and cold. So does this one." Babli doesn't know whether the family's latest round of illnesses was caused by the diesel and petrol exhaust that gives the air an acrid smell and a heavy feel, or by a soaking rain that left their clothes and blankets wet. "It all goes into our systems," she says. "We end up eating a lot of dust." "Dust, dirt, everything," her husband echoes. "This is a main road. It never closes."

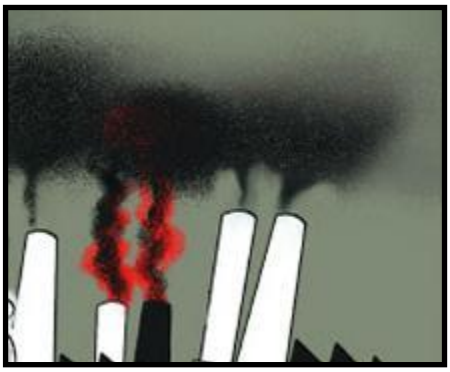
It is hard to imagine an existence more wretched than that of the Yunus family, huddled together on this dirty rectangle of concrete about 10 x 4 metres, surrounded by traffic on three sides and pressed on the fourth against a tall metal fence. Mohammad brings home what money he can, working on construction sites and selling vegetables in the market. His children, who do not attend school, earn a few coins

collecting discarded plastic bottles from around a nearby bus stop. Mohammad says a total of 18–20 people live in the space. Their belongings hang from the fence's spikes: a plastic bucket, bundles wrapped in patterned cloth, a few blankets, a shirt. Pedestrians stream past just inches away, dodging traffic and carrying goods on their heads or under their arms. A few months ago, a girl of around eight living on the same stretch of road was struck by a car and killed, nearby families say. Delhi's foul air impacts all sections of its society. A 2010 study of more than 11,000 schoolchildren found 43% had poorly developing lungs, compared with 25% of a rural control group. The Delhi pupils were three times more likely to have severe impairment, and such deficits are believed to last for life. But the city's destitute – poorly nourished, often suffering from chronic illnesses, and unable to afford medical care – are the most severely affected. "These people don't get any respite from the pollution, even at night, so yes I think it does [cause more death and illness among the poor]", says Dr Neeraj Jain, a respiratory consultant at Sir Ganga Ram Hospital.

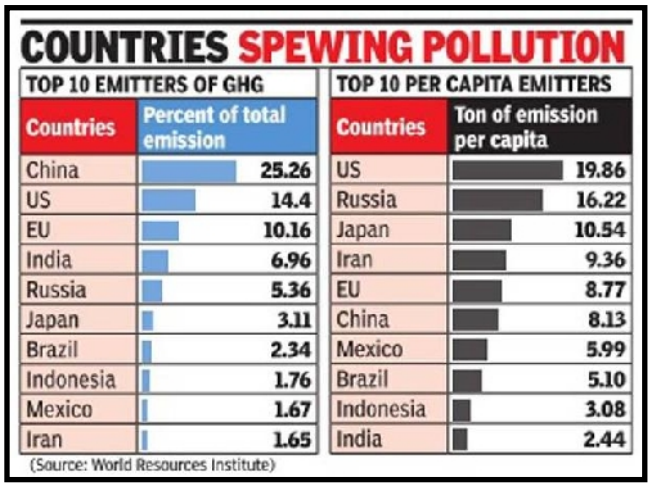
"It's just their economic status that makes them more vulnerable." A growing body of research also shows that those living within a few hundred metres of major thoroughfares suffer greater health problems. Everywhere in Delhi, the air is thick with toxins, and levels of the tiniest pollution particles – linked to ailments from heart attacks and stroke to cancer, respiratory infections and even dementia – reach 17 times the recommended limits in some parts of the city. Even in the springtime, when the air is far better than in the filthy, choking winters, the haze is visible night and day, shimmering in the headlights of cars and blurring buildings and bridges behind a gauzy grey curtain. Mohammad and his relatives came to Delhi from their village near Lucknow because the high cost of land made it impossible for them to earn a living by farming. The family originally camped a few kilometres away but police forced them out so they settled beneath the flyover, unable to find anywhere better to live. "It was God's will that we came here," says Yunus, a slim man in a worn grey shirt and trousers, his face freshly shaven but for a neat moustache. "Where should we go? You tell us."

Greenhouse gases: India fourth biggest emitter, but lags far behind top three

Date:25th June 25, 2015 Source: The Times of India



NEW DELHI: As the global community gears up for the crucial Paris climate summit, the World Resources Institute (WRI) — a global research organization — has come out with its latest analyses of the country-wise emissions of climate-damaging greenhouse gases. It shows India despite being the fourth largest carbon emitter continues to be far behind the other three top big emitters in terms of per capita emission. Though the data, released by the WRI, cannot be used as an excuse by India for not acting against its emission, such figures will certainly give the country an upper hand while negotiating for a global climate deal. India invariably uses the 'per capita' yardstick while insisting on more comprehensive actions from rich nations. However, developing countries like China, Mexico and Brazil too are way ahead of India in terms of their per capita contribution to the overall emissions. And, this is the reason why a section within the government in India has time and again argued not to compare the country's action with that of the Chinese goal. The WRI analysis is based on data from its Climate Analysis Indicators Tool (CAIT) that has recently released its emission figures for the year 2012. It also came out with details as how the various economic sectors have contributed to the overall emission. "Per capita emissions are still distributed unequally", it said, pointing out that the per person emissions still vary among the top 10 emitters, with the United States' per capita emissions eight times that of India.



COUNTRIES SPEWING POLLUTION

TOP 10 EMITTERS OF GHG		TOP 10 PER CAPITA EMITTERS	
Countries	Percent of total emission	Countries	Ton of emission per capita
China	25.26	US	19.86
US	14.4	Russia	16.22
EU	10.16	Japan	10.54
India	6.96	Iran	9.36
Russia	5.36	EU	8.77
Japan	3.11	China	8.13
Brazil	2.34	Mexico	5.99
Indonesia	1.76	Brazil	5.10
Mexico	1.67	Indonesia	3.08
Iran	1.65	India	2.44

(Source: World Resources Institute)

According to the figures, the largest emitters contribute a majority of global emissions as the top 10 emitters contribute over 72% of global greenhouse gas emissions (excluding land use change and forestry). On the other hand, the lowest 100 emitters contribute less than 3%. "While universal climate action is necessary, significant mitigation actions are needed by the largest emitters, taking into account that they have different capacities to do so", said the WRI in its document, carrying info-graphs on country-wise emission data. It shows the energy sector is the dominant source of greenhouse gas emissions. It contributes more than 75% of global emissions. "A rapid transformation of the energy sector by 2050, as the G7 (top rich countries) suggested in their recent announcement, is necessary to avoid the worst impacts of climate change", it said.

The analysis also shows that emission sources vary by country. While the energy sector dominates, industrial emissions in China contribute more than 3% of global emissions and new data from the Food and Agriculture Organization (FAO) indicate that agriculture contributes a notable share of Brazil's and Australia's emissions. "Mitigation policy options that countries pursue should therefore align with their national circumstances", the WRI suggested while sharing and analyzing those figures. Six of the top 10 emitters are developing countries. According to the data, China contributes approximately 25% of global emissions, making it the top emitter. India, Indonesia, Brazil, Mexico and Iran are also contributing relatively large shares of global emissions as their economies grow.

Supreme Court wrestles with air-pollution rule

Date:26th June, 2015 Source: High Country News

The Supreme Court is reviewing a major Obama administration rule aimed at cleaning up toxic power plant exhausts. The case puts in question both the cleanup and the court's longstanding practice of deferring to federal agencies to interpret murky laws. Under that 2011 Environmental Protection Agency rule, by the middle of next month, several hundred coal- and oil- fired power plants across the country must slash their emissions of mercury, arsenic and other toxic air pollutants or shut down. But in response to a challenge by 21 states—including Arizona, Alaska, Utah, Wyoming, North Dakota and Idaho—and some industry groups, this week the Supreme Court held oral arguments on the rule. At issue is whether the EPA was wrong not to consider costs—such as how much plant operators would spend to install pollution control equipment or switch to other fuel sources—before it decided to regulate under the 1990 Clean Air Act. The law doesn't explicitly tell the EPA to consider costs, but directs the agency to set pollution standards if it "finds such regulation is appropriate and necessary" after studying the health impacts of these emissions. (The agency did consider costs later in its regulatory process, when it was setting specific standards for types of power plants. But the states and industry argue that this wasn't adequate and costs should have played a role earlier.) During oral arguments in the case Wednesday, Justice Elena Kagan pushed back when a lawyer representing states and industry argued that with the words "appropriate and necessary" Congress was directing the EPA to take into account costs. "Congress knows

how to require consideration of costs, to get from silence to this notion of a requirement seems to be a pretty big jump," Kagan said. But some conservative justices made it clear they side with industry, especially considering that the EPA estimated costs of complying with the Mercury and Air Toxics Standards rule at $9.6 billion a year.

"I would think it's classic arbitrary and capricious agency action for an agency to command something that is outrageously expensive and in which the expense vastly exceeds whatever public benefit can be achieved," said Justice Antonin Scalia. In the past, the highest court usually has deferred to the EPA to use its own judgment in interpreting vague provisions of sweeping laws such as the Clean Air Act. Legal experts say this case could have broad implications if the court decides against the EPA. "It will be precedent setting if they say the word 'appropriate' absolutely includes costs," says Patrick Parenteau, a professor at Vermont Law School. "To argue that absolutely requires a cost-benefit analysis, how do you get that out of the word "appropriate?" What dictionary can you cite that says that's what the word appropriate means?" Jeff Holmstead, an industry lawyer who headed EPA's air pollution programs under President George W. Bush, said the EPA should take costs into account unless they're specifically prohibited. "The hope on the industry side is the Supreme Court will send a message that says you have to be more aware of the costs of your regulations," he said. "You can't just ignore those. That would send an important signal to EPA and perhaps other agencies as well."

Some industry representatives say that this ruling could have implications for another major EPA rule, which would control greenhouse gas emissions from power plants. The Mercury and Air Toxics Standards are among the EPA's costliest regulations ever. But the EPA estimated that the health benefits would far outweigh the costs. In addition to reducing mercury and other toxic pollutants, the rule also would reduce fine particles. The EPA calculated that it would avert up to 11,000 premature deaths, 4,700 heart attacks and 130,000 asthma attacks every year. But the states and industry argued that those benefits are grossly inflated because much of the benefits the EPA calculated are from reducing fine particles, which were not the main target of this regulation.

Most of the power plants impacted by this standard already have decided to shut down or have installed pollution control devices to capture mercury and other pollutants. But environmentalists cautioned that if the court sided with industry, companies might opt to keep their dirty old plants running longer or not use the pollution control equipment that they've installed. "There are operating costs and those aren't trivial," said Jim Pew, an attorney for Earthjustice who was representing environmental groups and the NAACP in the case. "If the court threw it out they might not run it." Although the EPA likely would rewrite the rule to address whatever shortcomings the court indicated, such a ruling could delay the cleanup of hazardous air pollution by several years. Alternatively, the court could decide to keep the rule in effect while the EPA reworks it. As for the plants that have closed or are slated to be shut down because of the rule, some utilities say it's too late to change their plans. But by hearing the case, the Supreme Court put a question mark over the fate of the 60-year-old Carbon power plant, which is nestled into a narrow canyon near Helper, Utah. That plant is scheduled to close next month, largely because of the 2012 EPA rule. Most of the 600 coal-fired and oil-fired plants nationwide that were impacted by the rule installed pollution controls or have gotten extensions from the EPA and are likely to do so in the future.

But there wasn't room for pollution control equipment near the 60-year-old Carbon plant. "Right now we can't envision a scenario that would result in changing our decision to close Carbon, but I'm not going to be absolutely unequivocal," says David Eskelsen, spokesman for PacifiCorps, which owns the plant. "We don't know what the Supreme Court might do and how that might change the company's calculations." The Supreme Court will rule before its term ends in June. Elizabeth Shogren is HCN's Washington DC correspondent. She Tweets @ShogrenE.

JULY 2015

UN chief seeks equity in Paris climate change pact

Date: 01st July, 2015 Source: Eco-Business

When the 193-member General Assembly hosted a high level meeting on climate change Monday, Secretary-General Ban Ki-moon warned that any proposed agreement at an upcoming international conference in Paris in December must uphold the principle of equity. The meeting, officially known as the Conference of the Parties on Climate Change (COP 21), should approve a universally-binding agreement that will support the adaptation needs of developing nations and, more importantly, "demonstrate solidarity with the poorest and most vulnerable countries through a focused package of assistance," Ban told delegates. The secretary-general is seeking a staggering 100 billion dollars per year by 2020 to support developing nations and in curbing greenhouse gas emissions and strengthening their resilience. Some of the most threatened are low-lying islands in the Indian Ocean and the Pacific that are in danger of being wiped off the face of the earth due to rising sea-levels caused by climate change.

"Climate change impacts are accelerating," Ban told a Global Forum last week. "Weather-related disasters are more frequent and more intense. Everyone is affected – but not all equally," he said, emphasising the inequities of the impact of climate change. Sam Kutesa, President of the 69th session of the UN General Assembly, who convened the high-level meeting, said recurring disasters are affecting different regions as a result of changing climate patterns, such as the recent cyclone that devastated Vanuatu, that "are a matter of deep concern for us all". He said many Small Island Developing States (SIDS), such as Kiribati, are facing an existential threat due to rising sea levels, while other countries are grappling with devastating droughts that have left precious lands uninhabitable and unproductive. "We are also increasingly witnessing other severe weather patterns as a result of climate change, including droughts, floods and landslides. "In my own country Uganda," he pointed out, "the impact of climate change is affecting the livelihoods of the rural population who are dependent on agriculture." Striking a positive note, Ban said since 2009, the number of national climate laws and policies has nearly doubled, with three quarters of the world's annual emissions now covered by national targets.

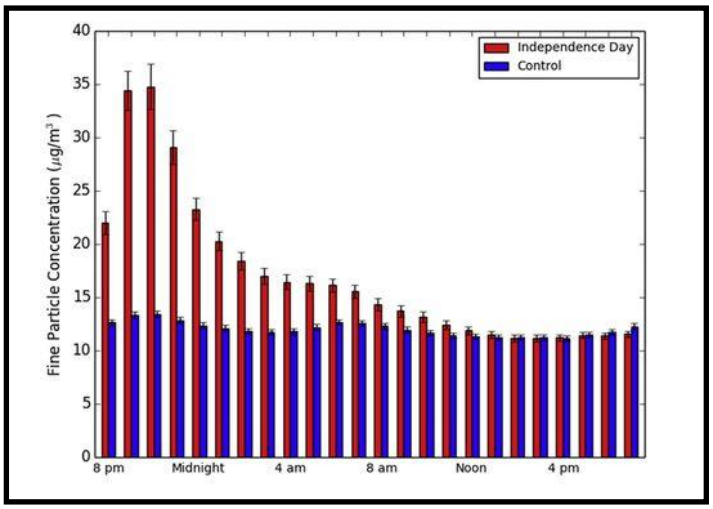
"The world's three biggest economies – China, the European Union (EU) and the United States – have placed their bets on low-carbon, climate-resilient growth," he added. Roger-Mark De Souza, Director of Population, Environmental Security and Resilience at the Washington-based Wilson Center, told IPS: "I am pleased to see the discussion of resilience at the high level discussion on climate change at the UN today." Resilience has the potential to be a transformative strategy to address climate fragility risks by allowing vulnerable countries and societies to anticipate, adapt to and emerge strong from climate shocks and stresses. Three key interventions at the international level, and in the context of the climate change discussions leading up to Paris and afterwards, will unlock this transformative potential, he said. First, predictive analytics that provide a unified, shared and accessible risk assessment methodology and rigorous resilience measurement indicators that inform practical actions and operational effectiveness at the regional, national and local levels. Second, risk reduction, early recovery approaches and long-term adaptive planning must be integrated across climate change, development and humanitarian dashboards, response mechanisms and strategies. Third, strengthening partnerships across these levels is vital – across key sectors including new technologies and innovative financing such as sovereign risk pools and weather based index insurance, and focusing on best practices and opportunities to take innovations to scale.

"There can no longer be an expectation that global action or decisions will trickle down to create local results, and this must be deliberately fostered and supported through foresight analysis, by engaging across

the private sector, and through linking mitigation and adaptation policies and programmes," De Souza told IPS. Asked about the serious environmental consequences of the ongoing conflicts in the Middle East, Ban told reporters Monday political instability is caused by the lack of good governance and social injustice. But if you look at the other aspects, he argued, abject poverty and also environmental degradation really affect political and social instability because they affect job opportunities and the economic situation. Therefore, "it is important that the benefits of what we will achieve through a climate change agreement will have to help mostly the 48 Least Developed Countries (described as "the poorest of the world's poor") – and countries in conflict," he added. Robert Redford, a Hollywood icon and a relentless environmental advocate, made an emotional plea before delegates, speaking as "a father, grandfather, and also a concerned citizen – one of billions around the world who are urging you to take action now on climate change." He said: "I am an actor by trade, but an activist by nature, someone who has always believed that we must find the balance between what we develop for our survival, and what we preserve for our survival." "Your mission is as simple as it is daunting," he told the General Assembly: "Save the world before it's too late." Arguing that climate change is real – and the result of human activity – Redford said: "We see the effects all around us–from drought and famine in Africa, and heat waves in South Asia, to wildfires across North America, devastating hurricanes and crippling floods here in New York." A heat wave in India and Pakistan has already claimed more than 2,300 lives, making it one of the deadliest in history. "So, everywhere we look, moderate weather is going extinct," Redford said. All the years of the 21st century so far have ranked among the warmest on record. And as temperatures rise, so do global instability, poverty, and conflict, he warned.

Study: Fireworks cause a toxic brew of unhealthy air

Date:01st July, 2015 Source: USA Today



The thousands of Fourth of July fireworks celebrations across the nation bring a toxic brew of air pollution to our atmosphere, according to a recent study from federal scientists.The exploding fireworks unleash tiny particles — about 1/30th the diameter of a typical human hair — that can affect health because they travel deep into a person's respiratory tract, entering the lungs. The tiny particles are known as "particulate matter" and include dust, dirt, soot, smoke and liquid droplets and are measured in micrometers, according to the Environmental Protection Agency. A micrometer is one-millionth of a meter. The fine particulate matter in this study — which was led by scientists from the National Oceanic and Atmospheric Administration — were 2.5 micrometers in size. Both long- and short-term exposures to fine particles are linked to a range of health effects — from coughing, wheezing and shortness of breath, to asthma attacks, heart attack and stroke, to even premature death in people with heart or lung disease, according to the study.

On average, the air is at its worst from 9 p.m. to 10 p.m. on the holiday, the study found. But levels drop back down by noon on July 5. "These results will help improve air quality predictions, which currently don't account for fireworks as a source of air pollution," said NOAA scientist Dian Seidel and study lead author. "The study is also another wake-up call for those who may be particularly sensitive to the effects of fine particulate matter," she said. The study appeared in the journal Atmospheric Environment.

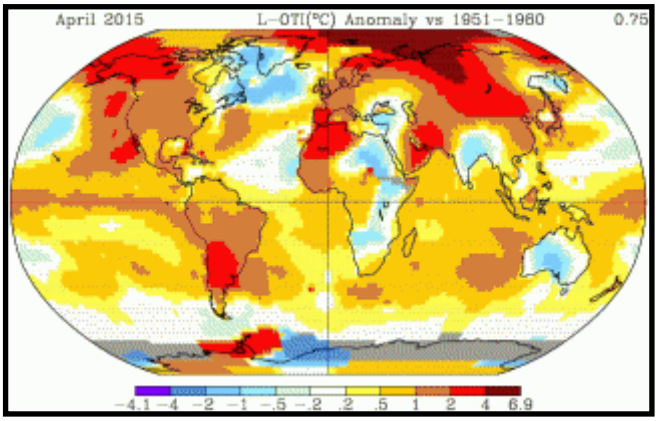
Zoological Survey of India monitoring climate change impact on Sundarban animals

Date:02nd July, 2015 Source: The Economic Times

KOLKATA: To measure the effect of climate change on the flora and fauna of Sundarbans, the Zoological Survey of India has set up monitoring bases inside the mangrove forests. There are 25 plots in the five islands of Bali, Gosaba, Basanti, Sagar and Satjelia where the bases have been set up to measure the diversity and population index of mangroves, crabs and snails. "Any change in their population will reveal how climate change is affecting the islands. We will know to what extent the biodiversity is getting affected due to change in the water salinity level and other factors," project in-charge scientist Bulganin Mitra told PTI. The monitoring process is an ongoing one and experts are sent to the spot to collect data about their population and species. "We will also take photographs and prepare a GPS map of their habitat. We will prepare a baseline data of biodiversity. As time passes by we will be able to know whether there is any change in the flora and fauna of the region or not," he said. The monitoring bases have so far been established in the buffer zone of the mangrove forest. They have taken permission from the state Forest Department to start more such centres inside the core area of the tiger reserve. A UNESCO World Heritage site, Sundarbans is an archipelago of more than a hundred islands, famous for its mangrove forests and several endangered species like the Royal Bengal Tiger, Ganges and Irawadi dolphins. The islands are hit hard by constant land erosion and salinity due to rising sea levels.

Nobel laureates warn of global warming risks

Date:03rd July, 2015 Source: Summit Country Voice



Unsustainable plunder of the planet represents a serious threat to humanity Staff Report FRISCO — When several dozen of the world's smartest people — all recognized as Nobel Laureates — gather on an island and declare that climate change and the unsustainable plunder of natural resources are a serious threat, it might be time to listen.

That's what happened this week during the 65th Lindau Nobel Laureate Meeting, as physicists, chemists and many Nobel Prize winners ended their conference by signing a declaration on climate change, urging nations of the world to "take decisive action to limit future global emissions." The declaration reinforces the recent message presented by Pope Francis environmental- and climate-themed "Laudato si" encyclical, as well as the latest climate policy resolutions adopted by the G7 states and marks yet another urgent warning of the consequences of climate change."If left unchecked, our ever-increasing demand for food, water, and energy will eventually overwhelm the Earth's ability to satisfy humanity's needs, and will lead to wholesale human tragedy," the declaration states. The Mainau Declaration 2015 is the result of an initiative on the part of Nobel Science Laureates who took part in the 65th Lindau Nobel Laureate Meeting. The signatories to the declaration have all been awarded Nobel Prizes in physiology or medicine, in physics or in chemistry. Some of the laureates who have not attended the final day of the meeting had already put their names to the declaration earlier at Lindau. The spokesperson for the initiators is US astrophysicist Brian Schmidt who in 2011 was awarded the 2011 Nobel Prize for Physics for his work in figuring out how fast the universe is expanding. The 2015 conference is the first time since 1955 that Nobel laureates use the platform of the

Lindau Nobel Laureate Meeting to take a stand on social policy issues. The first Mainau Declaration signed on that occasion by a total of 51 Nobel laureates on the initiative of physics laureate Otto Hahn contained an appeal for the peaceful use of nuclear energy and warned of the dangers inherent in its application for military purposes. The total of 65 laureates taking part in the 65th Lindau Meeting was the highest number ever assembled here. In addition to the numerous laureates of the medicine, physics or chemistry Nobel Prizes, the speakers also included Indian Nobel Peace Laureate Kailash Satyarthi and Nigerian Nobel Literature Laureate Wole Soyinka. The week-long conference annually provides an opportunity for an inter-generational and an inter-cultural exchange of ideas: Over 650 young scientists from 88 countries successfully passed the multi-stage selection process to take part in this interdisciplinary anniversary meeting. The Lindau Meetings were established in 1951 by Lennart Count Bernadotte af Wisborg and the Lindau city councilors Franz Karl Hein and Gustav Wilhelm Parade. Ever since, the final day of the meeting has traditionally been held on Mainau Island.

Mainau Declaration 2015 on Climate ChangeWe undersigned scientists, who have been awarded Nobel Prizes, have come to the shores of Lake Constance in southern Germany, to share insights with promising young researchers, who like us come from around the world. Nearly 60 years ago, here on Mainau, a similar gathering of Nobel Laureates in science issued a declaration of the dangers inherent in the newly found technology of nuclear weapons—a technology derived from advances in basic science. So far we have avoided nuclear war though the threat remains.

We believe that our world today faces another threat of comparable magnitude. Successive generations of scientists have helped create a more and more prosperous world. This prosperity has come at the cost of a rapid rise in the consumption of the world's resources. If left unchecked, our ever-increasing demand for food, water, and energy will eventually overwhelm the Earth's ability to satisfy humanity's needs, and will lead to wholesale human tragedy. Already, scientists who study Earth's climate are observing the impact of human activity.

In response to the possibility of human-induced climate change, the United Nations established the Intergovernmental Panel on Climate Change (IPCC) to provide the world's leaders a summary of the current state of relevant scientific knowledge. While by no means perfect, we believe that the efforts that have led to the current IPCC Fifth Assessment Report represent the best source of information regarding the present state of knowledge on climate change.

We say this not as experts in the field of climate change, but rather as a diverse group of scientists who have a deep respect for and understanding of the integrity of the scientific process. Although there remains uncertainty as to the precise extent of climate change, the conclusions of the scientific community contained in the latest IPCC report are alarming, especially in the context of the identified risks of maintaining human prosperity in the face of greater than a 2°C rise in average global temperature.

The report concludes that anthropogenic emissions of greenhouse gases are the likely cause of the current global warming of the Earth. Predictions from the range of climate models indicate that this warming will very likely increase the Earth's temperature over the coming century by more than 2°C above its pre-industrial level unless dramatic reductions are made in anthropogenic emissions of greenhouse gases over the coming decades. Based on the IPCC assessment, the world must make rapid progress towards lowering current and future greenhouse gas emissions to minimize the substantial risks of climate change. We believe that the nations of the world must take the opportunity at the United Nations Climate Change Conference in Paris in December 2015 to take decisive action to limit future global emissions. This endeavor will require the cooperation of all nations, whether developed or developing, and must be sustained into the future in accord with updated scientific assessment.

Paris climate meet: India to market its action plan for achieving emission targets

Date:04th July, 2015 Source: The Economic Times

As the world gears up for the UN Climate Change Conference to be held in Paris this year-end, a lot of attention is focused on India and the role it will play in what many see as a make-or-break deal on climate change.With the US, Europe and now China having put out their Intended Nationally Determined Contributions (INDCs), or emission target actions, for the Conference of Parties (also known as COP 21), India is the next country to be watched out for. India has to submit its INDCs by September 30. The 21st session of the conference will be hosted in Paris in December 2015 to find consensus on keeping global warming below 2 degree Celsius by cutting down on greenhouse gas emissions. India, as a developing nation, is seen as a key partner on climate change talks and is taking an increasingly visible leadership role on the issue. The BJP-led government has taken a strong and clear position on climate change, emphasising its commitment to the cause and its voluntary initiatives. It has also at the same time pointed out repeatedly that developed nations cannot escape the responsibility towards greater action to check climate change.

Top government officials said India's INDCs will be focusing also on the environmentally-friendly measures it has already adopted. India hopes to use the global forum to tell the world just how much it has been working on a voluntarily basis on the matter, owing to its concern for climate change. Prime Minister Narendra Modi's very own proposal to co-launch a book with French President Francois Hollande on slogans related to climate change ahead of the Paris talks is an indicator of New Delhi's efforts to highlight its views. Incidentally, the government's plan also fits in perfectly with the larger global political impetus that France is trying hard to build to ensure that an agreement is arrived at when 196 countries converge in its capital in December. "We will take a range of actions towards cutting down emissions, but we will also tell the world how much we have already done and are doing. While India already exercises a range of measures that work towards checking climate change, the problem is that we have not managed to package this and market this well. We intend to correct that," a senior official at the environment ministry told ET.

"From our ambitious solar and wind power targets, we will also be pointing to the huge lifestyle changes that will bring about greater energy efficiency. We also intend to move increasingly towards green buildings, are bringing in several pollution control measures and will work across ministries and departments for a concerted action plan." Ministry officials said India is taking its INDCs very seriously and will also indicate clear timelines for achieving the targets it sets out to show its commitment to the cause.Globally, too, India's 'Make in India' plan, the focus on lifestyle choices towards climate change, PM Modi's idea to create a coalition of nations for solar power, the ambitious solar power targets and efforts aimed at bringing renewables at par with coal in costs are eliciting curiosity and attention. The tone and tenor of India's stance at COP 21 has in fact been set well in advance by Modi. During his visit to Berlin earlier this year, Modi said "India will set the agenda for the upcoming Conference of Parties." The emphasis on common but differentiated responsibility and the historical responsibility of developed nations had also been underlined. Modi also expressed his surprise at some criticism India has been facing on its stance on climate change, saying "... that the world is scolding us even though our per capita gas emission is the lowest... The whole world is posing questions to us.

Those who have destroyed climate are asking questions to us. If anybody has served the nature, it is Indians." Environment minister Prakash Javdekar, speaking in June at the sixth Petersberg Climate Dialogue in Berlin, also emphasised the need for developed countries to take enhanced mitigation pre-2020 measures to prevent dangerous human interference with the climate system before the COP 21 targets would kick into

effect if the agreement comes through. Even on the subject of hydrofluorocarbon, the Modi government has marked a shift in stance, agreeing to move an amendment to the Montreal Protocol for a phase down of gases used extensively in refrigeration and air-conditioning in India, but also setting out its own terms of negotiations. India will also strongly raise the need to mobilise climate funding as assured earlier by developed nations and will assert its right to development and sustainable industrialisation as a developing nation with aspirations. India is among the nations that have talked repeatedly about the nature and structure of climate funding as well as the need for the developed nations to enhance action on their own for the pre-2020 period - the emission cut targets specified under the Kyoto Protocol are in effect only until 2015 and the COP Paris agreement, if arrived at, will kick into effect after 2020. Developing nations have been asking for the need to take enhanced measures before 2020 as well.

Independence Day fireworks 'cause significant rise in air pollution'

Date:04th July, 2015 Source: Medical News Today

July 4th has been celebrated as the birth of American independence since 1776. Tonight, the sky will be illuminated with stunning fireworks displays that are taking place all over the US. But according to a new study, such festivities may have an unintended consequence - a significant increase in air pollution.Published in the journal Atmospheric Environment, the study identifies a rise in fine particulate matter, or PM2.5 - particles that are 2.5 micrometers in diameter and smaller - on the evening of July 4th and the morning of July 5th. According to the US Environmental Protection Agency (EPA), these small particles are a health concern; they can easily pass through the throat and nose to the lungs, which can trigger shortness of breath, coughing, wheezing and asthma attacks, as well as long-term health effects - such as stroke and heart attack and death from lung and heart disease. It is well known that fireworks can present health risks. Last year, a Spotlight feature from Medical News Today noted that firework injuries - such as burns and other injuries to the hands, eyes and legs - increased by 30% compared with the previous year.

According to the researchers of this latest study - including Dian J. Seidel of the National Oceanic and Atmospheric Association (NOAA) Air Resources Laboratory in College Park, MD - previous studies had identified increases in air pollutants during and following fireworks displays. "But no study to date has explored fireworks' effects on air quality over large regions using systematic observations over multiple years to estimate typical regional PM [particulate matter] increases," they note.

Concentrations of fine particulate matter '42% higher on evening of July 4th'Seidel and study co-author Abigail N. Birnbaum, of the University of Maryland and student intern at NOAA, set out to address this research gap, assessing the air quality of 315 sites across the US on every 4th July between 1999 and 2013. "We chose the holiday, not to put a damper on celebrations of America's independence, but because it is the best way to do a nationwide study of the effects of fireworks on air quality," says Siedel.

The researchers analyzed the hourly concentrations of fine particulate matter on the evening of July 4th, comparing them with those of the days before and after, The team found that on average, concentrations of fine particulate matter were 42% higher on the evening of July 4th, compared with the days before and after the holiday. Levels reached their highest between 9 pm and 10 pm, with increases beginning at 8 pm. The increases lasted until around midday on July 5th. The researchers identified variations in PM2.5 concentrations between air quality monitoring sites, which appeared to be dependent on weather conditions and how close the fireworks were to the site.

For example, concentrations were around 370% higher on the evening of July 4th at one site where the fireworks were set off in a field adjacent to it - which the team says is at a level well above the maximum 24-hour limit of 35 mcg per cubic meter set by the EPA. Commenting on the findings, Seidel says: "These results will help improve air quality predictions, which currently don't account for fireworks as a source of air pollution. The study is also another wake-up call for those who may be particularly sensitive to the effects of fine particulate matter."The team notes that while the EPA do not regulate fireworks, they do recommend that individuals who are sensitive to air pollution - such as those with asthma - watch fireworks displays from a distance and ensure they have any required medication to hand. Written by Honor Whiteman

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India's tech hub gasps for fresh air

Date:05th July, 2015 Source: Business Standards

India's technology hub, that had become an international byword for outsourcing, is gasping for fresh air as high vehicular emissions, increasing industrial fumes and rising dust from construction activities are polluting its atmosphere and harming its 10 million denizens. Once known to be a pensioners' paradise for its salubrious climate and greenery, the garden city, which is also Karnataka's state capital, is no more what it was till the turn of the century, as explosive growth, poor infrastructure, indiscriminate felling of trees and encroachment of lakes/water bodies have turned it into a 'smoke' city, competing with rivals for being the most polluted.

"The air quality in the city's thickly populated, commercial and industrial areas has deteriorated at an alarming rate over the years due to influx of people and vehicles, and the state government's failure in regulating reckless growth," Karnataka State Pollution Control Board (KSPCB) chairman Vaman Acharya told IANS here. Air quality monitoring by the regulatory body also revealed that the respiratory suspended particulate matter, containing dust, sulfur dioxide, nitrogen dioxide and other pollutants exceeded the national limit of 60 Aug/M3 in 13 of the 15 stations located across the city last fiscal (2014-15). "With vehicular density increasing to a whopping 5.6 million, the city has one vehicle for every two persons. As most of them ply on gridlocked roads burning fossil fuels and polluting, there is no fresh air to breathe,"
Acharya lamented. Similarly, unprecedented construction activity without protective measures kicks up a lot of dust, while guzzling diesel generators foul the ambiance. The board's direction to the state transport department for restricting new vehicles in the city has remained on paper in the absence of an enforcing law. In a bid to restrict the entry of new vehicles from about 1,000 a day, the watchdog suggested registration on alternate days, only if parking space is available and selling fuel to vehicles with a PUC (pollution under control) certificate. "We also told the transport department to stop allowing 15-year-old vehicles plying in the city and selling them where pollution levels are low," Acharya recalled. With traffic snarls limiting vehicular speed to eight kilometres per hour during peak hours, emission levels remain high and far above permissible limits. Contrary to fears of industrial pollution in the city, a reality check of industrial areas revealed that they were not purveyors of pollution as their presence is inversely proportioned to that of the knowledge sector.

"Bengaluru is not an industrial town but a knowledge hub. They (industries) are scattered and located on the city's outskirts. To think pollution means industry is a foolish notion and it does not apply to modern cities," Acharya asserted. Reckless construction up to road and building violations grossly have left no space for

free movement of air in most localities of the city. "City and building planners have not thought about open and lung spaces for air corridors and restricting construction to 25-30 percent of the road," the regulator noted. Being in a land-locked location, Acharya observed that Bengaluru does not have as much wind movement as coastal cities like Chennai, Kolkata or Mumbai to take pollutants away from the city. To check pollution, the chairman has advocated greater public transport, Metro rail services, increasing use of cycles, heavy entry fee on vehicles, allowing only four-stroke autorickshaws - as their two-stroke versions are most pollutant due to mix of kerosene in fuel - and a ban on vehicles which are not Bharat stage IV emission norm compliant. "Only electric-driven vehicles should be allowed to ply in the central business district, government should promote public transport and charge heavy-duty vehicles entering the city from outside," Acharya reiterated in an effort to tackle the pollution menace gripping the state capital. The board favours adoption of a Delhi model in Bengaluru to run transport vehicles, including city buses on cleaner fuels such as LPG and CNG to check emission of fumes. (Sharon Thambala can be contacted at sharon.t@ians.in)

Air pollution warning expanded in Minnesota

Date: 06th July, 2015 Source: KARE

ST. PAUL, Minn. - The Minnesota Pollution Control Agency is expanding its air pollution warning due to smoke from wildfires in Canada.The agency on Monday expanded the alert previously issued for the northern two-thirds of Minnesota to include the southern, central and northeastern parts of the state. The expanded area includes the Twin Cities. Heavy smoke from Canadian wildfires is slowly moving across Minnesota. As of 3 p.m., fine particle levels had reached unhealthy levels in a band across the state that includes Marshall, St. Cloud, Brainerd, Duluth and Grand Portage. All areas of Minnesota are expected to see improved air quality by Tuesday morning, but smoke could return to the state that afternoon.

Smoke From Canadian Wildfires Leads To Air Pollution Warnings

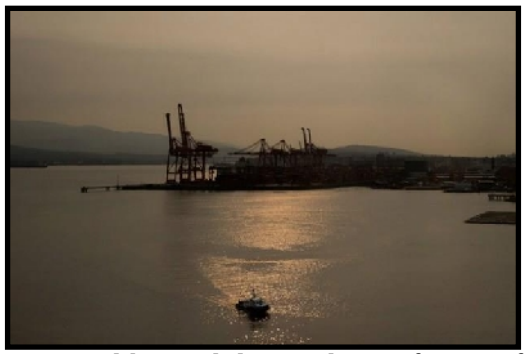
Date: 06th July, 2015 Source: Keloland

As some places struggle with flooding, others are dealing with dangerous air. Northern Minnesota is under an air pollution warning. You'll also find hazy skies again in North Dakota. In Minot, smoke from Canadian wildfires continues to cause the air quality to decline. The smog-like haze has loomed over the area for a week and is expected to continue throughout this week. The smoke isn't as thick, but you could also see a noticeable haze Monday in eastern South Dakota. While there isn't an air quality warning here, doctors say it's still a good idea to avoid strenuous exercise outside, especially if you have any underlying health conditions such as asthma. Crews are battling 110 fires right now in Saskatchewan. They've burned 741,000 acres, which is about ten times more than normal this time of year. The fires are threatening homes and are forcing more people to evacuate every day.

Metro Vancouver air quality advisory still in effect, wildfire resources 'critical'

Date:07th July, 2015 Source: Metro News

British Columbia fire crews are already operating at critical levels and have to prioritize which wildfires to fight. The province is off to the fiercest start to its summer fire season in recent memory and, on Tuesday, BC Wildfire Service' fire centre manager Kurtis Isfeld said crews and resources are stretched fighting 184 active fires. Nine of those fires have triggered evacuation orders or alerts. "The availability of resources is at



a critical level," said Isfeld. "We currently have all of our own B.C. wildfire staff engaged in operations. Any increase in fire load will be difficult for us to manage." Isfeld said the service has requested 290 additional personnel from other jurisdictions to help local crews. Seventy firefighters from Ontario arrived in B.C. on Tuesday, and more help is expected to arrive from Australia. The province has already spent more than $90 million fighting more than 865 wildfires this year, exceeding the $63 million budgeted for wildfire response in 2015. With continued hot and dry conditions forecast for the next 12 days, Isfeld expects about 30 new fires to ignite throughout B.C. every day. "Unfortunately, it does look like we're in for a long, hot summer," said Forests Minister Steve Thomson, who promised B.C. will dip into contingency funds and call on outside help to make sure fire crews have all the resources they need. The air quality advisory in effect over Metro Vancouver remains in effect. First issued Sunday after heavy smoke from surrounding wildfires outside the region settled over the Lower Mainland, the advisory warns of high concentrations of fine particulate matter in the air over Metro Vancouver and the Fraser Valley. The region says people with chronic underlying medical conditions should postpone strenuous activity until the advisory is lifted. "More favourable wind conditions have resulted in air quality improvements overnight but wildfire smoke remains in the region and in surrounding areas," the advisory reads. "This advisory is expected to continue until there is a change in the current weather." The elderly, young children and people with chronic heart and lung conditions are being asked avoid strenuous activity until the advisory is lifted in the Lower Mainland. Vancouver Coastal Health medical health officer Dr. James Lu said that anyone in the general population where pollution is at its worst (along the Sea-to-Sky highway and in Whistler, near the Pemberton-area fires) should also do the same and try to stay inside in air-conditioned buildings. "Adjust your activities according to how you feel," he said. The latest air quality updates are available to the public at www.bcairquality.ca.

Wildfire smoke drifting across Manitoba, health officials warn

Date:07th July, 2015 Source: CBC News

The skies are going to be smoky again over much of Manitoba in the coming days, thanks to forest fires here and in Saskatchewan, provincial health officials warn.The chief provincial public health officer issued an advisory late Tuesday, saying smoke from a number of wildland fires burning in both provinces will drift across most of Manitoba. Environment Canada has already issued an air quality statement for all of northern and much of central Manitoba. "Northern Manitoba is currently experiencing higher levels of smoke. The area impacted most will expand to include the western border of the province on Wednesday," the advisory states in part. However, most of the province is expected to experience some smoke over the next several days." The amount of smoke in the sky will vary according to wind direction and other weather conditions, the province says. Exposure to smoke can cause sore eyes, tears, coughing and a runny nose. Children, seniors, pregnant woman and people with heart or lung conditions — especially asthma — are at a higher risk of being affected by wildfire smoke. Dr. Susan Roberecki, medical lead for environmental health with Manitoba Health, Healthy Living and Seniors, told CBC News last week that people should use their own judgment when deciding whether to limit their time outdoors.

"People should judge themselves by their symptoms and by the visibility. If you can't see very far … they might reduce their time outside and not to do strenuous activities," she said.

Health officials are encouraging people to protect themselves by:

- Limiting outdoor activity and strenuous physical activity.

- Stopping any strenuous activity outdoors if breathing becomes difficult or uncomfortable.
- Staying indoors or moving to areas with cleaner air.
- Turning off furnaces and air-conditioning units that may draw smoke indoors.
- Keeping the indoor air cleaner by avoiding smoking or burning other materials.

People in Winnipeg and Brandon can check the air quality health index online to help decide whether to go outside on a given day.

Ghaziabad residents raise a stink over rising pollution

Date:08th July, 2015 Source: The Times of India

LUCKNOW: India Rejuvenation Initiative (IRI), a forum for probity in public life, has sought chief minister Akhilesh Yadav's intervention in controlling air and water pollution in large number of villages in Ghaziabad. In a letter to the chief minister, senior IRI member Prof HC Pande said that the problem had assumed acute proportions in around 50 villages of Ghaziabad. During a recent visit of a team of IRI the villagers showed that apart from large-scale damages to agriculture, residents have been suffering from various acute ailments. The villagers told the IRI team that the flow of water from Tronica City into the canal has led to massive damage to farmlands in the area. Due to the foul smell, villagers are unable to work on their fields. Pande also said the distributed temperature sensing (DTS) level of river Hindon around villages Ghari, Siraura, Bhoopkheri, Bhanera, Aslatpur and Farrukhnagar had gone up dangerously. The alarming rise of cases of cancer, heart attack, kidney and continuous fever has become a matter of concern and at least 50% population has been suffering from respiratory diseases in the region. The IRI team was told that at least 70% population had been taking medicines for one or the other ailment. Air pollution, causing respiratory trouble, has also led to acute problems of wide spread obesity. Seeking UP government's assistance in tackling the pollution menace, IRI has requested that the district administration, UPSIDC and UP pollution control board should take immediate corrective measures to stop water and air pollution in the area.

Catastrophic Chinese floods triggered by air pollution

Date:08th July, 2015 Source: Science News

What atmospheric scientist Jiwen Fan saw on her television in July 2013 appalled her. The worst flooding to hit China in 50 years was happening in Sichuan province, in the same place that had been devastated by a massive earthquake just 5 years earlier. Over the course of 5 days, 73 centimeters of rain pounded the mountains, peaking at 29 centimeters in a single day. Rivers burst their banks and poured through city streets, washing away homes, factories, and bridges. Steep valley slopes collapsed in deadly landslides. About 200 people died, and a further 300,000 were displaced.

But Fan was worried about more than just the immediate effect of the floods. The Richland, Washington–based researcher—an expert on air pollution and climate at the Pacific Northwest National Laboratory in Richland, Washington—wondered how they had gotten so strong so fast. The Sichuan basin, surrounded by mountains that trap smoke billowing from its industrial centers, is “notorious” for its dirty air, she says. Did air pollution play a role? To find out, she and her team of Chinese, American, and Israeli researchers designed precision computer simulations to model what had happened. Air pollution can affect precipitation in many ways. Sometimes, the aerosol particles in smoke can reduce or delay rain. Sometimes, they can make thunderstorms more intense. Their best understood interaction is in changing how water vapor condenses to form droplets in clouds. But Fan and her team have proposed a first: that pollution also

changes some air circulation patterns that lead to rainclouds. In the case of the Sichuan storms, they write in a paper published online before print in Geophysical Research Letters, soot in particular contributed to the catastrophic flooding. It prevented rainclouds from forming over the basin during the day, leading to more intense rainfall in the mountains that evening. "We were amazed at the scale of the effect the pollution had," Fan says. "Effectively it redistributed the precipitation from the wide area of the basin into the mountains." Fan and her co-authors ran two forecasts for the weather system that passed over the Sichuan basin during the peak of the floods: one with the thick blanket of smoke that covered the region and one with the kind of clean air that existed 40 years ago, before the Chinese economic boom. In the clean air model, moist air at Earth's surface was heated by the daytime sun, became buoyant, and rose to great heights, triggering a convective cycle that led to storm clouds and mild daytime rainfall. But in the dirty air model, the dark veil over the plain soaked up much of the sun's warmth high in the atmosphere, while simultaneously cooling the streets and fields below. This altered thermal structure stabilized the daytime atmosphere and suppressed rainfall.

But as night fell, the moist air mass moved northward toward the Longmen Mountains, which tower some 2000 meters above the basin. The weather system that had been building energy over the plains for 12 hours was driven upward as it collided with the range's steep contours, triggering the postponed convection. A day's worth of rainfall from the plains was focused into a few hours over a handful of mountain valleys. Geography and pollution combined to make the floods intensely severe, Fan says. And she suspects the combination is not unique. Catastrophic floods in Pakistan only a month later, she says, may have involved the same factors: heavy industry plus a mountain backdrop.

Nanjing University meteorologist Aijun Ding says that Fan's model "raises an important point" and supports his own observations. He found that air temperature and rainfall dropped precipitously when farmers outside the city of Nanjing burned their crop waste en masse, forming a wall of sooty smoke that blotted out the sun in June 2012. Intense thunderstorms had been forecast for the city, but never materialized, though the precipitation downwind the following night was stronger than expected. It is as if anticipated storms can be "burned off by intense air pollution during daytime," Ding says.

Fan worries that such effects are not being taken into account in weather forecasting. In China, for example, she notices that forecasts often give the wrong area for thunderstorms, which are likely to be downwind of where expected. Such forecasts also get the intensity "worryingly wrong," she says. Atmospheric chemist Greg Carmichael of the University of Iowa in Iowa City agrees it's high time for air pollution to become a regular part of forecasting. Earlier this year, he published a study in Geophysical Research Letters that tied an exceptional outbreak of 122 tornadoes in the southeastern United States to a bout of biomass burning in Central America. He says this kind of research shows that aerosol feedbacks can be large enough to impact weather. As he puts it: "Ignoring aerosols is becoming less of an option."

Analyst disputes electric car air-pollution study

Date:08th July, 2015 Source: Ecomento

A recent study published by the National Bureau of Economic Research (NBER) claims that – in certain cases – electric cars can contribute to more air pollution than internal combustion models, owing to the carbon emissions associated with electricity production. Researchers concluded that this variability means financial incentives, such as the current $7,500 Federal tax credit for electric cars, aren't justified in many cases by environmental impact. However, those conclusions paint an unrealistically negative picture of electric cars and their environmental impact, according to a recent article

analyzing the study by Autos Cheat Sheet. The author notes that "well-to-wheels" emissions of electric cars are somewhat dependent on the greenness of the local grid, but claims the NBER study went too far. The problem isn't with electric cars themselves, but rather with dirty electricity grids used to power them in certain regions, the article argues. Electric cars get cleaner as their sources of power do, so switching to greener forms of electricity generation would solve this problem, and also go a long way toward reducing air pollution. Eliminating tax credits and rebates for electric cars, as suggested in the original NBER study, would also have negative long-term consequences, the article claims. Getting consumers to warm up to electric cars and building the necessary infrastructure takes time, and cutting incentives would slow down that process. Electric cars remain a small market niche and may stay that way for some time, but their potential environmental and economic benefits make them a worthwhile investment, even if short-term returns don't meet expectations, the author concludes. "The NBER study makes some credible points, but using it to support the idea that electric cars are bad or not worthwhile is going too far."

Almost all London boroughs failed EU air pollution limit for toxic NO2 gas

Date:09th July, 2015 Source: Edie

All but two of London's boroughs are exceeding EU limits for a toxic gas linked to respiratory problems, ministers have admitted. Bromley and Sutton were the only two boroughs to meet the annual mean limit for nitrogen dioxide (NO2) in 2013, the latest year for which data is available. NO2 is a pollutant created by diesel vehicles. The figures suggest that 24-hour EU limits for another pollutant, fine particulates known as PM10s, were met in every borough. But limits for a more harmful, smaller pollutant, PM2.5, were missed in seven boroughs: Hammersmith & Fulham, Kensington and Chelsea, Westminster, Ealing, Tower Hamlets, Camden and Brent.

Sadiq Khan, the Labour MP who is campaigning for his party's nomination as mayoral candidate, and who requested the numbers, said: "These figures paint a dismal picture of London's long-term efforts to tackle air pollution and underline the need for a much bolder and more radical approach. "When it comes to reducing certain pollutants, it's clear that any progress we have seen has been lacklustre at best, and in some cases simply non-existent." The capital's air pollution problem was brought to the fore last week when an independent review into airport expansion backed a third runway at Heathrow. The Davies Commission said it supported Heathrow only with the proviso that there was a "legal commitment on air quality" that new aviation capacity would not be added if it delayed compliance with EU limits.

The capital as a whole is not expected to comply with NO2 limits until 2030, even without expansion at Heathrow. As recently as 2011 every single borough failed to meet the limits, according to the figures released by Rory Stewart, minister for the natural environment.

Khan and several of the other London mayoral hopefuls, including Conservative Zac Goldsmith, oppose building a third runway at Heathrow on air and noise pollution grounds. The consultation for the Davies commission was extended to take in further evidence on air pollution after the government was ordered in April by the Supreme Court to submit a plan for tackling NO2 by the end of the year Simon Birkett, founder of the Clean Air in London campaign, said: "With most of the breaches of NO2 laws in London due to diesel vehicles on Transport forLondon roads, it is clear the mayor has failed to

help boroughs comply with these limits. "The situation is starkest around Heathrow... where a third runway would result in staggering increases in NO2 concentrations beside nearby roads." A spokeswoman for Heathrow airport said: "We have always said that Heathrow expansion should only go ahead within EU air quality limits and the Airports [Davies] Commission has confirmed that our proposal meets this test." The mayor of London, Boris Johnson, plans to introduce an "ultra low emission zone" (ULEZ) in 2020 to tackle the capital's pollution problem, charging the owners of the most polluting vehicles up to £100 a day. Last week, Transport for London announced that a fully electric double decker bus would go into service from October in a bid to cut pollutants. NO2 pollution hotspots such as Oxford Street are caused largely by a high concentration of diesel buses. Later this year the government's Committee on the Medical Effects of Air Pollutants is expected to factor NO2 into its calculations on the number of prematurely deaths caused annually by pollution. This is expected to see the number of deaths double from around 30,000 to 60,000. The latest borough-by-borough data on pollutants, for 2014, will be published in September, Stewart said. Adam Vaughan

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Valley's dirty air mostly a mobile-sources issue; ergo, fix transpo first

Date:10th July, 2015 Source: Air Quality Matters

There isn't a reader who reads this blog regularly who does not now know that the San Joaquin Valley of California is this nation's most air-polluted trouble spot – irrespective of whether such had prior knowledge of this or not – a pollution trouble spot even more so than Los Angeles in the south state which was itself once this country's epicenter for air pollution. Air pollution worse in the Valley than in Los Angeles? Really? Yes, really! I'll get to the specifics on this in a moment.

Now think about this for a moment. Leaders at the local air district have been telling the Valley citizenry for years how mobile sources are responsible for the bulk of the Valley's air-pollution problem – I've read where pollution in this region from mobile sources is as much as 80 percent. It doesn't help that geography, topography and meteorology can as well be blamed for bad air being trapped in California's mid-section, often for days and sometimes weeks if not months at a time. In getting air here to a state of healthier repair it is going to take serious help (read: "work" – hard work and lots of it)!

How Valley moves- Just yesterday, I learned by reading an article in The Fresno Bee that not only has driving increased (at least in Fresno and Tulare counties, anyway), but so too has roadway capacity in the form of more miles of roads and highways being added, while public transit use has fallen off, in Fresno County, that is. In fact, in Fresno County alone, miles driven went from 19.3 million miles per day to 23 million from 2000 to 2013, a rise of 19 percent. Meanwhile, road miles during this same time went from 6,987 to 7,167. The story is little different in Tulare County, a neighboring county to Fresno's south. There, vehicle miles traveled jumped from 8.9 million to 9.9 million, or an increase of 10.8 percent. Add to this that the average time it took drivers in Tulare County to commute to work one way was 21.1 minutes in 2013.

Though public transit use rose by just one-tenth of a percentage point, miles of Tulare County roadway went from 4,728 in 2000 to 4,906 in 2013. Many residing here won't see this as a problem as commuting to work one way on average consumes just 20.5 minutes. Many as well won't see the downturn in workers commuting by public transit as any big deal. They might if congestion was an issue. But, alas, it's not. This, however, does not change the fact that free-flowing traffic existing today might become congested or gridlocked traffic tomorrow considering the San Joaquin Valley is expected to grow in population from its current 4 million to as many as 9-to-12 million by 2050, that's two-and-a-quarter to 3 times as much. If roadway lane mileage doesn't keep pace, what then? Then there is what's called: "induced demand." That is, as extra roadway capacity is added, the number of vehicle miles traveled also goes up. And, when travel increases, especially if the majority of that travel is in gasoline-fueled motor vehicles, well, guess what: the concentration of pollution in the air also jumps. Transit could lessen some of the impact. But the reality that

transit-bus commuting in this area has dropped from 1.7 percent to just 1.1 percent doesn't bode well. It may be time to consider something other than roadway-based transit bus service as an effective solution. It may be time to look at light rail. SJV the nation's air pollution hot spotThose who would believe that the South Coast Air Basin is the epicenter for polluted air in the United States would be wrong.

The basin includes all of Orange County, and the non-desert portions of Los Angeles, Riverside and San Bernardino counties. Covering an area in size no smaller than 30,000 square miles, housing no fewer than 17 million people, the South Coast air basin does have its share of pollution. But, air-pollution-wise, the San Joaquin Valley, at around 24,000 square miles in area with its approximately 4 million residents is the dirty air king. Region versus region, per-San-Joaquin-Valley-square-mile, an average 166 and two-thirds people reside while an average 566 and two-thirds persons per square mile live in the South Coast air basin – that's 400 more people per square mile. What this tells me is that per given area, the South Coast region has a far higher concentration of people whereas the San Joaquin Valley, with far fewer people, has a far higher concentration of air pollution per person. Despite this, the concentration of pollution in the air, South Coast compared to San Joaquin Valley, isn't that much different. And, in effect, what this means is that if the Valley had a population similar to that of the South Coast region, the concentration of pollution in the air would be considerably higher. Alternatively, without air-cleansing Pacific Ocean breezes to help filter area air in the Southland, that location would no doubt be this country's worst place for dirty air.

Mosses and lichens come to the rescue in battle against air pollution

Date:10th July 10, 2015 Source: Times Live

We cannot avoid breathing in the air around us. When we breathe, tiny air pollutants such as toxic trace elements can penetrate and spread throughout our bodies. These pollutants can also be absorbed by our skin. Once inside, trace elements find their way into our lungs and enter our blood system. We might not be able to see these harmful elements with the naked eye, but we can detect them by using plants as well as nuclear physics and related techniques. There is a rising need for every country to monitor concentrations of pollutants in the air. But studies have focused mainly on classical ones like carbon monoxide. Heavy metals have not received the attention they deserve despite having been identified as the most harmful active air pollutants by the World Health Organisation. But new scientific research is making headway into ways of tracking less visible air pollutants. A collaborative research initiative is using a simple method called biomonitoring to assess levels of toxic trace elements in the Western Cape area. We are using mosses and lichens as air filters. Once the invisible toxic trace elements in air have been revealed, certain air quality standards can be enforced. Industry will be encouraged to invest in technologies that emit fewer pollutants. Moreover, people will be encouraged to find ways of reducing the air pollution emissions like unrestricted waste burning. Air pollution can cause chronic diseases, degrade the environment and even destabilise economies. Vehicle emissions and industrial growth are the major causes of air pollution. At high concentrations, the effects of heavy metals in the air can lead to mortality. The World Health Organisation has linked premature mortality and reduced life expectancy to air pollution exposure. Air pollution also leads to forest decline and loss in agricultural production. Unfortunately air pollution is not always noticeable. Heavy metals such as lead, cadmium and mercury carry the highest and most dangerous toxicity and can be found in clean-looking air. What makes mosses and lichens especially suitable for studying air pollution is their underdeveloped root system. As a result they get their nutrients from the air through atmospheric dry and wet depositions.

Both mosses and lichens are non-vascular plants that act as natural air filters against toxic trace elements. They can be thought of as analogues to air filters. Their underdeveloped root system minimises their contact with soil and so the amount of pollutants they get from the soil can be considered negligibly small. To survive they accumulate trace elements from atmosphere. In this way they are able to accumulate and retain air pollutants. Mosses are green land plants with small leaf-like structures. Mosses lack some of the

adaptations to dry environments that are found in the vascular plants and so are only able to grow and reproduce in wet environments. Lichens are a complex life form that have an interdependent partnership with fungus and algea. Lichens do not have any roots, stems or leaves. They usually create disc-shaped structures and often have a grey or pale white appearance.

To identify the toxic trace elements in plants, we bombard them with neutrons, in a nuclear physics technique called neutron activation analysis. Once the accumulated trace elements in the plants absorb the bombarded neutrons, they become unstable. However, the trace elements prefer to exist on a less excited state which has energy higher than the absolute minimum also known as the ground state. Once they are radioactive, they de-excite by emitting high energy photons called gamma rays. These help in identifying different elements in the sample. Each element will give a gamma-ray of its own unique energy. Gamma-rays indicate the presence of a specific element in the sample under study. Gamma-rays are presented in a spectrum in a form of peaks at particular energies and the intensity of each peak is related to the concentration of that particular element. In that way, scientists can be able to identify an element in the sample as well how much of it is there. Apart from just identifying the kinds of toxic pollutants available in air, it is also important to know how much of those pollutants are there. This is because the extent to which one is affected by air pollution depends on the length of exposure and the amount of pollution in the air. That is where mosses and lichens are unique. Their air pollutant fighting capability can be used worldwide. This is important because, on a larger scale, long term results of air pollution will affect the planet's ability to sustain life. Fresh air, pure water and unpolluted earth are the basic needs for humanity to continue to exist. Hence all living creatures have the right to an environment that is not harmful to their health and nations have a responsibility to keep the quality of air in a good state.

Arrangements to cut air pollution as over 4m vehicles enter Makkah

Date:12th July, 2015 Source: Yahoo News Maktoob

With the flow of pilgrims and visitors to Makkah to spend the last few days of the holy month of Ramadan in the vicinity of the Holy Kaaba gaining momentum, the Civil Defense has chalked up unprecedented and unique arrangements to ensure the safety and comfort of the faithful. Since the beginning of the fasting month, more than four million vehicles have entered the holy city and another one million or more are expected in the remaining couple of the fasting days. In the wake of this, the Civil Defense has made elaborate arrangements to handle emergency situations as well as to reduce carbon emission and control pollution, the Saudi Press Agency reported.

Fahd Al-Radadi, director of the civilian protection group at the department, said special teams have been mobilized to cleanse the entry points of major tunnels and sites that are potentially vulnerable to risk while other teams have been assigned to monitor chemical substance, gas and carbon monoxide, and radioactive materials inside the tunnels round the clock basis. There are also teams to monitor movement of vehicles and avoid any chances of jams inside tunnels. The Civil Defense teams are implementing the plan in cooperation and coordination with the concerned security departments and agencies. Al-Radadi said the teams for monitoring chemical substance have been stationed to measure the level of gas and carbon emission inside tunnels for both vehicles and pedestrian, and these include tunnels of Al-Maskhouta, King Abdulaziz, Souq Al-Saghir, Jarwal and Kadwa. The teams are well-equipped with the high tech devices.

The department has also worked out an extensive medical evacuation plan for the central area near the Holy Haram in the event of emergency situations such as stampede, accident, food poisoning, natural calamities, chemical or radioactive leakage and the like, the official added. Meanwhile, the general department for Haj and Umrah at the Makkah governorate said over 4 million vehicles entered Makkah since the beginning of Ramadan. Sultan Al-Dosary, director general of the department, said the

department's Umrah plan is being implemented flawlessly by all the concerned departments with the close and meticulous supervision of Prince Khaled Al-Faisal, emir of Makkah and chairman of the Central Haj Committee. Transportation of pilgrims and visitors within the city is the major highlight of the plan and it is being implemented in a smooth way, reducing traffic jams, he said.

Pollutionwatch: Ozone, the flipside to sunny days

Date: 12th July, 2015 Source: The Guardian

The record temperature this month also brought problems with summertime smog. Ground-level ozone reached between 7 and 9 on the UK's 10-point air-quality index. Millions of people across the eastern half of England were exposed to pollution levels that were about twice World Health Organisation (WHO) guidelines. This was the worst summertime smog across southern England since 2012. Ozone is synonymous with Los Angeles in the 1960s and 1970s, when concentrations could be assessed by measuring how fast the smog rotted rubber. At ground level, ozone forms from chemical reactions between natural, traffic and industrial pollution in strong sunlight, meaning that concentrations are usually greatest in the afternoon. Some people doing sport notice breathing problems at these times even if they are not asthmatic. In the evening, concentrations normally drop quickly as ozone reacts with surfaces and fresh city pollution. Avoiding strenuous exercise and endurance sports in the afternoon is a practical way for vulnerable people to reduce their exposure. Health guidelines for ozone are set assuming eight-hour exposure, based originally on studies of schoolchildren in summer camps. However, overnight on 30 June and 1 July, ozone-free air did not form close to the ground across southern England. (This might have been because of a combination of overnight breezes and changes to air pollution in our towns and cities.) Many people were exposed to ozone above WHO guidelines for up to 36 rather than eight hours. Maybe it's time to rethink the health guidelines for this pollutant?

Bees recruited by scientists to monitor air pollution

Date:12th July, 2015 Source: The Telegraph

The static electricity produced by bees means that airbourne particles stick to their wings and body Bees are crucial for crop pollination and honey production but now scientists have recruited the pollinators for pollution monitoring. Scientists at the Natural History Museum are capitalising on the fact that pretty much everything will stick to a bee's body and wings. It is why they are so vital for pollination because so much static electricity builds up in their fur that it draws in tiny particles. Researchers realised that the build-up of industrial pollution on bees can be used to monitor air quality. The insects can fly up to 2.5km a day around their hives, so they can provide a much more accurate sample of particulate matter in an area than ground-based observations. The researchers studied bees in an industrial area of Sardinia where dozens of lead-zinc mines operated until recent times, leaving thousands of tonnes of finely ground ore materials exposed. Industrial and mining activity releases a range of fine particles that can remain suspended in the atmosphere; some of these can be particularly harmful to humans. Mineralogist Dr Christian Mavris, one of the lead authors of the study, said: "Using our novel method, bees dynamically sample airborne particulate matter. "This allowed us to discern between different emission sources. Stationary observation stations allow for more accurate estimates of particle quantities, but they cannot match our new method's ability to determine emission sources." The Sardinian samples showed that The bees' head, wings and legs were coated with particulate matter of industrial and mining origins, accumulated during their adult life span of about six weeks. The researchers were able to track the origin of these particles, including emission sources several kilometres from the beehives. Their findings suggest that the exposure of humans living in the area to post-mining and industrial pollutants could be far higher

than previously thought. Dr Mavris believes that bees could be used in the British countryside to monitor former industrial areas such as old coal and lead mines. “There are lots of applications for this kind of bee monitoring,” he said. “We often have an assumption that air in the countryside is very good but that is probably not a precise estimate. “If we wanted to test an area we could take some honeybees and put some hives there and then check the level of particles that stick to them. It could give us a good indication of how air quality was changing over time. “The Sardinian experiments have shown us that in old mines, even when the ore dumps had been covered over by soil, the particles were still getting into the air. “It could help narrow down sources of air pollution.” The research was published in the journal PLoS One.

Rs. 1-cr. project to monitor air pollution

Date:12th July, 2015 Source: The Hindu

An air pollution monitoring system, part of the Modelling of Atmospheric Pollution and Networking (MAPAN) of the Union Ministry of Earth Sciences, was inaugurated by Andhra University Vice-Chancellor G.S.N. Raju at the university’s Department of Meteorology and Oceanography.

The university is implementing the project in collaboration with the Indian Institute of Tropical Meteorology (IITM) in Pune, Head and Principal Investigator of the project K.V.S.R. Prasad has said. The Rs. 1-crore system would continuously measure the atmospheric pollutants -- carbon monoxide, carbon dioxide, oxides of nitrogen, ozone, particulate matter, black carbon, methane and total non-methane hydrocarbons and weather parameters like air temperature, solar radiation, wind speed, wind direction and relative humidity.

The data from stations installed at Pune, Chennai, Jabalpur, Hyderabad, Delhi, Srinagar and Udaipur has been transferred online to a server at IITM for further processing and analysis, according to Prof. Prasad. According to the data seen, AU campus is a tolerable area since the mean value of pollutants on the AU campus is under the acceptable value.

What's causing air pollution in Delhi?' NGT asks union transport ministry

Date: 13th July, 2015 Source: The Times of India

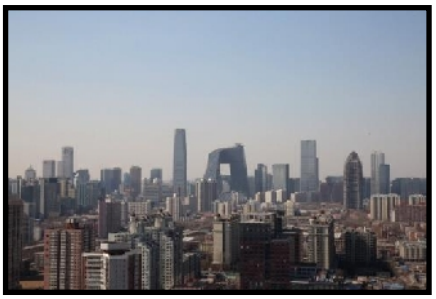
NEW DELHI: The National Green Tribunal (NGT) on Monday directed the union transport ministry to submit its views on what is contributing to air pollution in Delhi. Reacting to the ministry's previous affidavits which pretty much stated that transport isn't the major contributor to poor air quality, the NGT bench headed by chairperson, justice Swatanter Kumar asked the ministry to come back on Tuesday with substantive arguments on what apart from transport could be causing such severe air pollution in the city. Sanjay Upadhyay, lawyer who is representing the petitioner, Vardhaman Kaushik also intervened highlighting how the ministry and all other agencies have been dodging action to control sources of air pollution. "Nothing has happened since last October. There are no substantial submissions, everybody especially the transport ministry is in a mode of denial. We have to accept the norms for polluting vehicles is very lax. We have made our submissions to NGT on this."

The union transport ministry had filed an application in NGT in April against a ban on old diesel vehicles claiming that age based phase-out is a "short-cut" that may not yield much improvement in air quality and that "the fitness testing of the vehicle will prove whether a vehicle has reached the end of its life or not..." In subsequent affidavits, the ministry had claimed that more than ten year old diesel vehicles contribute to less than 1% of PM 2.5 (fine, respirable pollution particles) emissions in the city. Their argument was based on a study by Professor Dinesh Mohan and other IIT scientists.

The ministry had argued that only 7% of the vehicles in the capital are more than 10 years old. It had also submitted data on PM 2.5 levels in RK Puram found that on Sundays or holidays despite traffic being very low the PM 2.5 levels remained high. NGT had slammed the study as it failed to explain what was causing high air pollution levels on holidays. The Centre for Science and Environment (CSE) has also criticized the ministry for using studies by IIT Delhi "selectively" ... "to play down the problem of vehicular pollution and block the ban on old diesel vehicles."

Beijing, Zhangjiakou To Contain Air Pollution Through Wind Power

Date: 13th July, 2015 Source: China Topix



Beijing is setting its eye on resolving its problem with air pollution. On Monday, it was revealed that the China's capital city is working hand in hand with Zhangjiakou in an attempt to contain this predicament. According to Eco-Business, Beijing and Zhangjiakou already have a joint project that is in the works. Local media said the new project refers to the use of wind power in generating heat and this will be used in mitigating the air pollution in the city. The plan, according to several sources, is expected to commence in 2017 and it will be set in northwest Beijing's Yanqing county. Perhaps the main reason why Beijing is partnering with Zhangjiakou is the fact that Yanqing county borders it, and the said area is very abundant in terms of wind power. In light of the joint project, the National Energy Administration has required the two cities to coordinate their power grid sectors and companies, as well as their heating companies. The decision of the joint project comes amid China's long battle against air pollution, which is reportedly caused by coal burning.While coal burning is still China's means of energy consumption, the fume that it produces has since been causing major issue for Beijing and neighboring areas Hebei and Tianjin, as per China.org. Since Beijing is home to over 20 million people, the city requires a lot of power and heat. Though this joint project, Beijing can minimize its consumption of coal to produce heat and divert its attention to wind power. Air pollution is not something new to China, which is now considered as the world's largest greenhouse gases emitter. However, China is now changing its ways to get rid of the notorious label. On June 30, Chinese Premier Li Keqiang announced that the county will henceforth commit itself to doing everything it can in reducing its carbon emissions, Foreignpolicy.com has learned. The nationwide plan, which also includes China's desire to focus on renewable energy as its primary energy supply, is set to be realized by 2030. In the recent years, Beijing has been at the forefront of this plan. It has since implemented policies on regional coal caps and certain bans on steel, new coal and cement plans.

Unraveling the Relationship Between Climate Change and Health

Date:13th July, 2015 Source: The New York Times

Air pollution, like heavy smog in Beijing, is contributing to climate change, a phenomenon that is starting to affect people's health around the world. CreditAgence France-Presse — Getty Images Is climate change a serious threat to human health? Simple logic would suggest the answer is yes, a point that the Obama administration is using to build support for the president’s effort to make climate change a centerpiece of his final months in office. A White House report listed deepening risks. Asthma will worsen, heat-related deaths will rise, and the number and traveling range of insects carrying diseases once confined to the tropics will increase. But the bullet points convey a certainty that many scientists say does not yet exist. Scientists agree that evidence is growing

that warmer weather is having an effect on health, but they say it is only one part of an immensely complex set of forces that are influencing health. For example, scientists note that global travel and trade, not climate change, brought the first cases of chikungunya, a mosquito-borne tropical disease, to Florida. Temperatures may be rising, but overall deaths from heat are not, in part because the march of progress has helped people adapt — air conditioning is more ubiquitous, for example, and the treatment of heart disease, a major risk for heat-related mortality, has improved. The resurgence of forests in the eastern United States and the subsequent increase in the deer population have helped drive a sharp growth in ticks and Lyme disease. But the increase in the prevalence of the illness in the United States has little to do with the climate, federal health experts say. "There's a lot of evidence showing that extreme weather can hurt people, but what we don't know is whether those effects are getting worse," said Patrick L. Kinney, director of the Columbia University Climate and Health Program, adding that scientists don't have the long-term data needed to pinpoint how climate change is affecting health.Still, climate change is a contributing factor. Ragweed now blooms about two to three weeks longer in the north central United States than it did a few decades ago, extending sneezing and watery eyes further into the fall, according to research led by Lewis H. Ziska, a plant scientist at the United States Department of Agriculture. The Asian tiger mosquito, which came to the southern United States from Japan in the 1980s, likely in a shipment of used tires, has recently spread as far north as Connecticut, an encroachment scientists have connected to rising temperatures, said Dina Fonseca, an entomology professor at Rutgers University. Mary H. Hayden, a scientist at the National Center for Atmospheric Research in Boulder, Colo., who studies climate and health, said of dengue fever, a tropical disease carried by mosquitoes: "I don't think we can dismiss the role of climate. But can we say there is a direct causal link? No, we can't. It's more complex than that." The science is in its infancy. Data on insects, pollen counts and diseases in developing countries is often patchy. Many studies show associations, meaning two things are happening at the same time, but it is not clear that one is causing the other. Some experts compare it to the state of science in the early days of understanding smoking's effect on lung cancer.

Evidence is accumulating, however. In 2000, the first National Climate Assessment, a government document weaving together the best evidence on climate change, had just 21 pages on health. The most recent assessment included a special section on health that filled more than 400 pages. Two peer-reviewed British journals — Philosophical Transactions B and The Lancet — have dedicated many pages to the topic this year. Europeans, unburdened by the level of political controversy over climate change in the United States, often give more conclusive interpretations of the science. "We are in a far more certain place now," said Nick Watts of the University College London Institute for Global Health and a co-author of the Lancet analysis.

"We feel very comfortable talking about direct effects of climate change on health." The climate's effect on health is generally less pronounced in wealthier countries like the United States, where so many people are protected from the elements in their homes. A study comparing Laredo, Tex., and a city just across the border in Mexico found the incidence of dengue fever was far higher in Mexico, even though the mosquitoes that carry it were more abundant in Texas. Researchers attributed the Texan advantage to economics — air conditioning and windows that shut — not climate. But climate change is affecting health in developed countries, too. In Canada, the tick population has exploded in recent years, with 13 areas where ticks were living and reproducing locally, up from just two in 1997.

Researchers have found that some areas have become warmer, and thus more suitable for ticks. Warmer weather allows more immature ticks to survive into adulthood, expanding the population."The areas that are suitable for ticks to colonize are changing," said Patrick Leighton, an assistant professor of veterinary epidemiology at the University of Montreal. Insects like ticks and mosquitoes cannot regulate their own body temperatures, so their breeding, feeding and life cycles are extremely sensitive to temperatures. Canada now has about 700 locally acquired cases of Lyme disease a year, up from about 40 cases 15 years ago.

Nearly all past infections used to happen outside Canada. Now most are acquired locally. "This whole Lyme disease issue has gone from theory to reality for us," said Dr. Nick Ogden, a senior scientist for the Public Health Agency of Canada. "Now the ticks are really moving in." But Lyme disease is also an example of just how difficult it is to draw broad conclusions about how climate change affects health. The disease is also moving south, with large sections of Virginia and parts of North Carolina now inundated with ticks that carry the disease. But that pattern appears to have little to do with climate. Dr. C. Ben Beard, associate director for climate change at the Centers for Disease Control and Prevention, said reforestation in the eastern United States and the expanding populations of deer and people appear to be factors.

Climate change threat must be taken as seriously as nuclear war – UK minister

Date:13th July, 2015 Source: The Guardian

The threat of climate change needs to be assessed in the same comprehensive way as nuclear weapons proliferation, according to a UK foreign minister. Baroness Joyce Anelay, minister of state at the Commonwealth and Foreign Office, said the indirect impacts of global warming, such as deteriorating international security, could be far greater than the direct effects, such as flooding. She issued the warning in a foreword to a new report on the risks of climate change led by the UK's climate change envoy, Prof Sir David King. The report, commissioned by the Foreign Office, and written by experts from the UK, US, China and India, is stark in its assessment of the wide-ranging dangers posed by unchecked global warming, including:

- very large risks to global food security, including a tripling of food prices
- unprecedented migration overwhelming international assistance
- increased risk of terrorism as states fail
- lethal heat even for people resting in shade

The world's nations are preparing for a crunch UN summit in Paris in December, at which they must agree a deal to combat climate change. Monday's report states that existing plans to curb carbon emissions would heighten the chances of the climate passing tipping points "beyond which the inconvenient may become intolerable". In 2004, King, then the government's chief scientific adviser, warned that climate change is a more serious threat to the world than terrorism. "Assessing the risk around [nuclear weapon proliferation] depends on understanding inter-dependent elements, including: what the science tells us is possible; what our political analysis tells us a country may intend; and what the systemic factors are, such as regional power dynamics," said Anelay. "The risk of climate change demands a similarly holistic assessment." The report sets out the direct risks of climate change. "Humans have limited tolerance for heat stress," it states. "In the current climate, safe climatic conditions for work are already exceeded frequently for short periods in hot countries, and heatwaves already cause fatalities. In future, climatic conditions could exceed potentially lethal limits of heat stress even for individuals resting in the shade."

It notes that "the number of people exposed to extreme water shortage is projected to double, globally, by mid century due to population growth alone.Climate change could increase the risk in some regions." In the worst case, what is today a once-in-30-year flood could happen every three years in the highly populated river basins of the Yellow, Ganges and Indus rivers, the report said. Without dramatic cuts to carbon emissions, extreme drought affecting farmland could double around the world, with impacts in southern Africa, the US and south Asia.

Areas affected by the knock-on or systemic risks of global warming include global security with extreme

droughts and competition for farmland causing conflicts. "Migration from some regions may become more a necessity than a choice, and could take place on a historically unprecedented scale," the report says. "It seems likely that the capacity of the international community for humanitarian assistance would be overwhelmed." "The risks of state failure could rise significantly, affecting many countries simultaneously, and even threatening those that are currently considered developed and stable," says the report. "The expansion of ungoverned territories would in turn increase the risks of terrorism."

The report also assesses the systemic risk to global food supply, saying that rising extreme weather events could mean shocks to global food prices previously expected once a century could come every 30 years. "A plausible worst-case scenario could produce unprecedented price spikes on the global market, with a trebling of the prices of the worst-affected grains," the report concludes.

The greatest risks are tipping points, the report finds, where the climate shifts rapidly into a new, dangerous phase state. But the report also states that political leadership, technology and investment patterns can also change abruptly too. The report concludes: "The risks of climate change may be greater than is commonly realised, but so is our capacity to confront them. An honest assessment of risk is no reason for fatalism."

India may be hotter by 8 degrees, lose $200bn per year: Study

Date:14th July, 2015 Source: Hindustan Times

Global warming is at a much faster pace than estimated. The visible impact would be temperature crossing 50-degree mark by the turn of the century and water stress in the northern part of India, a new global study released on Monday in London and Mumbai said. Climate change could cost India US $200 billion per annum if it fails to ensure adequate adaptation measures and the countries fail to reduce their carbon emissions, the study — Climate Change: A Risk Assessment — conducted by climate advisors to the governments in United States, United Kingdom and China, the world's biggest carbon emitters, said. They analysed data from across the world to arrive at the conclusions. "The water stress will increase in coming years and will have implications on India's food security," said Arunabha Ghosh, chief executive officer of Council on Energy, Environment and Water, the Indian partner for the study funded by UK foreign office.

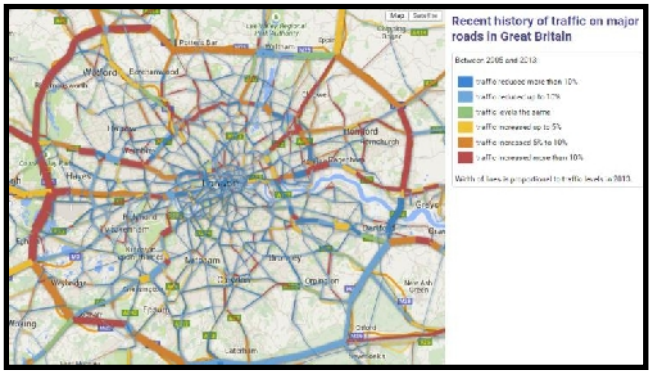
The authors have clearly outlined the northern part of India, including Delhi, Chandigarh, Bihar and Uttar Pradesh, as high impact zone of climate change in India. In the report, they said, said high heat stress can have various implications, including restrictions on outdoor work and sports and not getting sound sleep. Different scenarios presented in the report say the temperature could rise 8 degrees Celsius, crossing the 50-degree mark in cities like Delhi, Jaipur and Chandigarh during summer. The study reiterated the fact that extreme rainfall will increase in India and sounded an alarm that frequency of floods will increase in the Gangetic plains. Its implication will be on India's food security with an estimated loss of up to US $200 billion per year by the turn of this century. This is in tune with the assessment made by the Indian Agricultural Research Institute. The report for the first time also showed internal security risks arising

because of climate change. It is well documented that a reason for rise of IS in was back to back droughts and food crises, the study said.

What can the next mayor to do combat London's air pollution?

Date:17th July, 2015 Source: City Metric

Sian Berry is seeking the Green Party's nomination to be London's mayor. So oddly enough, she has some thoughts about the figures which this week showed the terrifying level of air pollution in the capital... The shocking news this week that air pollution is responsible for nearly 9,500 early deaths a year in London makes air pollution a true public health emergency – and we need a full range of policies and action to match. The better news is that London's citizens are already taking notice. I spoke at a packed event on air pollution last week, organised by Client Earth's Health Air Campaign and London Sustainability Exchange, where local communities and campaigners from all over London came to share their experience and knowledge of getting action on this problem. A very encouraging sign is the growth in the number of community campaigners doing citizen science to map local hotspots. Successful examples including campaigners against Transport for London's proposed Silvertown Tunnel; my Green party colleague Caroline Russell's work in Highbury; and residents in Putney, who won cleaner buses after they found horrific levels on their high street. In my council ward of Highgate, our own monitoring project showed that even on the leafy fringes of central London, traffic was responsible for nearly double the legal limits on some of our busiest roads. Another positive development is the very clear results of Client Earth's legal challenge to the government. In April, the Supreme Court ruled that ministers must make new plans to bring our air within legal limits "in the shortest time possible".In the past, I've criticised Transport for London's upcoming Ultra Low Emission Zone (ULEZ), and said it needs to be bigger, sooner and fiercer. This is certainly what I'd bring in if I was responsible – and I'm standing to be the Greens' candidate for mayor of London next year to try to make that happen. I've also criticised the lack of progress on electric vehicle charging points: there are just over 1,300 in the Source London network, compared with the 25,000 promised. I've also been supporting Blue Solutions, who have taken over expansion plans, to help them work with boroughs to get more parking spaces dedicated to zero-emission cars.



But of course this cannot be just about cleaner vehicles. It's not that radical to talk about taking more road space away from cars in London and prioritising other ways to get around. Just a few minutes exploring the sea of road links in the capital that are colour-coded blue on the mapping project I recently conducted for the Campaign for Better Transport shows that traffic has fallen on most of London's roads over the past decade. That's true in both inner and outer London – and the average fall is about 10 per cent.

We need to work with this trend away from driving and car ownership, not build wider motorways and expensive road tunnels and bridges. If we don't change the plan, this new map from the Green London Assembly Members suggests, we'll leave Londoners stuck in stationary buses and cars for an extra 40 days a year. We need to replace the creaking Congestion Charge, which first started 12 years ago, with something much more sophisticated, covering all of London not just a small central zone. A replacement scheme should start consultation as soon as the next mayor takes over, with a set of fair new charges based on three principles: how far you drive, how polluting your vehicle is, and the time of day.

I also like to remind people about the 2012 Olympics, where a proper effort was made to get Londoners to switch modes, travel outside rush hour, share cars and generally avoid driving in the city. Workplaces, commuters and delivery companies were engaged with in a massive communications effort that included adverts, phone lines and advice on the ground from TfL staff. People listened, understood the need, and more than one third of Londoners made some simple and easy changes to their routines. The result was that – even with some road space taken away for "Games Lanes" –- there was far less congestion and traffic than normal. The sense of urgency and a big occasion meant this fierce application of "Smarter Choices" principles worked a treat. And the urgency of the public health problem of air pollution now means a similar level of investment and effort is fully justified.

What London has lacked over the past eight years is a mayor with a vision for how great a city with less traffic and less pollution can be for everyone, every day. While Boris has wasted time on "iconic", not-very-low emission buses and sticking pollution to the roads with glue, we could have done so much more and saved many lives. If the next mayor is a Green, the right to breathe clean air will not be ignored for another minute.

Sian Berry is a Green party councillor in the London Borough of Camden, and is seeking the party's nomination to be its mayoral candidate next year. She also works with the Campaign for Better Transport. If you or someone you know is hoping to be mayor of London, and would like to put forward your own plans on these pages, then please do get in touch.

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4 degree rise in global temperature may make outdoor work impossible in northern India: Study

Date:19th July, 2015 Source: The Economic Times

NEW DELHI: If the world warms up by 4 degrees Celsius, there is 30 per cent probability that temperatures will be so high that even moderate outdoor work cannot be carried out in the hottest month in northern India, a study on the risks of climate change has said.

There would also be a 40 per cent chance that individuals in northern India will not be able to participate in competitive outdoor activities in summertime if global average temperature rises on an average by one degree.

An international group of climate scientists, energy analysts and experts from finance and military recently released an independent assessment of the risks of climate change commissioned by the United Kingdom's Foreign and Commonwealth Office. "The most important decision any government has to make about climate change is one of priority - how much effort to expend on countering it, relative to the effort that must be spent on other issues.

"This risk assessment aims to inform that decision. In a year when important climate negotiations are scheduled, this kind of multi-country risk assessment hopes to inform a wide range of stakeholders about the risks for which human societies need to prepare," said Arunabha Ghosh, CEO, Council on Energy, Environment and Water (CEEW) and one of the lead co-authors of the report. The report was the result of a collaboration between Harvard University Center for the Environment, Tsinghua University, China, CEEW and Cambridge University Centre for the Study of Existential Risk. The study also said that on a high emission pathway, flooding in the Ganges basin could be six times more frequent, becoming a 1 in 5 year event over the course of the century. It also said that with 1 metre of global sea level rise, the

probability of what is now a "100-year flood event" becomes about 1000 times more likely in Kolkata. The assessment considers three key areas - the future pathway of global emissions, the direct risks arising from the climate's response to those emissions, and the risks arising from the interaction of climate change with complex human systems. The report suggests that the largest risks of climate change may be those that are magnified by the interactions of people, markets and governments. It finds that migration from some regions of the world could become "more a necessity than a choice" and that the risks of state failure could rise significantly affecting many countries simultaneously.

The report recommends applying the principles of risk assessment to climate change, broadening participation in the climate risk assessment process beyond just climate scientists, and reporting to the highest decision making authorities at the national and international levels.

California Wants 'Green' Freight Vehicles That Can Help Them Cut on Pollution

Date:20th July, 2015 Source: Mobile Mag

Air pollution is a humungous problem in California, thanks to the numerous oil refineries, industrial facilities and the countless number of vehicles that are present in the state. Today, it is amongst the most populated areas on Earth; however, it looks like the situation won't be the same forever. Californian governor Jerry Brown indicated that he is determined to make a dramatic cut in the levels ofgreenhouse gases present in the state by 2030 for which he might have to introduce some major changes for the big rigs and cargo ships present in the state. According to reports, several agencies have been told to draft a plan for a freight transportation system that's much cleaner and greener. The plan will most probably focus on emissions-free ports, trucks and trains.

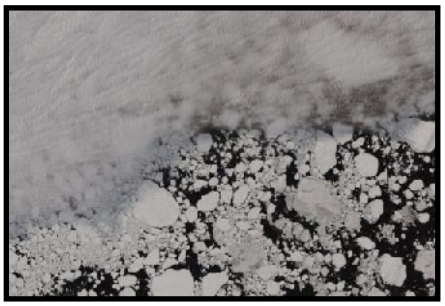
As was expected by this move, California's freight business has turned a bit nervous. According to The California Trucking Association, their main cause of worry is the new efficient technology which might prove 'costly;' however, they are willing to work with the state on any sort of possible solution. Officials who are designated the job of planning out this project have until July 2016 to present their detailed reports as what all can be done in order to implement the changes as soon as possible. Half of America's dirtiest cities are present in California and air pollution at those places has reached alarming levels. Every year, hundreds of people get diagnosed with asthma and other respiratory illnesses due to California's dirty air. Californian government has ignored this issue for long now, but it seems like they've finally woken up.

Renowned climate scientist projects rapid rise in sea level, more intense storms

Date: 20th July, 2015 Source: Alaska Dispatch News

James Hansen has often been out ahead of his scientific colleagues. With his 1988 congressional testimony, the then-NASA scientist is credited with putting the climate change issue on the map by saying that a warming trend had already begun. Now Hansen — who retired in 2013 from his NASA post and is now an adjunct professor at Columbia University's Earth Institute — is publishing what he says may be his most important paper. Along with 16 other researchers, including leading experts on the Greenland and Antarctic ice sheets, he has authored a lengthy study outlining a scenario of potentially rapid sea-level rise combined with more intense storm systems. It's an alarming picture of where the planet could be headed — and hard to ignore, given Hansen's reputation. But it may also meet considerable skepticism in the broader scientific

community, given that its scenarios for sea-level rise occur more rapidly than those ratified by the United Nations' Intergovernmental Panel on Climate Change in its latest assessment of the state of climate science, published in 2013. The authors conclude that 2 degrees Celsius global warming — the widely accepted international target for limiting warming — is "highly dangerous."



The research is slated to appear online this week in Atmospheric Chemistry and Physics Discussion, an open-access journal published by the European Geosciences Union in which much of the peer review process, in effect, happens in public — a paper is uploaded, other scientists submit comments on it, and the authors respond. The new paper takes, as one of its starting points, evidence regarding accelerating ice loss from parts of the planet's ice sheets, especially West Antarctica. One of the co-authors on the new paper, Eric Rignot of NASA, was the lead author of a 2014 study that suggested, as one NASA news release put it, that the decline of West Antarctica could now be "irreversible." In the new study, Hansen and his colleagues suggest that the "doubling time" for ice loss from West Antarctica — the period over which the amount of loss could double — could be as short as 10 years. In other words, a non-linear process could be at work, triggering major sea-level rise in a time frame of 50 to 200 years. By contrast, Hansen and colleagues note, the IPCC assumed more of a linear process, suggesting only about 1 meter of sea-level rise, at most, by 2100. "If the ocean continues to accumulate heat and increase melting of marine-terminating ice shelves of Antarctica and Greenland, a point will be reached at which it is impossible to avoid large scale ice sheet disintegration with sea level rise of at least several meters," the new paper says. Using climate models and an analogy with the Eemian period — an interglacial period 120,000 years ago that featured considerable sea-level rise — the paper goes on to suggest that major ice loss from both Antarctica and Greenland will change the circulation of the oceans as large volumes of cold, fresh water pour in. This freshening or decreasing saltiness of the ocean, at both poles, could ultimately block the oceans' overturning circulation, in which (in the Northern Hemisphere) warm water travels north and then colder, denser water sinks and travels back south. As the paper notes, there is already evidence of such cooling in the North Atlantic — presumably because of ice loss from Greenland.

Around Antarctica, meanwhile, sea ice has been growing — potentially another indicator of cooling and freshening at the ocean surface because of ice loss from the frozen continent. In the model employed by Hansen and his co-authors, this cooling and freshening of the oceans eventually leads to a shutdown of the oceans' circulation, with warm waters trapped below a cold, fresh surface layer in the Antarctic region continually eating away at ice sheets from below. It also triggers a globe with ever-warming tropics but cold poles — leading to a large contrast in temperatures between the mid-latitudes and the polar regions. This scenario depends on major ice loss from Greenland or Antarctica happening relatively quickly — an assumption that lies at the center of the new paper. And while the paper expresses doubts whether a continued non-linear growth will occur in Greenland, it concludes that "if (greenhouse gases) continue to grow, the amplifying feedbacks in the Southern Ocean, including expanded sea ice and (Southern ocean overturning circulation) slowdown, likely will continue to grow and facilitate increasing Antarctic mass loss." So is this abrupt climate change scenario really something we should take seriously? Michael Mann, a climate researcher at Penn State University who reviewed the paper at The Washington Post's request, commented by email that "their case is most compelling when it comes to the matter of West Antarctic ice sheet collapse and the substantial sea level rise that would result, potentially on a timescale as short as a century or two." But Mann was skeptical of other aspects of the work, including whether ice loss from Greenland and Antarctica would lead to a near-total shutdown in the circulation of the oceans. Mann said, "Whether or not all of the specifics of the study prove to be correct, the authors have initiated an absolutely critical discussion."

China's Anti-Pollution Drive Starts to Bite on Sales of Coal

Date: 22nd July, 2015 Source: Bloomberg Business

China's push to ease its reliance on coal and the fossil-fuel pollution choking Beijing's skies has started to hit sales of coal from the nation's biggest supplier. China Shenhua Energy Company Ltd.'s shipments dropped 24 percent in the first half of the year compared with a year ago, according to a statement released Monday. The company, which employs more than 90,000 people and has a market value of $59 billion, blamed falling consumption and "heightened pressure for environmental protection."

President Xi Jinping's drive to punish polluters "with an iron hand" is aimed at seeing greenhouse gas emissions peak around 2030 and removing the smog from the skyline of China's biggest cities. The result is shifting more resources to renewable energy and starting to ratchet back on coal demand. "To see that a lot is happening on coal in China right now is very encouraging and a positive signal in the right direction," Niklas Hoehne, founding partner at the NewClimate Institute, said by phone. "The activities happening right now on coal in China have a significant impact. Since China is so big, it has an affect on global greenhouse gas emissions."

China remains the biggest emitter of the pollution blamed for global warming, with the majority of its electricity generated from coal-fired plants, according to the International Energy Agency. The institution that advises industrial nations estimates China could cut that portion. The coal consumption cuts may not be solely a product of environmental concerns. "Coal is the one industry where China got worried about the corporate debt structure," Colin Hamilton, global head of commodities research at Macquarie Group Ltd., said by phone. "Thermal coal consumption is down in our numbers at 4 percent year on year. Capacity has been pretty sticky, and there has been government pressure on Shenhua to keep production down."

Bad air means lower grade point averages in Texas

Date: 24th July, 2015 Source: Environmental Health News

Fourth and fifth graders in El Paso, Texas, are more likely to have lower grade point averages if heavily exposed to contaminated air at home, according to a new study. The study is the first to look at kids' exposure to air toxics at home and its impact on their school performance. It bolsters a growing body of evidence that air pollution can impair success in school. "This is an interesting paper that deals with a serious problem affecting millions of children around the world," said Dr. Lilian Calderón-Garcidueñas, a researcher who studies air pollution and health effects at the University of Montana in an email.

"These exposures start in utero, so the detrimental effects upon the developing brain are affecting the embryo and the fetus and continue once the child is exposed to the outside environment," said Calderón-Garcidueñas, who was not involved in the study. University of Texas at El Paso researchers analyzed the grade point averages of 1,895 children and, using their home location, estimated their exposure to air toxics—such as benzene, arsenic, lead, mercury, hydrochloric acid, toluene, vinyl bromide, xylenes, and diesel particulate matter—using federal data. They found that for all types of air pollution sources, more exposure corresponded with lower grade point averages. Only one type of pollution—point sources such as factories—was not significantly linked to lower grade point averages. "A lot of other studies have been school based," said Frederica Perera, a professor at Columbia University and director of the Columbia Center for Children's Environmental Health who as not involved in the study. "But kids spend more time at

residences." In the study, published this month in the journal Population and Environment, the authors said that air toxics may not cause dramatic drops in school performance but, nonetheless, the results were "disturbing." "Effects appear to be insidious, since they are mild, unlikely to be perceived, and, hence, unlikely to be addressed in any way … seemingly trivial effects on children's development may translate into substantial impacts throughout the life course in terms of physical and mental health and personal success," the authors wrote. The researchers did control for some other things that can affect children's grades such as poverty, mother's age, education and ability to speak English, and the child's race and sex.

Still, the study doesn't prove that dirty air makes kids do worse in school. It does, however, suggest children's developing bodies are more susceptible to air pollution, which can harm their respiratory systems and brain. Air pollution might hamper kids' grades via two primary ways: Illnesses, mostly respiratory, that would make them miss school, and developmental problems resulting from long-term exposure, said Sara Grineski, an associate professor of sociology at The University of Texas at El Paso and co-author of the new study. Others have found similar links between air pollution and academic performance. Three months ago Columbia University's Perera and colleagues reported that New York City children born to mothers in poverty and exposed to certain air toxics during pregnancy had lower IQs. Perera, tracking the mothers and children since before birth, said the pollution exposure prior to birth is more strongly linked to learning and behavioral problems.

In the current study it's unclear if the children were exposed in their mothers' womb—an exposure window that is critical to brain development, Perera said. It's "certainly not implausible that exposure over the childhood years could continue to influence a child's academic performance," she said. "Although the prenatal window is when extremely rapid development of brain happens, the process continues through first few years of life." Other studies support this—in February Calderón-Garcidueñas and colleagues reported Mexico City smog was linked to impaired short-term memory and IQ in children. Timothy Collins, a University of Texas at El Paso geography professor and co-author of the study, said the El Paso findings suggest an environmental justice issue in El Paso. The city is more than 80 percent Hispanic.

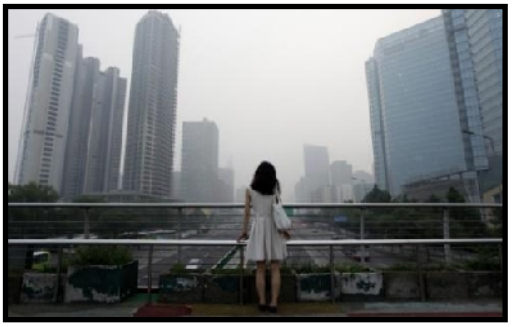
"There's a long history, more than a century, of air pollution," Collins said. "It's hard for us to not look at environmental justice implications." Previous studies have shown that El Paso's minorities are disproportionately impacted by toxics, Grineski said. The city of 675,000 is one of the worst when it comes to particulate matter—a mix of substances emitted by combustion sources, including cars, trucks, industrial plants and wood burning—especially coarse particulates, PM10, those between 2.5 and 10 micrometers (from about 25 to 100 times thinner than a human hair, according to the EPA).

El Paso's 24-hour PM10 average is about 233 micrograms per cubic meter of air, according to the latest EPA data from 2013, which was eighth highest among more than 500 U.S. cities. El Paso, along with Laredo, has the highest carbon monoxide levels in Texas. Major contributors to El Paso's air fouling are the many trucks along the U.S.-Mexico border, the El Paso International Airport, an expanisve system of railways and Fort Bliss, the country's second largest military base with an expansive missile and artillery airspace. The city is poorer and more poverty stricken than the rest of Texas: El Paso's median household income is 22 percent lower than the rest of the state, and has a 23 percent poverty rate compared to Texas' 17 percent, according to the U.S. Census 2014 estimates. Grineski said they have a follow-up study to more accurately pin down why air pollution seems to hamper El Paso kids.

The preliminary results hint that "there's something else going on that's not fully explained by poor health," she said. EHN welcomes republication of our stories, but we require that publications include the author's name and Environmental Health News at the top of the piece, along with a link back to EHN's version. For questions or feedback about this piece, contact Brian Bienkowski at bbienkowski@ehn.org.

China's ability to tackle air pollution doubtful, says veteran US policymaker

Date:26th July, 2015 Source: South China Morning Post



US policymaker casts doubt on capital's ability to reclaim its blue skies, citing lack of detailed emissions data and targeted approaches A veteran US policymaker responsible for cleaning up the smoggy skies of Los Angeles decades ago has voiced concern over Beijing's ability to tackle its notorious air pollution. James Lents, former executive officer of California's South Coast Air Quality Management District, said Beijing and other Chinese cities might not have sufficient people who adequately understood the pollution problem, and that they needed to come up with better long-term plans. In an interview with the Post on the sidelines of a Sino-US forum on air pollution, Lents said comprehensive pollution data and targeted approaches had been vital in removing smog in the Californian city.

"It took us almost 40 years to clean up," said Lents, who oversaw policies to clean up Los Angeles' skies, adding that they made mistakes and learned lessons in the process. Beijing and Los Angeles were comparable, the policymaker said, as both cities had a dense population, heavy traffic and similar geology, with surrounding mountain ranges that could trap air pollutants.

But with better technologies available now, it could take Beijing a much shorter time to reclaim its blue skies, he said. Official statistics show that average levels of PM2.5 - airborne particulates small enough to deeply penetrate the lungs - fell 16 per cent in 189 Chinese cities that monitored the pollutants both last year and this year.

In Beijing, PM2.5 levels fell 15.5 per cent in the first six months of the year from the same period last year, even though they still averaged 77.8 micrograms per cubic metre. The World Health Organisation's recommended maximum annual average is 10. But while Beijing and many other major mainland cities had targets for reducing pollution, Lents said they were often not comprehensive enough. "[Los Angeles] developed a plan, we understood what the emissions were, what caused them and what would be the best ways to reduce them. I don't often see a plan like that for the [mainland] cities," Lents said.

"They do have five-year plans where cities say 'we'll reduce this by a certain percentage, we'll close factories or limit car use' - which are good. But they don't put all these things together." Lents said the pollution targets should also be based on carefully studied pollution inventories - a complete set of data of pollution sources and amount of emissions - and good modelling on how emissions were likely to grow in the future. In 2013, the State Council released a 10-point guideline for cities to rein in air pollution.

The list included measures such as energy restructuring, and set targets to reduce smog by as much as 25 per cent in five years. Beijing's own plan includes relocating polluting factories, phasing out the burning of coal in downtown areas, limiting car use and even banning barbecues. Lents said Los Angeles's efforts to limit car use - by encouraging carpooling - never worked out as it was "politically unacceptable".

So the city adopted a "technology intrusive" approach - for instance, by making people switch to less-polluting materials in starting a barbecue - over a "culturally intensive" one that forced people to change their ways of life, he said. It also had a strong team of some 700 environmental staff members to strictly enforce rules, he said. "I don't think Beijing has a team as big, which may explain why compliance by factories and the public is not as good," Lents said.

Pollution takes toll on Golden Temple's sheen

Date:31st July, 2015 Source: Tribune India

Burgeoning population, increasing vehicular traffic, mushrooming hotels and industrial pollution continue to pose a serious threat to the Golden Temple which was earlier too robbed off its sheen due to these factors, forcing the SGPC to replace its gold-plated domes in 1999. A World Health Organization (WHO) report says Amritsar is the ninth most polluted city in the country. While the number of private vehicles plying in the area around the shrine is also high, the rickety auto-rickshaws running on adulterated fuel also pose a severe threat to the architectural marvel that the Golden Temple is. Most of these auto-rickshaws are plying without Pollution Under Control (PUC) certificates. Besides, a large number of hotels have come up around the shrine over the last two decades. As per a study on air pollution around the shrine conducted by IIT Delhi, the particulate matter (PM10) concentration breached the National Ambient Air Quality Standards (NAAQS), which was attributed by the study to high background concentrations of PM10 (55.00 µg/m3) within the city.

The study found re-suspension of road dust (47 per cent), followed by industries (31 per cent) as main source of PM10. The study said diesel generators (59 per cent), vehicular exhaust (26 per cent), and free kitchen (12 per cent) were contributing to NO2 emission. Similarly, kitchen (46 per cent) and industries (41 per cent) were main sources of SO2 emission around the shrine. Similarly, as per the PPCB study from January to December 2011, the RSPM level around the Golden Temple had come out to be maximum of 227 and minimum of 124, though it should not be more than 100 microgram/cubic metre around heritage sites. However, the level of sulphur dioxide (SO2) and nitrous oxide (NO2) was within prescribed limits. The high level of pollution is causing harm to miniature paintings and gold plating at the shrine, besides leading to corrosion and blackening of white marble. Its adverse effect can be seen on the gold plating on the outer walls of Akal Takht.

Talking to The Tribune, SGPC Additional Secretary Daljit Singh Bedi said the Punjab Pollution Control Board (PPCB) is yet to install the real time pollution monitoring device to keep a check on pollution level in and around the shrine. He revealed that the SGPC too was initiating measures like reducing the duration of fireworks on occasions like Diwali and modernising the kitchen alongside its langar hall in a bid to curb pollution. Dr Charanjit Singh of the PPCB said they had already placed the order for the device with a France-based private firm and they had given it three months' time to facilitate the device which will be installed at the Golden Temple Complex.

AUGUST 2015

Sunita Narain: Leave Delhi, or face up to pollution?

Date: 02nd August, 2015 Source: Business Standard

I do not know how best to respond to the question that, these days, many parents ask me. Concerned about the toxic air of Delhi, they - particularly those with children who have asthma - ask me if they should leave the city. Many times, I am also told that they have decided to move away; they cannot take it anymore. It is a no-brainer, you would say. After all, Delhi is very polluted and we know from all evidence that the air toxins are deadly for our health. There may not be any comprehensive epidemiological study conclusively showing how growing air pollution in Indian cities is adding to the health burden, but there is enough to tell us that things are bad. Only the most diehard polluter - a manufacturer of diesel vehicles, for example - would argue that the current level of air pollution in Delhi is not hazardous for our health.

This past winter, in November, December and January, air was classified as "severely polluted" for over 65 per cent of the days. According to the government's own air quality index this would mean pollution is so bad that it would cause "respiratory effects even on healthy people". So why am I troubled in saying that yes, they should leave the city? After all, their health is at risk. One, I realised, painfully, that it would mean accepting defeat. It was in the mid-1990s that we started work on clean air. Then, unlike now, people did not even see the connection with our bodies. When we said tiny particles emitted from diesel vehicles could be carcinogenic, a leading automobile manufacturer slapped us with a Rs 100 crore defamation suit. But courts and governments worked to take decisive and difficult action, and pollution was checked.

Now we are back to where we started. Pollution is rising; governments are scrambling to deny the obvious and it is clear that this second-generation reform is much more difficult. All the easy pickings - if you can call the contested transition to compressed natural gas (CNG) in vehicles easy - are over. Now the answer is to restrain the growth of cars and build a convenient and modern public transport system so that even the rich do not use their vehicles. Now the answer is to drastically improve the quality of fuel and technology used in trucks or find ways for them to bypass cities. Now the answer is to find more CNG to use in industries and to ensure that there is tight enforcement of rules from institutions that have been whittled away deliberately. All this is difficult. More difficult than before. So, should we give up? Decide that it is impossible to do anything?

But then, I think of how Anil Agarwal - Centre for Science and Environment's (CSE's) founder - had reacted to the news of his own cancer. He investigated the cause and found clear links with contaminants like pesticides. "My story today your story tomorrow" was his poignant rallying call for bringing change in the way we spray our food with poison. Just before his death, he set up India's first public laboratory to test contaminants in our everyday life. Since then, the tests done - from pesticides in soft drinks and Punjab farmers' blood to antibiotics in chicken - have brought home the fact that we need to reduce our exposure to toxins. And even though much more needs to be done, it is good to know that Agarwal's fight has not been wasted. So leaving should not be the question. How to fight and win this battle against pollution should be.

Secondly, where will you go? The fact is that most of India is getting equally polluted - air is equally foul but it is just not monitored. This is the difference between Delhi and other cities. Other cities also have everything going for pollution cocktail - growing number of diesel vehicles, poor public transport, weak surveillance of polluting factories and poverty that forces people to burn biomass instead of cleaner cooking fuel. So, where will you run away to?

This is the same when we believed that the answer to fighting pollution was to buy air purifiers. But the fact is that purifiers can clean only up to a limit and not all pollutants. Besides, we have to breathe common air sometime. Yes, if you are rich, you can install it in your home to protect yourself and your children from the worst of the harm. But it is not the answer because not everyone is rich enough to use one. The answer is to clean the air. Yes, you can run abroad where countries breathe better air. But how many have that option? This is what should drive us to not give up. We have to win this battle - for the sakes of those who have left our city and for the sake of those who stay. There is no choice. This is the answer.

Summer time Olympics 2016: Athletes Shrug Off Air pollution Points At Rio Olympic Check

Date: 02nd August, 2015 Source: Observer Chronical

Athletes, coaches and organizers at a serious check occasion for subsequent yr's Olympic Video games shrugged off a simmering dispute over security at watersports venues by diving into the controversial waters off Copacabana Seashore on Saturday. The primary day of the triathlon world championship occasion noticed para-athletes swim within the Atlantic waters and bike and run within the streets close by.

Obama launches Clean Power Plan to cut carbon emissions

Date: 03rd August 03, 2015 Source: The Denver Post

Colorado conservationists joined their counterparts nationwide rallying behind President Obama's Clean Power Plan, being unveiled Monday, to cut U.S. emissions of greenhouse gases by targeting existing coal-burning power plants. Obama in a video memo Sunday called this "the biggest most important step we've ever taken to combat climate change." The plan requires an overall 32 percent cut in carbon dioxide emissions by 2030 as measured against 2005 levels, a White House statement said. "We cannot condemn our kids and grandkids to a planet that's beyond fixing."

That's up from the 30 percent cut the EPA proposed last year. It's unclear how much individual states must do. Legal challenges loom. Some governors have threatened not to comply. Colorado has been seen as relatively well-positioned. State lawmakers under a Clean Air, Clean Jobs Act in 2010 required regulated utilities to develop plans for reducing air pollution. These plans launched utilities on efforts to replace coal plants with energy generated using renewable sources and natural gas. Colorado's largest utility, Xcel Energy, is on track to reduce its carbon dioxide emissions by 28 percent.

The Colorado Department of Public Health and Environment now must ensure overall compliance with the national plan. "Colorado can build on a rock solid foundation of clean air solutions by scaling up our proven energy efficiency programs for low income families and investments in low cost wind power, and driving down the pollution from high-emitting power plants," said Vickie Patton, Boulder based director of the Environmental Defense Fund's national and regional clean air programs. A combination of investments in low-carbon technology, greater efficiency in generating electricity, and shifting coal-fired power plants toward natural gas put Colorado on course. State voters in 2004 passed a measure requiring use of renewable sources to generate a portion of electricity. In 2010, state lawmakers also set a target: 30 percent of electricity used in Colorado by 2020 must be generated from renewable sources. (For rural utilities, they relaxed the target to 20 percent.)

The conservation group Western Resource Advocates did an analysis of greenhouse gas emissions from the power sector and estimated that Colorado, by 2020, should emit 20 to 25 percent less than in 2005 based on existing policies and commitments. Xcel's coal-fired Valmont plant in Boulder is scheduled for retirement by 2017. Three of four units in Xcel's Cherokee plant in Denver are to be shut down. A fourth has been converted to run on natural gas. A couple of units at Xcel's Arapahoe plant in Denver are to be closed. Power plants cause about a third of U.S. emissions of carbon dioxide and other heat-trapping gases blamed for global warming. American Lung Association officials said CDPHE must look first at power plants to make required additional gains. "Colorado has done a great job of going the extra mile compared with other states. We can come together as a state and figure this out," ALA spokeswoman Cindy Liverance said. "There's more we can do with the other power plants in the state. And we definitely need to look at clean energy technology," Liverance said. "We're excited. This will reduce asthma attacks. And it will reduce hospitalizations due to lung disease caused by air pollution."

Good day to play outside? Learn about air pollution to find out.

Date: 03rd August, 2015 Source: The Washington Post

Have you ever run around outside on a hot summer day, and suddenly your lungs feel as though they're burning? You could be overly tired. Or your lungs may be reacting to pollutants and chemicals in the air. Understanding air pollution can help you avoid it and think about ways you can make the air cleaner. What's happening?- Air pollution often refers to two things: ozone and fine particulate matter, both of which are harmful to humans. Fine particulate matter, or tiny pieces of dust like substance, is mostly produced from burning fossil fuels, for instance, gasoline in cars and coal in power plants.

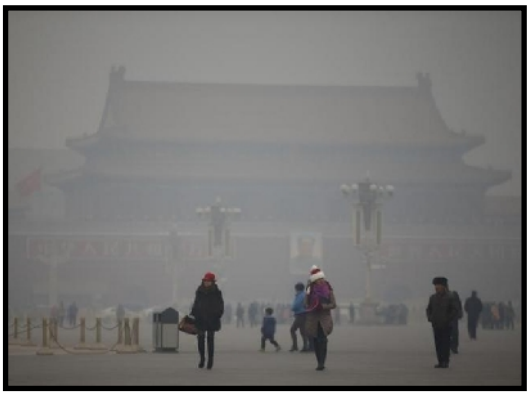
Fine particulate matter is much smaller than the kind of dust that you find after you haven't cleaned your room in a while. The small size is what makes this matter problematic to our health, because it can settle deep in our lungs, making it hard to breathe. Ozone happens because of a chemical reaction. Sunlight chemically reacts with gases produced from the burning of fossil fuels to form ground-level ozone. When ozone is high in the atmosphere, it helps protect life on the ground from harmful radiation from the sun. This radiation causes problems such as skin cancer. Ozone becomes a problem when it's close to Earth. When ozone gets into our lungs, it becomes harmful to our health. Kids are at higher risk of the damaging effects of ozone and particulate matter, especially kids with asthma, because their bodies and lungs are developing. "Children tend to have a higher respiratory rate [inhaling and exhaling more rapidly than adults]," said Janet Phoenix of Clean Air Partners, an organization that educates people about air pollution in the Washington area. "So they're more exposed to any chemical particles that might be in the air."

When to go inside- Some of the worst air-quality days are actually the most beautiful days. On hot, sunny days without wind, the air doesn't move around and pollutants build up. "Poor air circulation, heat and light kind of help to bake the chemicals into the air," Phoenix said. Rain helps wash the bad things out of the air, so the worst time to be outside is when it hasn't rained in a while. "It's like if you don't take a shower for a few days, you know what happens," said Ross Salawitch, a professor of atmospheric and oceanic studies at the University of Maryland. "The rain is cleansing like a shower is cleansing." In order to help you know when it's safe to be outside, days are assigned color codes that correspond to numbers, which represent how much of these nasty substances is in the air. When the amount of ozone and particulate matter reaches unsafe levels, the day will be labeled as code orange, code red and on the worst days, code purple. "When we have air-quality alerts that are either red or purple, even orange, those are the days to stay inside nd play video games," Salawitch said. According to Phoenix, the worst time of day for air quality is when people are going back and forth from school and work. "If you can wait until later in the day to do some of these [outdoor] physical activities, especially when in the red or orange zone, then you're better off," she said. A hopeful trend-The good news? Because of stricter pollution regulations, Washington's air quality is improving, according to Salawitch. There hasn't been a code red day in the region in the past three

summers. The last code purple was in 2006. But even short exposure to poor air quality can have negative effects on your body. That's why area residents should limit activities that increase air pollution, Phoenix said. Try encouraging your family to walk to the pool or the library. When school starts, take the bus instead of having your parents drive you. Keeping your family's cars off the road means less air pollution — and not just for your neighborhood. "What you do in one part of D.C. will affect your neighbors," said Phoenix, adding that area residents are becoming more aware. "I think people are really making an effort, and that's wonderful."

Beijing to limit cars, factories to ensure clean air for war anniversary

Date: 03rd August, 2015 Source: Reuters

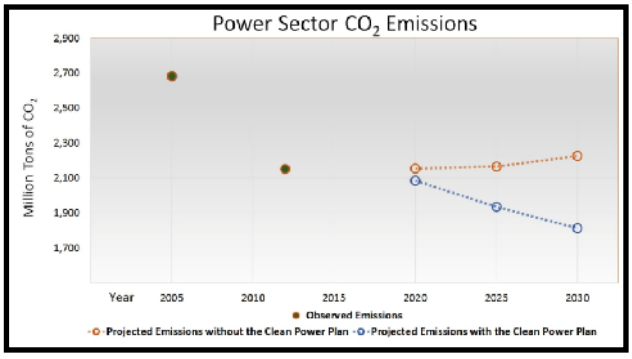


Beijing will limit the number of vehicles on the streets and shut factories to ensure clean air during a commemoration of the 70th anniversary of the end of World War Two, the government and media said on Monday. The heavily polluted capital, often cloaked in a choking gray haze, will hold a military parade on Sept. 3, which is likely to center around Tiananmen Square in the heart of the city. The parade will be a highlight of a series of events the government has planned for the anniversary of Japan's formal surrender on Sept. 2, 1945. From Aug. 20 to Sept. 3, the city will halve the number of vehicles allowed on the streets, restricting cars according to their license plate numbers, the People's Daily, the ruling Communist Party's official newspaper, said on its microblog.

The city will also impose temporary controls on industry, coal-burning boilers and construction, forcing them either to stop or curb operations during the period, the government said on its microblog account on Weibo. The capital, which has been enveloped by smog for the past few weeks, often enacts pollution controls ahead of major events such as the 2008 Olympic Games and a meeting of Asia-Pacific Economic Cooperation (APEC) forum leaders last year. The city government said it was drawing from the experience of the 2008 Games and the APEC meeting to ensure "the full protection of air quality during the commemoration".On Saturday, the Xinhua state news agency said authorities would impose temporary air traffic restrictions over Beijing during the military parade. Workers will also be given three days off over the anniversary, ostensibly to ease congestion. Chinese communist and nationalist forces battled Japanese forces that occupied much of China during World War Two. The Chinese forces later fought a civil war which communist forces won in 1949. (Reporting by Sui-Lee Wee; Additional reporting by Adam Rose; Editing by Robert Birsel)

Obama slashes greenhouse gas emissions from power plants

Date:04th August, 2015 Source: High Country News



President Barack Obama has just made the biggest contribution to the fight against climate change of any U.S. president by requiring the electricity sector to cut nearly one-third of its greenhouse gas emissions over the next 15 years. "We're the first generation to feel the impact of climate change. We're the last generation that can do something about it," Obama said Monday in a White House address, announcing the EPA's much-anticipated Clean Power Plan. "I

don’t want millions of people’s lives disrupted and this world more dangerous because we didn’t do something about it. That’d be shameful of us.”

The president cited intensifying natural disasters such as drought, floods and forest fire along with rising sea levels and temperatures as justifications for an Environmental Protection Agency rule that sets the first-ever limits on greenhouse gas emissions from power plants. The administration projects that it will cut emissions 32 percent by 2030 compared to 2005 by requiring states either to set up programs to cut pollution from their power plants or sign up for a federal program.

The president said the rule will help the U.S. forge a strong global climate change treaty at the end of the year and keep America on track to meet its international commitments to reduce overall greenhouse gas emissions to 17 percent below 2005 levels by 2020 and to 26-28 percent below 2005 levels by 2025. The plan cuts pollution slightly more than a proposal for the Clean Power Plan that came out last year, because renewable generation has become more affordable and is making bigger gains than anticipated. “Our country’s clean energy transition is happening faster than anybody anticipated,” EPA administrator Gina McCarthy told reporters in a conference call on Sunday. “The accelerating trends towards clean power and the growing success of energy efficiency efforts means carbon emissions are already going down, and the pace is picking up.”

The EPA projects that in 2030, the share of the nation’s electricity produced with coal, the dirtiest source of power, will drop to 27 percent, down from 39 percentlast year. Electricity from utility-scale solar and wind projects is projected to double from 2013 to 2030.

To encourage faster adoption of renewable power and energy efficiency, the plan rewards early action “because time is not on our side,” Obama said. The so-called clean energy incentive program is one of many differences between the rule and the proposal that came out a year ago. Others include: An additional two years, until 2022, for states to meet their first targets, which responds to states’ concerns that earlier targets would make it difficult to invest in wind and solar projects.
- A safety valve that will help avert any unanticipated risks to the reliable supply of electricity.
- The EPA estimated the rule will cost $8.4 billion. But its benefits are estimated to be four to seven times

greater, because it would avoid thousands of premature deaths, millions of asthma attacks and other impacts of power plant pollution and climate change. The EPA also estimates that the rule will save average American families nearly $85 on their annual energy bills in 2030.

States will have the option of crafting their own plans to reduce emissions or participating in afederal plan. Tribes that have large fossil fuel power plants, including the Navajo Nation and Ute, will be covered by the federal rule unless they apply to be treated like states and develop their own plans. If states fail to create their own plans, they will be covered by the federal plan by default.

States and tribes have different targets, which the EPA determined based on a complicated analysis that included many factors, including how much of a state’s electricity now comes from coal or natural gas. The EPA’s rule was less stringent for some Western states, including Arizona, than its previous proposal. But officials from most states said they needed time to digest the complicated rule before they could comment. “We’re still just trying to get our heads around it,” said Eric Massey, director of the air quality division in the Arizona Department of Environmental Quality.

Dr. Larry Wolk, executive director and chief medical officer of the Colorado Department of Public Health and Environment, told HCN: “I think it’s a challenging plan, but an obtainable plan.” The changes from the proposal, such as the extra time, will make it easier for Colorado to adopt more wind and solar power rather than burning more natural gas, which contributes to the state’s air pollution problems, he said.

“We value our environment and our health in Colorado,” Wolk said. “We’ve had wildfire and we’ve had floods. So I think the reality of climate change has hit Coloradans.”

As HCN has reported, Western states had many concerns about the EPA’s proposal, including how it treated states that export electricity and hydropower, which might be impacted by climate change. Western states have been meeting regularly to share strategies for complying with the federal rule. The rule is just one of several major initiatives Obama has taken to fight climate change, including reducing the greenhouse gas emissions from cars. The president had wanted Congress to craft an economy-wide legislative solution to climate change. But since Republicans won control of the House in 2010, the issue has been a nonstarter. A bill did pass in the House in 2009, but stalled in the Senate, although Democrats held the majority at the time. Even before the new rule was released, Sen. Majority Leader Mitch McConnell, R-Kentucky, urged states to opt out. Most congressional Republicans oppose the new limits on greenhouse gas pollution.

“The Obama administration has no concern for costs, no concept of reality and no respect for the rule of law,” said Sen. James Inhofe, R-Oklahoma. “President Obama, and his EPA know that Americans do not support his costly carbon mandates.”

But Sen. Edward Markey, D-Massachusetts, said Republicans and the coal industry have themselves to blame: “Five years ago, when coal companies had the opportunity to support theWaxman-Markey bill, they chose regulation over legislation. They helped kill the bill and put us on the path toward these new rules.” Elizabeth Shogren is HCN's DC Correspondent.

Speed of glacier retreat worldwide 'historically unprecedented', says report

Date: 04th August, 2015 Source: The Guardian

Researchers have recorded rapid rises in meltwater and alarming rates of glacial retreat, which are accelerating at a pace double that of a decade ago The world’s glaciers are in retreat. The great tongues of ice high in the Himalayas, the Andes, the Alps and the Rockies are going back uphill at ever greater speeds, according to new research. And this loss of ice is both accelerating and “historically unprecedented”, say scientists who report in the Journal of Glaciology. In the past year or so, researchers have identified rapid rises in meltwater and alarming cases of glacial retreat in Greenland, West Antarctica, the Canadian and Alaskan coastal mountains, in Europe and in the Himalayan massif. They have also watched glaciers pick up speed downhill. One satellite-based study, confirmed by on-the-ground measurements, of the Jakobshavn glacier in Greenland, confirms that the river of ice is now moving at the rate of 46 metres a day, 17 kilometres a year, which is twice the speed recorded in 2003, which in turn was twice as fast as measured in 1997. The World Glacier Monitoring Service, based at the University of Zurich in Switzerland and with partners in 30 countries, has been compiling data on changes in glaciers over the last 120 years. And it has just compared all known 21st century observations with data from site measurements, aerial photography and satellite observations and evidence from pictorial and written sources. Altogether, the service has collected 5,000 measurements of glacier volume and changes in mass since 1850, and 42,000 records of variations in glacier fronts from records dating back to the 16th century. And the evidence is clear: the glaciers are in retreat, worldwide, and the retreat is accelerating. “The observed glaciers currently lose between half a metre and one metre of ice thickness every year – this is two to three times more than the corresponding average of the 20th century,” says the study’s lead author, Michael Zemp, who directs the monitoring service. “Exact measurements of this ice

loss are reported from a few hundred glaciers only. However, these results are qualitatively confirmed from field and satellite observations for tens of thousands of glaciers around the world."

The great ice sheets help maintain the climate zone differences that drive weather patterns. They provide distinct ecosystems that support precisely adapted lifeforms, from mountain wildflowers to snow leopards. They offer a source of tourist income for mountain communities and deliver spring and summer meltwater to irrigate crops in the fertile valleys downstream. And as long as ice is safely stored in mountain ranges, it isn't contributing to sea level rise.

But sea levels are creeping up inexorably every year, as a consequence of galloping glacial retreat in the polar, temperate and tropical zones. This loss of ice is not uniform: researchers recorded cases of glacier advance, sometimes of a few hundred metres, in the 1990s. But these intermittent glacial gains are nothing like the return of the ice recorded during the so-called "little Ice Age" that began in the 16th century, when the Thames froze hard enough to support annual winter fairs. The big picture is one of retreat, everywhere.

Some glaciers may now be doomed. In the last century, because of fossil fuel emissions of greenhouse gases into the atmosphere, global average temperatures have crept up by almost 1C to trigger wide-scale melting. Even were the world to abandon fossil fuel use right now, some melting would continue. "Glaciers in many regions will very likely suffer further ice loss, even if climate remains stable," the researchers conclude.

World's Glaciers Melting at Record Rate

Date:05th August, 2015 Source: Ecowatch

The world's glaciers are melting fast—probably faster than at any time in recorded history, according to new research. Measurements show several hundred glaciers are losing between half and one meter of thickness every year—at least twice the average loss for the 20th century—and remote monitoring shows this rate of melting is far more widespread. The World Glacier Monitoring Service (WGMS), based at the University of Zurich, Switzerland, has compiled worldwide data on glacier changes for more than 120 years.

Drawing on reports from its observers in more than 30 countries, it has published in the Journal of Glaciology a comprehensive analysis of global glacier changes. Pictorial Sources- The study compares observations of the first decade of this century with all available earlier data from field, airborne and satellite observations and with reconstructions from pictorial and written sources. Dr. Michael Zemp, director of WGMS and lead author of the study, says the current annual loss of 0.5-1 meter of ice thickness observed on "a few hundred glaciers" through direct measurement is two to three times more than the average for the last century. "However, these results are qualitatively confirmed from field and satellite-based observations for tens of thousands of glaciers around the world," he adds.

The WGMS compiles the results of worldwide glacier observations in annual calls-for-data. The current database contains more than 5,000 measurements of glacier volume and mass changes since 1850 and more than 42,000 front variations from observations and reconstructions stretching back to the 16th century. Glaciers provide drinking water for millions of people, as well as irrigating crops and providing hydropower. When they melt, they also make a measurable contribution to sea level rise. The researchers say the current rate of glacier melt is without precedent at the global scale—at least for the

time period observed and probably also for recorded history, as reconstructions from written and illustrated documents attest.
Long-term Retreat- The study also shows that the long-term retreat of glacier tongues is a global phenomenon. Intermittent re-advance periods at regional and decadal scales are normally restricted to a smaller sample of glaciers and have not come close to achieving the Little Ice Age maximum positions reached between the 16th and 19th centuries.

Glacier tongues in Norway, for example, have retreated by some kilometers from their maximum extents in the 19th century. The intermittent re-advances of the 1990s were restricted to glaciers in coastal areas and to a few hundred meters. The study shows that the intense ice loss of the last two decades has resulted in what it calls "a strong imbalance of glaciers in many regions of the world." And Dr. Zemp warns: "These glaciers will suffer further ice loss, even if climate remains stable." He told Climate News Network: "Due to the strong ice loss over the past few decades, many glaciers are too big under current climatic conditions. They simply have not had enough time to react to the climatic changes of the past. "So they will have to retreat further until they are in balance with climatic conditions again. In the European Alps, many glaciers would lose about 50 percent of their present surface area without further climate change."

AIR POLLUTION: Ads use national parks as props to attack EPA ozone plan

Date:05th August, 2015 Source: E&E Publishing, LLC

Most industry campaigns opposing U.S. EPA's proposal to tighten the national ground-level ozone limit have argued that a lower standard is not necessary and would cause widespread economic ruin. But an ad launched last week by the National Association of Manufacturers puts a different spin on the Obama administration proposal. Airing in the Washington, D.C., television market, the ad opens with a shot of Yosemite National Park, then takes the viewer on a tour of other iconic Western parks. An announcer touts the parks' "pristine" air quality as soothing background music plays. Then music screeches to a halt and the announcer says the Obama administration's proposed ozone standard would put the parks in violation of the Clean Air Act.

Experts who study political advertising said NAM's strategy of using national parks has the potential to resonate more than its ads that focus solely on big economic costs, especially among citizens outside the Beltway who are not intimately familiar with the details of the ozone proposal. Evan Tracey, an adjunct professor in political communications at George Washington University, said the parks ad's strategy is to spin EPA's complex ozone proposal into an "absurd" proposition.

"It's really about being able to create an ad or message in some way that shows the ozone standard in somewhat of an absurd way," Tracey said in an interview. "You're trying to go at people's trust and plant some doubt in them." EPA in November proposed to lower the national air standard for ozone to between 65 and 70 parts per billion from 75 ppb set during the George W. Bush administration. The agency says the tougher standard would shield the public health from ozone, a component of smog.

Industry groups opposed to a tighter standard have ramped up their attacks on it in the past week. NAM yesterday launched another television ad in the D.C. market that opens with a shot of the White House and warns that EPA's proposal would stifle economic growth and kill jobs. NAM released the parks ad -- called "What Does the Elk Say" -- last week in the D.C. market, just as many people were planning their summer escapes to those parks. NAM plans to expand it to other markets in the next month (E&E Daily, July 28).
"The fact that it is using such a nonobvious argument could be in its favor," said Edward Maibach, a communications professor at George Mason University. The ozone issue is complicated. Ground-level ozone -- a pollutant -- is chemically identical to compounds that protect humans from the sun's harmful

rays in the upper atmosphere. Ground-level ozone is not directly emitted but forms when nitrogen oxides and volatile organic compounds react in sunlight.

The regulatory regime for ozone pollution is also complicated. It involves more than one standard and allocates some duties to EPA and others to state and local regulators. And there is yet another complication: In the West, there's "background ozone," which falls from the upper atmosphere, which is transported from overseas or is caused by lightning and wildfires. "The problem is when you start to break it down to rank-and-file Americans, ozone is not going to register on a poll," Tracey said. "To the extent that you can connect the regulations back to something that people care about, then you get them more interested." Advertising that focuses mainly on large-scale economic impacts of the ozone standard may not register with voters if they cannot connect those impacts to their everyday lives, Tracey said. Something like ozone is more abstract than a gasoline tax, for example, which affects consumers directly every time they fill up at the pump. The national parks ad is "trying to use something that people wouldn't necessarily connect and use that essentially as a metaphor to get people to care about this issue," he said. Maibach, who directs George Mason's Center for Climate Change Communication, objected to the ad's content. "We love our national parks. We do want to believe that they are pristine places," he said. "Regrettably, they aren't pristine places, often because of the coal-fired power plants in the neighborhoods." Group slams, NAM defends ads Last week, as NAM released the ad, the National Parks Conservation Association (NPCA) unveiled a report that found three-quarters of national parks at times experience air that's unhealthy, defined as "moderate" or worse air pollution under EPA's Air Quality Index (Greenwire, July 28). "The most prized national parks including Grand Canyon, Zion and Yosemite struggle with significant air pollution, and to suggest otherwise is fallacious and not in the best interest of America's parks or their millions of annual visitors," association Chief Operating Officer Theresa Pierno wrote in an open letter in response to the NAM ad. In its report, NPCA found that visibility-impairing haze also affects parks and that people, on average, lose 50 miles of view due to haze.

Stephanie Kodish, head of NPCA's air program, said NPCA is working with its allies to get its report's content out on public media. The conservation organization is also seeking to direct the public to EPA data and other tools that let people know the quality of their air on a daily basis. "When you throw millions of dollars behind ads that are saying that, you have sort of a weight of attention to deliver on a message, which doesn't make it accurate. It just makes it more in your face," Kodish said.

"My hope is that accurate information, even if it's not backed by millions, will make its way to the light so that these absurd ads can be dismissed for what they are: ridiculous propaganda," she said. NAM yesterday launched another television ad that opens with a shot of the White House and warns that EPA's proposal would stifle economic growth and kill jobs. The national parks ad is aimed not only at the public but also at policymakers, according to Ross Eisenberg, vice president of energy and resources policy at NAM. NAM, he said, is trying to raise awareness of EPA's ozone proposal outside the Beltway after meeting with local officials who had no knowledge of the agency's bid to tighten the standard. The manufacturing group's campaign was also partly meant to coincide with the start of the congressional recess and to make sure ozone remains "on top of their issue priority list" as members go back to their home districts for the month.

Climate change threatens food production in Nigeria

Date: 05th August, 2015 Source: Business Today

Changing rainfall patterns and higher temperatures resulting from climate change will threaten food production across the country as more than 50 percent of farmers are yet to commence planting due to inadequate rainfall. As a result, Nigeria farmers especially those in the north have expressed fears that the

change in weather being experienced this year might affect food production in the country. Africanfarmer Mogaji, chief executive officer, X-Ray Farms in an interview with BusinessDay said, "The sun intensity is very high and the rains are not falling. Most of the farmers ought to have planted the second time for the year but because of the weather about 50 percent have not even harvested their first planting." Mogaji further said, "Some farmers have made a loss of 70 percent due to climate change while some have not made any income this year."

Food prices have also been on the increase across the country and it may even increase further at the end of the year, according to industry watchers. "Tomatoes reached an all time high this year selling between N30, 000 to N34, 000 for a 50kg basket and climate change is part of the problem," he added.

Consumer inflation rose to 9.2 percent year- on- year in June as a result of bottlenecks observed in the food and beverage sub- index which increased at a faster pace during the period, according to the National Bureau of Statistics (NBS). Food inflation edged higher to 10 percent year- on-year in June, up 0.2 percentage points from May, NBS said.

Climate change is on the rise in average surface temperatures on earth mostly due to the burning of fossil fuels. This is also called global warming. According to analysts, farmers started experiencing August break in July which is meant to happen in the month of August. This has caused a lot of fears amongst farmers because they really cannot predict when the rains will start falling again or when it will stop eventually for the year. "The agricultural sector is the most vulnerable sector of climate change. Agriculture is particularly sensitive to rising temperature," Chidi Ibe, professor of Geology, University of Port-Harcourt stated at BusinessDay event on effective reporting on climate change held recently in Lagos. Also global food prices are likely to surge by 10 percent to 20 percent in the next few months as an El Nino weather pattern grips top producers in Asia, heating up the region's croplands and whittling down of stocks of grains to multi-year lows and also causing heat waves experienced in Asia.

Killer Heat Grows Hotter around the World

Date: 06th August, 2015 Source: Scientific American

Millions of people around the world are experiencing a scorching summer, as records are broken and thermostats climb this week in parts of Europe. Temperatures in Paris and Brussels exceeded 90 degrees Fahrenheit at a time of year when 70-degree weather is the norm, according to Accuweather.com. In Bandar-e Mahshahr, Iran, temperatures climbed to 115 °F last week. The temperature, together with high humidity, felt like 163 °F to hapless people directly exposed to the weather, according to Accuweather. That is the second-highest known "heat index" value ever recorded, said Maximiliano Herrera, a climatologist and weather aficionado who maintains one of the world's most comprehensive datasets of extreme temperatures. The highest heat-index value ever recorded was 174 °F in 2003 in Dhahran, Saudi Arabia, he said. The highest air temperature in an inhabited area was recorded in Gotvand and Dehloran, Iran, and Turbat and Sibi, Pakistan, in the 1990s, when the thermostat climbed to 127.4 °F (53 degrees Celsius), Herrera said.

In June, Pakistan experienced a heat wave so severe that more than 1,229 people died. A month earlier, temperatures in parts of India climbed up to 113 °F, killing at least 2,500 people. Including June, four months out of the first six in 2015 have broken global temperature records. July appears to be tracking the trend, even as a strong El Niño has formed, which will exacerbate global temperatures. "I'd not be surprised if 2015 ends up the warmest year on record," said Derek Arndt, chief of the monitoring branch at National Oceanic and Atmospheric Administration's National Centers for Environmental Information, during a media call in June (ClimateWire, June 19).

While scientists are still deciphering if particular heat waves, such as the ones in Pakistan and India, could be tied to climate change, it is accepted science that heat waves, broadly speaking, will become more frequent, intense and prolonged with global warming. They are already the deadliest weather phenomenon in the world. Nine out of 10 heat waves with the most fatalities have occurred since 2000, according to data in EM-DAT, an international disaster database. They have caused 128,885 deaths around the world, according to the database. Some areas may become uninhabitable. So what is the highest temperature a person can tolerate? It depends on the amount of heat stress a person undergoes. This, in turn, is dictated not simply by the air temperature, but also by the humidity, wind speed, and the amount of long- and shortwave radiation a person is exposed to. In a 2010 study in the Proceedings of the National Academy of Sciences, scientists explored the level of temperature and humidity—called the "wet-bulb temperature"—beyond which a human body can no longer dissipate heat by sweating, and the body temperature rises to life-threatening levels. The scientists found that if humans were to be exposed to wet bulb-temperatures higher than 95 °F (35 ºC) for more than six hours, they would not survive.

Wet-bulb temperatures average 78 °F (26 ºC) in most places in the world today. That's true even in the hottest deserts, where air temperatures can soar but the humidity tends to be low, resulting in tolerable wet-bulb temperatures. But low wet-bulb temperatures may not hold in a warming world, the study found. As humans double the levels of CO2 in the atmosphere above preindustrial levels, global temperatures are expected to rise by between 1.9 and 4.5 ºC, according to the Intergovernmental Panel on Climate Change. If much of the fossil fuel reserves on the planet are burned, CO2 levels would more than double. As a result, global temperatures may rise by 12.6 °F (7 ºC), and many parts of the world would become uninhabitable, the study finds. And if all the fossil fuel reserves are burned, temperatures would rise by 21.6 °F (12 ºC), and all of Earth will be intolerable to humans, the study finds. Adaptation harder for the poor Wet-bulb temperature does not correlate directly with the number of fatalities from a given heat wave. Although Bandar-e Mahshahr residents experienced wet-bulb temperatures exceeding comfortable limits last week, there were few fatalities. That's because the nation has infrastructure to minimize residents' exposure to intolerable heat. Middle Eastern nations, which are sweltering hot throughout the year, are highly air conditioned. People in Bandar-e Mahshahr do not stay outside in the summer for more than 15 minutes without cooling off, one resident told The Washington Post. In contrast, poorer people in Pakistan and India do not have the economic means to cope with deadly heat. They may also have a poorer nutritional status and chronic diseases related to poverty that puts them at higher risk of heat-related mortality, said Patrick Kinney, a professor of environmental health sciences at Columbia University. "People that are less economically capable and living in conditions where they can't protect themselves will be more vulnerable," he said. Some Indian states, like Odisha and Gujarat, have launched awareness campaigns to inform people of heat waves. But much of the nation has not adapted to the threat (ClimateWire, June 1). So 16 years after a heat wave killed 2,500 people across the nation in 1999, India experienced similar levels of mortality this May. Reprinted from Climatewire with permission from Environment & Energy Publishing, LLC. www.eenews.net, 202-628-6500

Air pollution increases risk of dementia

Date:06th August, 2015 Source: Health Canal

Individuals who live in areas with increased levels of air pollution run an increased risk of developing dementia than people living in areas with cleaner air. This according to a study led by Bertil Forsberg, Professor at the Department of Public Health and Clinical Medicine at Umeå University. The results were published in the journal Environmental Health Perspectives.

"We have found a connection between the level of air pollution at your home and the risk of developing dementia," says Bertil Forsberg at Umeå University. In the study, 2,000 Umea residents were tracked

spanning over a period of 15 years. According to Forsberg, the results are nothing but sensational. “The risk is approximately 40 percent higher to develop dementia among the 25 per cent that have the worst air in their home neighbourhood in comparison to the 25 per cent with the clearest air at home.

Zimbabwe: Porous Borders Fuel Influx of Ozone-Depleting Substances

Date: 06th August 06, 2015 Source: All Arica

By Andrew Kunambura- Government is currently struggling to control the ODS because of its porous borders. AN unprecedented influx of ozone-depleting substances (ODS) could see Zimbabwe miss the United Nations 2030 deadline to phase out the substances, despite being one of the first countries to ratify the 1987 Montreal Protocol, having done so in 1992.

The Montreal Protocol on Substances that Deplete the Ozone Layer (a protocol to the Vienna Convention for the Protection of the Ozone Layer) is an international treaty designed to protect the ozone layer by phasing out the production of numerous substances that are responsible for ozone depletion. The protocol was agreed on September 16, 1987 and entered into force on January 1, 1989, followed by a first meeting in Helsinki, 1989. Since then, it has undergone eight revisions, in 1990 (London), 1991, (Nairobi), 1992 (Copenhagen), 1993 (Bangkok), 1995 (Vienna), 1997 (Montreal), 1998 (Australia), 1999 (Beijing) and 2007 (Montreal). It remains the most ratified protocol in the world. Government is currently struggling to control the ODS because of its porous borders.

The Zimbabwe Revenue Authority, which is in charge of the ports of entry, seems to be incapacitated to plug the loopholes resulting in the banned ODS flooding the country daily. Ozone is a tri-atomic form of oxygen which has three oxygen atoms instead of the normal two and formed naturally in the upper levels of the earth's atmosphere. ODS are a cocktail of controlled products that contain or are designed to contain harmful substances such as chlorine, fluorine, bromine, carbon, and hydrogen in varying proportions and are often described by the general term halocarbons.Chlorofluorocarbons (CFCs), carbon tetrachloride, and methyl chloroform are some of the manmade ozone-depleting gases that have been used in many applications including refrigeration, air conditioning, foam blowing, cleaning of electronic components, and as solvents. These substances are effective ozone-depleters chiefly for two reasons: First, they do not break down in the lower atmosphere and can exist therein from between 20 to 120 years or even more.

Unlike most chemicals released into the atmosphere from the earth's surface, ozone-depleting substances are not washed back to earth by rain or destroyed by other chemicals, which means they drift up into the stratosphere. Second, they contain either/both chlorine and/or bromine and thus help the natural reactions that destroy ozone. Once they reach the stratosphere, ultraviolet radiation breaks up these molecules into chlorine or bromine which, in turn, wrecks the ozone layer (O3), which absorbs the sun's biologically harmful ultraviolet radiation. Ozone depletion causes skin cancers, eye cataracts, partial and permanent blindness, damage to terrestrial plant life, leading to low crop yields and forest decline as well as damage to single cell organisms and aquatic ecosystems. The UN initially set the deadline to phase out ODS for 2040 for developing countries and 2030 for developed countries but it has cut it further by 10 more years amid projections that the ozone layer can only heal around 2070 and that is if all countries combine efforts to combat ozone depletion.

Already, the effects of this hazard are being felt, with New Zealand having reportedly lost three quarters of its ozone layer, making it one country with many incidences of skin cancers. Zimbabwe does not manufacture any ODS, which means it gets them through importation. Information at hand shows that ODS continue to flood the country despite stringent measures because the Zimbabwe Revenue Authority (ZIMRA) is currently overwhelmed by the dexterity of smugglers who use every trick in the book to pass through border posts.

Latest ZIMRA figures accessed by the Financial Gazette indicate that all border posts have been hit by ODS smuggling, with a few contrabands intercepted. ZIMRA training officer-customs, Lameck Tatswareyi, said ODS were rampant despite the fact that all border posts have identifiers. He said smugglers achieve this through such means as mislabeling, diverting ODS (also known as false exports) and substituting seals. Smugglers, he said, were also using undesignated crossing points.

Documents show that at Beitbridge in 2013 ZIMRA seized 100 contrabands which had been declared ODS-free although being contaminated with ODS such as R22 gas, R134a gas and other assorted gasses. The yet to be released 2014 figures are expected to be even higher. Forbes boarder post accounted for the highest figures at 220 held contrabands, mainly refrigerant gases seized from unlicensed importers. On two occasions alone, documents show, ZIMRA officials seized 220×13,6kgs gas cylinders containing 99,9 percent R22 and 404 cylinders also containing 99,9 percent R22.

The consignments were being smuggled by a Harare based unlicensed importer. While figures for other border posts were not immediately available, Tatswareyi said Nyamapanda had also become a major entry point for smugglers who even use the landmine infested borderline between Zimbabwe and Mozambique.

”It is becoming increasingly difficult for us to contain the situation. Methods of smuggling change every day and also change with the quantity of the substance being smuggled," Tastwareyi said. "What further complicates the situation for us is the fact that we need to balance between control and facilitation. If we are going to out every vehicle through a scanner, it will bring the ports to a standstill," he said. He said smugglers were also producing counterfeit ZIMRA seals to avoid detection, adding that at one point, one person was caught with eight such seals.

He admitted that corrupt ZIMRA officials have been complicit in the smuggling of ODS. Ozone project manager in the Ministry of Environment, Water and Climate, being run in conjunction with the UN Environment Programme, George Chaumba, said government relies solely on ZIMRA to control the influx of ODS. Government, he said has the responsibility to control the use of ODS inside the country.

Remembering Hiroshima: The Threat of Nuclear War and Climate Change

Date: 06th August, 2015 Source: Ecowatch

Exactly 70 years ago today, at 8:15 a.m. Japanese time, the world changed forever. The Enola Gay dropped the first nuclear weapon used in war on the citizens of Hiroshima. From that moment on the face of the world and the future of humanity became unrecognizable. According to experts even though the Cold War is long over, in the short term, nuclear weapons remain the single greatest threat to humanity and the future of our planet.

My father, Ted Turner, has made nuclear abolition one of his top priorities as it is a looming threat for all of us and our life support system. He created history with his decision to donate one billion dollars to the UN Foundation, in an effort to support the work of the United Nations and prevent nuclear war. It was only a couple short months before the bombing of Hiroshima and Nagasaki that the United Nations convened for the first time in San Francisco on April, 25, 1945 to prevent a third World War. My father also went on to co-found the Nuclear Threat Initiative with former U.S. Senator Sam Nunn, which is funded by many prominent, international philanthropists. Among them is Warren Buffett, who shares my father’s belief that nuclear weapons are a top threat for humanity and is one of NTI’s leading funders. We have never needed the United Nations and leaders like my father and Warren Buffett more. The crisis in Ukraine, the rise of militants, and the increase in countries obtaining nuclear weapons has pushed the threat

level to an all time high. In an article published on CNN recently, Dr. Ira Helfand, co-president of International Physicians for the Prevention of Nuclear War and past president of IPPNW's U.S. affiliate, Physicians for Social Responsibility, wrote "In the last few years, climate scientists and physicians have shown that a large-scale nuclear war between the U.S. and Russia would drop temperatures across the planet to levels not seen since the last Ice Age, killing much of the human race in the process. Meanwhile, the crisis in Ukraine has raised the danger of such war to the highest level since the end of the Cold War. Indeed, even a very limited nuclear war, such as one that might take place between India and Pakistan and that saw the use of less than 0.5 percent of the world's nuclear arsenals, would cause enough cooling to disrupt agriculture across the globe and spark a global famine that could kill as many as 2 billion people."

Nuclear threat and climate change are the single biggest threats to civilization and are intrinsically linked. Beyond the physical destruction of the bomb and the resulting radiation, the impact of even a small nuclear disturbance could be profound, leading to serious issues of food scarcity. On Dec. 8, 2014 the Vatican released Pope Francis' statement on nuclear weapons called Nuclear Disarmament: Time for Abolition, which argues that the possession of nuclear weapons, even for purposes of deterrence, is immoral. The very existence of nuclear weapons prevents global peace from becoming a reality. A couple months later on May 24, 2015 Pope Francis released his encyclical "Laudato Si', On Care for Our Common Home," detailing the immediate threat of climate change.

It is heartening that some of the world's leaders are taking these issues seriously, but it is not enough. The world's population is looking at us, as one of nine countries that possess nuclear weapons, to be responsible and lead the call for disarmament. It would be wonderful if our citizens could join up with some of the smartest, most successful people in the world to start voicing their wishes to get rid of nuclear weapons once and for all.

CNG-run vehicles emit dangerous nanocarbon, can cause cancer: CSIR study

Date: 07th August, 2015 Source: Zee News India

Ahmedabad: The compressed natural gas (CNG)-run buses are harmful for humans as they emit "nanocarbon" particles which can cause cancer, according to a study conducted by Council of Scientific and Industrial Research (CSIR).

Though the study was conducted on a very limited sample size in Delhi, CSIR took the findings seriously owing to the health hazard it poses to humans and alerted the central government for further follow up, CSIR's director general Dr MO Garg said on Thursday.

According to him, the study can change the perception that natural gas is a clean fuel as it does not emit any visible smoke, which is in contrast to smoke emitted by diesel-run vehicles and perceived as harmful for humans. "Natural gas is supposed to be a clean fuel when used in internal combustion engines, right? But, I don't think people realize that what you see (smoke) is perhaps better than what you don't see (no smoke from CNG vehicles)," said Garg during his address at the Global Green Energy Conclave held here.

"We did a study with a professor of Alberta University, who have developed a device to measure and analyze particles emitted by vehicles. We have installed this machine on the exhaust of a natural gas-run DTC bus in Delhi," he said. "Can you imagine that we found nanocarbon particles coming out of from natural gas combustion. These particles are moving around in the atmosphere and going straight into your lungs through your nose. It then enters into your blood through membranes," Garg said.

According to him, these nanocarbon particles are carcinogenic. Garg also said that he has alerted the

government about its effects. "These nanoparticles are rich in polynuclear aromatic, having huge surface area. They are also carcinogenic. I have been telling government that we need to look at this situation more seriously," he said. "Imagine what will be its effect when all the commercial vehicles, such as buses, run on natural gas in Delhi. You can see smoke coming out from diesel engine and tell that it is dangerous. But, nanocarbon particles coming out from vehicles is something we need to look at," Garg added

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Research raises concerns about CNG exhaust gases

Date:08th August , 2015 Source: The Times Of India

NEW DELHI: Compressed natural gas (CNG) was pitched as a silver bullet for Delhi's air pollution problem, but new research suggests exhaust emissions of CNG vehicles may also be harmful. They may not be as toxic as diesel fumes but, scientists at Council of Scientific and Industrial Research (CSIR) say, gases produced while burning CNG contain carbon nanoparticles that are suspected to cause cancer. Referring to a study by CSIR-Indian Institute of Petroleum and University of Alberta (Canada), M O Garg, director general of CSIR, said nanoparticles have lower mass than particles found in diesel smoke but are far more numerous. "This is a result of combustion which causes carbon disintegration. We have to see if the nanoparticles arise from CNG or the lubricant used. All I am trying to say is that CNG technology may have great potential but there is also a negative aspect to nanoparticles," Garg told TOI, adding that systematic toxicity studies are needed besides trials to find out whether particulate filters can remove nanoparticles from exhaust gases.

The researchers analyzed smoke from a DTC bus, and carried out similar studies on diesel, petrol and hybrid vehicles. But the researchers also point out that technological improvements have enabled other fuels to gradually become cleaner. "About 15 years ago, when Supreme Court ordered the implementation of CNG, diesel had 500ppm (parts per million) sulphur content. Now there are catalytic convertors and particulate filters (that make diesel engines cleaner)," said Garg, citing the introduction of unleaded petrol as another example. The advocacy group Embarq studied emissions from buses run on different fuels in Mexico, Brazil and India, and found that CNG buses emit more micro particles. "The low-sulphur diesel particles were found to be slightly bigger than those from CNG. We also found that overloaded CNG vehicles emit even more micro particles," said Amit Bhatt, strategy head, urban transport, Embarq. "We can say that Euro V and Euro VI diesel is as good as CNG in terms of other pollutants, and superior if you consider particulate emissions," Bhatt added.

For now, CNG can't be labeled a highly polluting fuel because its particulate emissions are lower than those from diesel. "For diesel, we measure the weight of particulate emissions because they are measurable in micrograms. But for CNG, their weight cannot be measured as they are ultrafine; only their numbers can be counted," said Anumita Roychowdhury, head of Centre for Science and Environment's (CSE) Clean Air campaign. She said European countries have started measuring ultrafine particles because they have already addressed the problem of particulate emissions from diesel. India, however, should focus on reducing PM emissions that are the fifth major cause of death now, she added.

"The challenge of ultrafine controls will come only after we clean up the particle mass emissions from diesel vehicles through improvements in emissions standards. After the mass is gone, ultrafines remain," Anumita said. Even some leading medical researchers TOI spoke to said more evidence is required to draw conclusions about the harmful effects of CNG emissions. "The fact that carbon nanoparticles are emitted by CNG-run vehicles does not establish their health impact. Evidence available so far shows that extremely fine particles are not responsible for any significant respiratory health issues since they are too light and are exhaled by healthy individuals," said Dr Arup Basu, chest specialist at Sir Ganga Ram Hospital. But, he cautioned, these particles can deposit inside patients with chronic obstructive pulmonary disease (COPD).

Smokeless CNG bus carries Cancer risk, says CSIR study

Date:09th August, 2015 Source: The Tecake

A new survey conducted by CSIR — Council of Scientific and Industrial Reseach has warned that smokeless CNG run vehicles boasts cancer risk as they emit "nanocarbons". It is to be noted that CNG — "Compressed natural gas" was made mandatory for buses running in Delhi to curb the pollution in the capital due to smoke coming out of diesel-run vehicles. Although, CNG-run bus are smokeless but not disease free. In fact diesel-run bus boasts the risk of asthma but CNG-run buses are even more dangerous.

Dr MO Garg, director general of CSIR said that the survey was conducted on small scale and scientists analysed atmospheric pollution in Delhi and found CNG-run bus poses serious threat and CSIR has taken it very seriously and appropriate steps will be taken to prevent the potential hazard it poses to humans. Garg further added that he has informed the central government for further follow up. While commenting on the long time taken to identify such a threat, he said that everyone considered natural gas as a clean fuel as it does not release any visible smoke when compared to vehicle running on diesel, thus it lead to negligence towards the potential hazard possessed by it.

He explained that the study doesn't say to ban the natural gas, as it is a clean fuel, however when it is used in internal combustion engines like in vehicles it releases nanocarbons. The study was conducted in partnership with a professor of Alerta University. For the study, researchers installed a device in exhaust of CNG-run DTC bus in Delhi that measures the particles emitted from the exhaust.

The results were mind-boggling, said Garg. Researchers were shocked to see traces of nanocarbons coming out of the exhaust. Nanocarbons are carbon particles that are of nano dimensions and are usually produced with the help of nanotechnology. These nanocarbons once released into the atmosphere get in humans body via lungs and then enters in bloodstreams. In worst case nanocarbons can lead to cancer.

"These nanoparticles are rich in polynuclear aromatic, having huge surface area. They are also carcinogenic. I have been telling government that we need to look at this situation more seriously," he Garg. The study has raised the alarm for the citizens living cities since in these areas buses run mostly on CNG also, it boasts the highest chances of cancer. Government should take this seriously as it risks several lives.

China 'exporting' ozone pollution to US: study

Date:10th August , 2015 Source: Global Post

Progress slashing unhealthy ozone in the western United States has been largely undone by pollution wafting across the Pacific from China, according to a study published Monday. Scientists have long suspected this might explain why ozone levels along the US west coast remained constant despite a significant local reduction in ozone-forming chemicals. The study, published in Nature Geoscience, is the first to make the case using satellite observations coupled with computer models of how air-borne molecules travel in the lower atmosphere, the authors said. "The dominant westerly winds blew this air pollution straight across to the United States," explained lead research Willem Verstraeten of the Royal Netherlands Meteorological Institute. "In a manner of speaking, China is exporting its air pollution to the West Coast of America," he said in a statement. Nitrous Oxide emissions from vehicle traffic and industry, mixed with sunlight, create dirty-yellow blankets of ozone smog that sting the eye and scatch the throat.

Close to the ground, this pollution causes respiratory problems, damages crops, and is an important source

of greenhouse gases. By imposing stringent standards for motor vehicles and industry, state and national government in the US succeeded in cutting ozone-producing nitrous oxide emissions by 20 percent from 2005 to 2010. Those efforts, however, were undermined by China's galloping growth, which pushed its own ozone levels up over the same period by about seven percent. Molecules moving across the Pacific travel in the lowest layer in the atmosphere, called the troposphere, which reaches up to 17 kilometres (10.5 miles) above Earth's surface, depending on latitude. The satellite data used in the study zeroed in on a zone nine and three kilometres high, unable to penetrate further. There is a strong correlation between ozone at that level and closer to Earth's surface.

Approximately half of the increase in ozone over China during the 2005-2010 period came from the ground up, and half descended from the stratosphere, the study found. And some portion of the man-made ozone above China may not have been of its own making. "China itself lies downwind from India and other parts of Asia," notes Roth Doherty of the University of Edinburgh in a commentary, also in Nature Geoscience. "It remains to be established how the free tropospheric ozone trend over China is in turn influenced by emissions upwind." Verstraeten concludes by suggesting that local or national efforts to improve air quality will have limited impact unless dealt with on an international scale. "Our atmosphere is global rather than local," he said by email. Ozone in the stratosphere, which extends between 17 and 50 kilometres above Earth, acts to protect against dangerous ultraviolet rays.

UK butterfly species at risk of extinction due to climate change, says study

Date: 10th August, 2015 Source: The Guardian

Severe droughts caused by global warming could have a far greater impact on some UK species of butterfly than previously thought. Continuing climate change caused by carbon emissions from power stations and vehicles is set to have catastrophic consequences for British butterflies including currently widespread species such as the cabbage white and large skipper.

Researchers have found that the increase in extreme droughts as global warming takes hold will cause six species of UK butterflies to be lost from several areas of the country as soon as mid-century. Previous studies have looked at what a gradual increase in temperatures means for British wildlife, but a new paper published on Monday in the journal Nature Climate Change examined the impact of more extreme heat events. It found that butterflies which were predicted to do well under gradual warming would in fact be badly-hit by an increase in severe droughts.

Looking at how butterflies fared in the 1995 drought, the most arid summer since records began in 1776, the researchers identified six species that were particularly sensitive to drought – and then examined how

often they would be struck by similar droughts in the future because of climate change. "On average across the whole country it is quite bleak. I was surprised looking at climate data by the rapid increase in frequency of droughts we are in for," said Tom Oliver, the paper's lead author and an ecological modeller at the UK Centre for Ecology and Hydrology.

"Historically that 1995 drought was once in 200 years. And yet even on the low emissions scenario, by 2050 that's happening every seven years. Under the high emissions scenario [what we are currently on track for] it's every year." However, he said that there would be cooler, wetter refuges in the UK, such as the north-west of England and Scotland where some of the six species – cabbage white (Pieris brassicae), small cabbage white (Pieris rapae), ringlet (Aphantopus hyperantus), green-veined white (Pieris napi), speckled wood (Pararge aegeria), and large skipper (Ochlodes sylvanus) – would survive. Oliver said the way the species were identified as sensitive to drought was conservative, and that it was unlikely that it would just be butterflies that were hit. "It's likely other species besides butterflies will be affected by drought. Because butterflies are a well-studied group they can be used as an indicator for other groups, a canary in the coal mine, if you will," he said. If such losses also applied to other wildlife – such as bees and beetles – that would have a "substantial impact" on our wildlife and an "alarming" impact on the services they provide for ecosystems and agriculture, such as pollination, he said.

The study also highlighted the importance of a good, unfragmented landscape for butterflies hit by increasingly frequent droughts. "If a local population does go extinct it can potentially be recolonised from elsewhere, but they have to be able to move through the landscape. If there is hostile landscape in the way, they might not be able to," said Oliver.

That finding made a strong case for making the woodlands, grasslands and heathlands where Britain's about 50 species of butterflies feed and breed more joined-up, he said. "We are still waiting for action at sufficient scale [on habitats]," Oliver said. But under a business-as-usual scenario for warming – which assumes little or no international action is taken on climate change – even massively improving the landscape would not stop widespread local extinctions by the end of the century. The only way to guarantee the butterflies' survival by 2100 would be dramatic carbon cuts far beyond what governments have proposed so far, and "significant reductions in habitat fragmentation". It was unlikely that the butterflies would evolve quickly enough to adapt to the droughts, the study concluded. Oliver said he hoped the paper would give another reason for international negotiators meeting in Paris later this year to reach a strong deal on climate change.

"I think every little helps. We're highlighting the plight of these sensitive species under the marked increase in drought. Hopefully these results add to the pressure for international agreement for action on emissions."

New pollution-monitoring norms to be finalized in 2-3 months

Date: 10th August, 2015 Source: Live Mint

The Union environment ministry has proposed new pollution monitoring standards for industries in at least 22 sectors over the past few months in an attempt to regulate these sectors better. Some of these standards have been put online for suggestions and comments from various stakeholders. "These would be finalized and notified within the next two to three months. These proposed standards will immensely strengthen the ministry's overall regulation of the polluting industries," said a senior environment ministry

official, who did not want to be identified. The 22 sectors include industries such as paint, fertilizers, cement and co-processing, pulp and paper, sugar, thermal power plants, textiles, slaughterhouses, brick kilns, coffee, common effluent treatment plants, sewage treatment plants, fermentation (distilleries, maltries and breweries) and diesel generator sets.

In February, the Centre for Science and Environment, a non-governmental organization, had in a report pointed to the severe air pollution caused by thermal power plants across the country. The National Green Tribunal and the Supreme Court have also pulled up the environment ministry over the issue of air and water pollution. The senior ministry official cited earlier said that the new standards would check both air and water pollution. "Some of the industries in the list of 22 are highly polluting industries like cement and fertilizers," the official added.

The new standards focuses on waste-water management to check groundwater pollution from toxic discharges. One of the draft monitoring standards also talks about "bathing water quality criteria" as part of the efforts to "restore sanctity of rivers". The move seems to be a result of the severe criticism from activists that the environment ministry is only keen on giving green clearances to industries for various projects. Environment minister Prakash Javadekar, meanwhile, has been stressing on online monitoring of industries for greater transparency and also to address staff shortage. "These new proposed standards would complement efforts of online monitoring. One, there is staff crunch, and two, there are thousands of industries... so physical monitoring of all such industries is nearly impossible," said the official cited earlier. Environmentalist Manoj Misra, however, called for strict implementation of all rules. "Things like pollution control should be a more people-centric movement. However, over the period of time, the general public has been excluded from pollution controlling activities. How will the government guarantee that the new system will not become dysfunctional in some time? There is no feedback mechanism where the common people can report to the government about pollution around them," said Misra, convenor of Yamuna Jiye Abhiyaan, a civil society campaign to save the Yamuna river.

Lord Drayson takes on UK air pollution crisis with new smart sensor

Date: 11th August, 2015 Source: The Guardian

CleanSpace service uses shared data from personal air quality sensors to create network of pollution hotspots. Millionaire businessman Lord Paul Drayson, a major Labour party donor, former science minister and self-confessed "car nut", is moving on to his next environmental challenge: a hi-tech bid to tackle the UK's air pollution crisis. The peer, who made a reported £80m fortune from a needle-free injection system, has already funded the development of a record-breaking electric car through his company Drayson Technologies. In September, he will launch a personal air quality sensor that he hopes will not only help people avoid the most polluted routes but also add to pressure on local and central government to act on the problem.

London, Birmingham and Leeds are among the many UK cities that are not expected to meet EU safety limits on pollution until 2030. Tens of thousands of premature deaths each year are attributed to bad air quality by Public Health England, and a recent report commissioned by London mayor Boris Johnson blamed air pollution for killing nearly 9,500 people annually in the capital alone. "I'm an asthmatic, as are four of my children," said Drayson. "My family lives in and around London, and I enjoying cycling and running. With access to the insight coming out of the development side of the business [Drayson Technologies], I became, like many others, acutely aware of the importance of air quality." He said his fascination with the intersection of people and technology had led him to develop the

CleanSpace service, which launches next month. It uses a £35 mobile-phone sized pollution sensor to talk via Bluetooth to an Android and IOS app that gives users reward points for biking or walking, rather than taking the car.

Those points – 'CleanMiles' – can then be exchanged for rewards with the companies that Drayson is partnering with. Halfords is the first signed up, but he also hopes to target coffee shops and other businesses. Oil and gas companies won't be in the partner scheme, he says.

"What I learned from politics is you have to persuade people what they're moving to is better, rather than scaring them," he said. The sensor uses technology from Imperial College London and was developed in conjunction with air quality experts at King's College London. It measures carbon monoxide levels as a surrogate for vehicle pollutants, such as fine particulates known as PM2.5s and a toxic gas, nitrogen dioxide, generated by diesel vehicles. "The first step is to fully recognise the scale of the problem through better data and knowledge," Drayson said. He likened the network element of the service to the Israeli startup Waze, which shares data from smartphone users to build up a map of traffic hotspots and achieved enough critical mass that it was bought by Google. Anonymised data from a user's pollution sensor will be shared with other users so they can see which pollution blackspots to avoid on their journey. Whether CleanSpace can persuade enough users to buy into its model will be its key challenge. Public air-quality monitors already feed data to free rival pollution apps, though Drayson believes the personal and granular data his sensor offers will be enough of a lure.

The UK government has been forced by a supreme court ruling in April to draw up a plan of action on air pollution by the end of the year. But Drayson said a bottom-up approach is needed too, as public awareness of the crisis is still relatively low. "I think the effect of air pollution is still relatively underappreciated and there is work to do in raising awareness of the impact it has."

"Yes, the government has a role to play, but this isn't solely a government issue to tackle. The best way to achieve change, and for legislation and regulation to work, is for it to grow from and reflect the beliefs and behaviours of the general public as a whole." There are currently 250 people on a closed beta of the CleanSpace network ahead of its launch, but Drayson has a target of signing up 500,000 members across the UK.

India to submit its emission reduction targets soon

Date:12th August 12, 2015 Source: The Hindu Business Line

India will announce its voluntary emission reduction targets well ahead of the deadline of October 1, the Union Minister for Environment, Forests and Climate Change, Prakash Javdekar, told Parliament on Tuesday. It was agreed in the Lima climate conference last year that all countries would submit their 'intended nationally determined contributions' (INDCs) by October 1, 2015, two months ahead of this year's climate conference, which will be held in Paris from November 30. India has undertaken "an elaborate, multi-stakeholder consultation process for finalising its INDC," says a government press release, quoting the Minister. Climate conferences (negotiations) are held each year under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC). This year's conference is expected to be epochal, given the urgency of hammering out an agreement to do something before it is too late to halt and reverse mankind-caused climate change. A major global deal is expected to be negotiated which might say what each country would do and how the efforts will be funded. A key element of this year's negotiations is the concept of

INDC, an idea mooted in the 2013 Warsaw conference. The INDC represents a 'bottom-up approach', as it means each country will say how much of greenhouse gas emissions it would reduce from the year 2020 and the commitments will be legally-binding. (It is post-2020, because up till 2020 many countries already have their emission reduction commitments under the Kyoto Protocol.) India is among the top three polluting countries in the world, along with USA and China, though India is the 10th in terms of carbon dioxide emissions per person.

Many experts, including Jairam Ramesh, a former Minister for Environment and Forests, have said that India should formulate its emission reduction targets only after the developed countries and China do so. Most countries, including the US and China, have since submitted their INDCs, and all eyes are on India. "India has been advocating a strong and ambitious outcome in Paris in accordance with the principle and provisions of the United Nations Framework Convention on Climate Change (UNFCCC)," says the government press release. It notes that India wants an "equitable, comprehensive and balanced agreement in Paris."

Carbon Emissions Falling Fast as Wind and Solar Replace Fossil Fuels

Date:12th August 12, 2015 Source: Ecowatch

Europe's greenhouse gas emissions are falling fast, mainly because of the rapid spread of the wind turbines and solar panels that are replacing fossil fuels for electricity generation. European Union (EU) data shows that once countries adopt measures to reduce greenhouse gases (GHGs), they often exceed their targets—and this finding is backed up by figures released this week in a statement by the United Nations Framework Convention on Climate Change (UNFCCC). The Convention's statistics show that the 37 industrialized countries (plus the EU) that signed up in 1997 to the Kyoto Protocol—the original international treaty on combating global warming—have frequently exceeded their promised GHG cuts by a large margin.

Beacon for governments- The UNFCCC statement says, "This is a powerful demonstration that climate change agreements not only work, but can drive even higher ambition over time." "The successful completion of the Kyoto Protocol's first commitment period can serve as a beacon for governments as they work towards a new, universal climate change agreement in Paris, in December this year." In the EU, the leading countries for making savings are Germany, Sweden, France, Italy and Spain, which account for two-thirds of the total savings on the continent. But most of the 28 countries in the bloc are also making progress towards the EU's own target of producing 20 percent of all its energy needs from renewables by 2020. It has already reached 15 percent.

Part of the EU plan to prevent any of the 28 member states backsliding on agreed targets to reduce GHGs is to measure every two years the effect of various policies to achieve the reductions. All states have to submit details of savings achieved through the introduction of renewables in electricity production, heating and cooling systems and transport. Because of the time taken to compile the figures, the latest report from the EC Joint Research Center goes up only to 2012. However, it shows that each year in the three years up to the end of 2012 GHGs emitted by the EU fell by 8.8 percent as a result of replacing fossil fuels with renewables. Two-thirds of the savings came from the widespread introduction of wind and solar power. Renewables used for heating and cooling achieved 31 percent of the savings and transport 5 percent. Most transport renewables came from the use of bio-fuels instead of petrol and diesel.

Measuring the progress towards targets is vital for mutual trust between nations in the run-up to the Paris climate talks. It also gives politicians confidence that they can make pledges they can keep. Ambitious goal- The knowledge that the EU is likely to exceed its target of a 20 percent reduction of all emissions on 1990 levels by 2020 has led ministers to a more ambitious goal—total reductions of 40 percent by 2030. A large part of this will come from the installation of more renewables and energy-efficiency measures. Across Europe, emissions vary widely from country to country, with Germany having the highest and Malta the lowest. Germany also had the greatest absolute reduction of emissions—a total drop of 23 percent on 1990 levels by 2012. The highest emissions per capita were in Luxembourg (20 tons of carbon dioxide per person), followed by Estonia (12.7), the Czech Republic (10.2), Germany (9.8) and the Netherlands (9.7). Just five member states—Germany, Poland, the UK, Italy and Romania—together produced two-thirds of the EU's emissions in 1990. The only change by 2012 was that Romania had been overtaken by Spain.

Breathing space aims to decrease air pollution at Whipps Cross

Date: August 12, 2015 Source: The Guardian

Green fingered volunteers were on hand to help protect vulnerable patients from the impacts of air pollution by planting a new garden at Whipps Cross Hospital in Leytonstone. Breathing Spaces, a project from Global Action Plan and Barts Health NHS Trust, aims to spread awareness on the impact air pollution has on health and the environment which causes 9,000 premature deaths in London each year. Volunteers, patients and Barts Health staff came together to plant a selection of shrubs and flowers specially chosen for their ability to trap air pollution causing particles. Organisers hope that the new garden at Whipps Cross will be used as a tranquil respite from the 'hustle and bustle of everyday life'. The project also advises people to reduce their exposure to air pollution by take less polluted routes to work, avoiding rush hour traffic and keeping up to date with any air pollution alerts.

UK lobbying for even weaker EU air pollution laws, leaked papers show

Date: August 12, 2015 Source: The Guardian

Conservative government argues that already watered-down laws to limit toxic pollution that causes tens of thousands of deaths each year will cause job losses in the coal mining sector Leaked documents show the UK is pushing for watered-down EU air pollution laws to be weakened further, arguing they would cause pit closures leading to substantial job losses and the need to import coal. The EU rules could help curb toxic nitrogen oxides (NOx) and sulphur dioxide (SO2) emissions, although campaigners criticised them following revelations that they were partly drafted by the same companies they were meant to regulate. But a confidential government submission to Brussels, seen by the Guardian, says that the UK would have to import coal from Russia, Colombia and South Africa to meet the new standards, because British coal has such a high sulphur content. This "would therefore lead to the loss of the principal market for UK coal and the closure of the UK's coal

mines," the paper says. "The mine closures would also lead to substantial job losses – directly and indirectly within the supply chain – in areas of the UK with significant levels of unemployment and socio-economic deprivation." However, studies suggest that air pollution hits poor people in urban areas and ethnic minorities hardest, and its true early death toll could be even higher than the statistics suggest. The new pollution rules would also be costly, risk energy security, and prevent indigenous coal being used in new power plants fitted with carbon capture and storage (CCS) technology, the UK warns. The only leading British politician to publicly make such a strong case for coal has been Jeremy Corbyn, the leftwing frontrunner in the Labour leadership contest, who foresees CCS potentially enabling a return to mining in South Wales, and benefiting working class communities. Last week a Welsh council rejected plans for a new opencast coal mine. Greenpeace argued that because two-thirds of fossil fuel reserves must be left underground to avoid climate breakdown, the government should offer retraining and financial support to miners, instead of a lifeline to their bosses. "To protect the profits of a few coal-burning energy firms the 'greenest government ever' is lobbying to water down air pollution rules that could save hundreds of lives and millions in NHS costs," said Greenpeace's head of energy, Daisy Sands. "Not content with locking consumers into higher bills by undermining the cheapest clean energy sources and home efficiency, ministers are now putting their health at risk by letting big polluters off the hook." The new EU rules are expected to be agreed early next year, before coming into force in 2020. In April, the supreme court gave the government until the end of the year to present a plan for cleaning up the country's polluted air, which is responsible for 29,000 early deaths every year. The government is expected to announce its plan for bringing the UK into line with the EU's existing air quality directive next month. The UK has been in breach of the EU's nitrogen dioxide (NO_2) pollution limits since 2010 and will not meet them until 2030 on current trends, according to government figures, raising the spectre of fines of up to £300m a year. Alan Andrews, a lawyer for ClientEarth, which brought the supreme court case against the government, expressed dismay at the pro-coal stance in the leaked papers. "It suggests that they are not taking the supreme court decision seriously and are not making a genuine attempt to achieve the emissions reductions as soon as possible," he told the Guardian. "We would seriously consider further legal action if that is the case, after we have analysed the new plan."

States challenge air pollution 'loophole' rule

Date: 12th August, 2015 Source: The Hill

Seventeen states filed a lawsuit challenging the Environmental Protection Agency's (EPA) crackdown on air pollution from power plants during exceptional periods. Led by Florida, the states said that the EPA improperly shifted the federal-state balance that the Clean Air Act sets with the EPA's rule for startup, shutdown and malfunction pollution. "We will not step aside while the EPA, through heavy-handed federal overreach, threatens to upend a system that the EPA has approved multiple times and has provided a consistent, reliable framework to safely provide electricity to millions of Floridians across the state," Florida Attorney General Pam Bondi said in a statement, adding that the rule is likely to increase utility bills in Florida. In May, the EPA made final a rule that tells states to stop allowing power plants and other air pollution sources to exceed emissions limits during exceptional times like startup, shutdown or malfunctions, when it is usually harder to control emissions. The mandate to 36 states came after environmental groups complained that the Clean Air Act does not allow such exemptions, and called them "loopholes." But the 17 states filing a lawsuit Tuesday said that the EPA is unfairly reversing years of decisions approving state oversight of those plants. "Besides the clear violation of state's rights enumerated in the Clean Air Act, the final rule also stands to stall or reverse progress the plaintiffs have made in improving the quality of the air in their state," Bondi's office said.

It's CSE Vs. CSIR On CNG Vs. Diesel Powered Buses

Date:12th August, 2015 Source: Crazy Engineers

About a week ago, a CSIR study concluded that the CNG (Compressed Natural Gas) powered buses are hazardous to human health as they emit fine nanocarbon particles which may lead to cancer. The study was conducted on a limited number of buses in Delhi. But this study has now been challenged by the engineers and scientists at the CSE aka Centre for Science and Environment, India. The CSE India has published a press release that 'condemns' the misrepresentation of findings of the CSIR study.

The CSE release says that the CSIR study has not presented the full study and facts. It further says that misleading conclusions were projected in the public domain. CSE has acquired the actual findings which clearly indicate that the CNG run buses are not hazardous to human health. CSE found out that the results of the study done by CSIR show that the emission levels of nanocarbon particles and other pollutants are very close to EURO VI emission standards. It further says that the study done by CSIR actually affirms the benefits of the CNG powered buses. The regular buses in India do not use clean diesel technology and the emissions from them are way more hazardous than those from CNG run buses. CSE reported that the Indian diesel run buses emit typically about 600-2000 times more ultrafine particles compared to CNG buses. On the contrary, the CNG buses in India are already very close to the Euro VI emission standards which is 600 billion particles / kwhr; while the actual observation in Indian buses is just 278 billion particles / kwhr. CSE concludes the PR confirming that India needs to transition to clean fuel as soon as possible and adapt Euro VI standards for emissions. We'd like to have opinions from our fellow engineers on this CSE Vs. CSIR debate.

Deadly Heat Waves Sweep the Globe

Date:13th August, 2015 Source: Ecowatch

This summer is undoubtedly one for the record books. Brutal heat has literally melted roads, ignited forest fires and affected millions around the planet. Extreme weather has scorched the Middle East, Asia, Europe and the U.S, as weather experts predict that this year will surpass last year as the hottest in recorded history.

A massive heat dome continues to break so many records across Europe and the Middle East "I'd not be surprised if 2015 ends up the warmest year on record," said National Oceanic and Atmospheric Administration (NOAA) climate monitoring chief Derek Arndt in June.

The Middle East Death tolls are currently climbing in Egypt as temperatures soar to 114 degrees Fahrenheit. The Associated Press reported that more than 60 people—mostly elderly—have died from the heat and high humidity. An additional 581 people have been hospitalized for heat exhaustion.

The entire region has been devastated by the relentless heat. Earlier this week, Iran hit a sweltering 164 degrees—just a few degrees shy of the highest ever record heat index. Pakistan's devastating heat wave in June killed 1,233 and hospitalized more than 1,900 due to dehydration, heat stroke and other heat-related illnesses. In neighboring India, 2,500 people succumbed to heat a month earlier.

Asia- Japan is experiencing heat-related deaths in 29 out of its 47 prefectures, with Tokyo currently experiencing an "unprecedented" streak of temperatures over 95 degrees, according to Weather.com. The week of July 27 through Aug. 2—where 25 people died from heat stroke and other heat-related illnesses—

was considered the “deadliest” week in the country and nearly equaled the death toll of 30 in the preceding three months combined, Weather.com added in its report. — Tokyo Reporter (@tokyoreporter) August 12, 2015Elsewhere in Asia, Chinese weather authorities have issued heat wave alerts as some parts of the country experienced temperatures in the triple digits. The Guardian also reported in July that North Koreans were ordered to start work at 5 a.m. in order to cope with temperatures around 104 degrees Fahrenheit in Pyongyang.

Europe- The heat has smashed records across the continent, reminding some of the devastating summer of 2003 that claimed 30,000 lives. “Europeans have been painfully aware of the dangers of extreme heat since the killer heat wave of July 2003,” said Weather.com senior meteorologist Nick Wiltgen. “This July 2015 was the warmest July on record for Spain, Italy, Switzerland and Austria,” Dr. Jeff Masters, Weather Underground’s director of meteorology, told the website. Eastern Europe is also seeing temperatures up to the mid-90s, when highs around 75 are more common this time of year, AccuWeather wrote. And Poland is also experiencing the mass extinction of one very unsuspecting victim: IKEA meatballs. Record-breaking heat in Europe has forced Ikea in Poland to take meatballs off the menu.

North America- Although summer is coming to an end, many parts of the U.S. will still be baking in the sun’s rays. Some Los Angelenos, for instance, will feel temperatures in the 100s this week, the Los Angeles Times reported. Stuart Seto, a weather specialist with the National Weather Service, told the publication on Monday that while the city’s temperatures are not record-breaking, they are still about 10 degrees above average for this time of year. Heat wave expected to bake Los Angeles by Thursday

— Los Angeles Times (@latimes) August 11, 2015
The American summer of 2015 has also been marked by destructive wildfires that have burned through the West. So far, flames have burned nearly 5 million acres (an area the size of Connecticut) in the state of Alaska. Climate Central even created an interactive map that shows in real time the active wildfires in the U.S. Climate change?- Global warming has been suggest as one of the possible culprits of this extreme heat. “The heat wave is still ongoing and it is premature to say whether it can be attributed to climate change or whether it is due to naturally occurring climate variability,” stated Omar Baddour, who coordinates the World Meteorological Organization’s World Climate Data and Monitoring Program. “But climate change scenarios predict that heat waves will become more intense, more frequent and longer. It is notable that the time between major heat waves (2003, 2010 and 2015) is getting shorter,” he added.

Deadly Massive Chemical Explosion Raises Concerns of Toxic Brew Released Into the Environment

Date: 17th August, 2015 Source: Ecowatch

In the wake of the deadly explosion that ripped through Tianjin, China that has claimed at least 114 lives and left 70 more still missing since last Wednesday, attention is now being turned to what might have triggered the disaster as well as the toxic chemical brew released into the environment. While the exact cause is currently unclear, we know that the blast occurred at a warehouse owned by Rui Hai International Logistics, a private company licensed to handle potentially hazardous cargo, The New York Times reported. Officials from the Tianjin Tanggu Environmental Monitoring Station reported that the company stored a number of toxic industrial chemicals—sodium cyanide, toluene diisocyanate and calcium carbide—and was licensed to handle highly combustible substances such as compressed and liquefied natural gas, the Times wrote. Deborah Read, an associate professor at Massey University’s Center for Public Health Research in New Zealand, described to the The National Business Review the dangerous

nature of these three chemicals on human health. “Sodium cyanide releases hydrogen cyanide gas on contact with acids or water. Hydrogen cyanide interferes with the body’s ability to use oxygen particularly affecting the brain, heart and lungs and can rapidly lead to death,” she said.

As for the other chemicals that were reportedly present in the warehouse, Read continued that “toluene diisocyanate irritates eyes and airways and can cause asthma and fluid in the lungs (pulmonary oedema).” “Contact of calcium carbide with water can result in fire and explosion. Calcium carbide is corrosive to skin, eyes and airways and can cause fluid in the lungs (pulmonary oedema),” she said. More information desperately needed in #Tianjin. Precise make-up of “cocktail of chemicals” still unknown— Greenpeace East Asia Sodium cyanide, which is primarily used in the mining industry and for plastic production, is of particular concern; the U.S. Centers for Disease Control and Prevention saying that exposure to chemical can be “rapidly fatal.”

Urban Grime Can Contribute to Air Pollution

Date:17th August, 2015 Source: City Lab

The filthy, black grime crusting city buildings and statues isn’t just an eyesore. It’s also an unlikely contributor to lung-searing smog, according to Canadian scientists. Pollution from cars, factories, and other sources can waft around until settling on surfaces as grime. Locked into this solid-looking state, it’s easy to assume it doesn’t do much after that until somebody power-washes it into oblivion. But according to James Donaldson at the University of Toronto, when sunlight hits grime it kicks off a reaction that releases nitrogen-oxide compounds. These chemicals float back into the air and combine with others to make ozone, the principle ingredient in smog.

“We don’t know yet to what extent this is occurring, but it may be quite a significant, and unaccounted for, contributor to air pollution in cities,” Donaldson says in a press release. Here’s more: [S]cientists had long suspected that nitrogen oxides become inactive when they are trapped in grime and settle on a surface.

However, Donaldson and his colleagues at the University of Toronto have collected data that are inconsistent with this theory. In previous work, they discovered that nitrate anions disappeared from grime at faster rates than could be explained by wash-off due to rainfall. And, in a subsequent laboratory comparison, they found that nitrate disappeared from grime 10,000 times faster than from a water-based solution when both were exposed to artificial sunlight....“If our suspicions are correct, it means that the current understanding of urban air pollution is missing a big chunk of information,” Donaldson says.

“In our work, we are showing that there is the potential for significant recycling of nitrogen oxides into the atmosphere from grime, which could give rise to greater ozone creation.”

Donaldson and his compatriots also found large differences in the amount of grime in two cities they tested, Toronto and Leipzig. The latter showed 20 times the amount of grime, suggesting locals might be breathing in larger amounts of ozone, which can cause chest pain and wheezing and aggravate bronchitis and emphysema. Anybody interested in learning more can tune into an American Chemical Society YouTube talk today at 1:30 p.m. ET.

EPA Proposes First Methane Cuts for Fracking Industry as Part of Obama's Climate Efforts

Date: 18th August, 2015 Source: Ecowatch

Today, the Obama administration released its proposed rule to limit air pollution from fracking and other oil and gas operations. The Methane Pollution Standard is the first limits on methane emissions from new and modified facilities including well pads, compressor station, storage facilities and other infrastructure. At Earthworks we have witnessed the impacts of air pollution from oil and gas drilling for decades. But, it was only when we purchased our FLIR Gasfinder camera a year ago that we were able to see firsthand the methane and volatile organic compounds spewing from nearly every oil and gas site we visited. It was scary for us to see and it is even scarier for communities to live with. These Clean Air Act rules come at a time when the rush to drill has scarred our landscapes and the hearts of families whose children are suffering from environment-induced asthma, nosebleeds and headaches.

Fracking and the web of infrastructure that comes with it, has reached its spidery fingers into our most vulnerable neighborhoods, far beyond the point of extraction. The oil and gas industry has left no stone unturned and neither can we. Better regulations to rein in this out-of-control industry are one tool in our toolbox to help reduce the harm of fracking across the country. These rules will make a difference for people from California to Texas to Ohio and Pennsylvania who are faced with oil and gas knocking on their front door.

The rules address threats to our air, our planet and our common sense:

- Fracking and related activity is bad for our climate. President Obama likes to talk about reducing our carbon footprint, but CO2 is only one of many greenhouse gases that worsen the impacts of climate change. Methane, the gas specifically targeted by this rule, is 86x worse for climate than CO2, but it gets about 86x less attention. This rule can change that.
- Oil and gas operations pollute our communities with health-harming chemicals like Volatile Organic Compounds (VOCs), benzene, a known carcinogen and ozone, which is hazardous to human health and can cause premature death. Exposure to hydrogen sulfide gas, found in many shale oil and gas formations, can cause difficulty breathing and eye and throat irritation. High levels of exposure can be fatal. These harmful air toxins often "hitchhike" along with methane pollution, allowing this new rule to capture a whole host of pollutants.
- And finally, allowing these chemicals to pollute our air wasteful. Methane, by another name, is natural gas. Yes, the exact thing that we are trying to produce more of is what we are recklessly releasing into the air and allowing to pollution our communities. By plugging the leaks we will stop our natural resources from becoming polluting waste.

We can see the pollution and we can stop it. But the rule falls short. It only covers new facilities, leaving people who have already signed leases, already grown their families in areas infiltrated by industry, in danger. We cannot afford to turn down any solutions, but we also cannot afford to stop fighting for comprehensive solutions that protect everyone.

And that's the elephant in the room. In order to protect our clean air for the long haul, we must expedite the transition to renewable energy—today. We have the solutions, it's time our leaders in Washington take decisive action to realize the renewable energy future we need now.

Wenonah Hauter: Methane Reductions Will Not Hold Off Growing Climate Crisis

Date:18th August, 2015 Source: Ecowatch

Today the Obama Administration released proposed regulations to directly regulate methane leaks from the oil and gas industry. If adopted, these regulations would wrongly promote natural gas as a "clean" alternative to oil and coal. These weak regulations leave the impression that pursuing natural gas benefits the environment, providing a justification for continuing to drill and frack. Besides contaminating water and causing earthquakes, drilling and fracking for gas is impacting the global climate.

Implementing the proposed methane reductions could not possibly hold off the growing climate crisis. Methane leaks are seriously underreported and will increase as fracking is expanded. Even if only carbon dioxide emissions from natural gas are considered, we must keep fracked gas in the ground. Regulating methane will not address fracking's carbon dioxide footprint and fracking must be entirely halted if we are to avoid the worst of the expected impacts from global warming. A serious program for curbing climate change, means President Obama needs to move aggressively to keep fossil fuels in the ground, stop promoting expanded drilling and fracking, and do everything in his power to accelerate the transition to a 100 percent renewable energy economy.

E.P.A. Announces New Rules to Cut Methane Emissions

Date:18th August, 2015 Source: The New Yark Time

Oil rigging equipment near Sweetwater, Texas. The Obama administration has set a goal of reducing methane emissions by 40 to 45 percent from 2012 levels by 2025.

WASHINGTON — The Obama administration on Tuesday proposed the first federal regulations requiring the nation's oil and gas industry to cut emissions of methane as part of an expanding and increasingly aggressive effort to combat climate change.

In a conference call with reporters, Janet McCabe, the Environmental Protection Agency's acting assistant administrator for the Office of Air and Radiation, said the rules were designed to ensure that oil and gas companies reduced waste and sold more gas that would otherwise be lost, while protecting the climate and the health of the public. Ms. McCabe estimated that the proposals — which would require drillers to stop leaks and capture lost gas even in wells intended to extract only oil — would cost the industry up to $420 million to carry out by 2025, but that there would be savings, including reduced waste, of as much as $550 million during that period, bringing a net benefit of as much as $150 million.

The new rules, which were widely expected, are part of a broad push by the Obama administration to cut emissions of planet-warming gases from different sectors of the economy. This month, Mr. Obama unveiled the centerpiece of that plan, a final regulation meant to cut emissions of carbon dioxide by 32 percent from 2005 levels by 2030 and increase to 28 percent the proportion of the nation's electricity generated by renewable sources like solar and wind. Those rules, if they withstand legal challenges, would transform the nation's energy sector.

Reducing methane is an important part of the administration's strategy, because methane is 25 times more powerful than carbon dioxide in trapping heat, although it persists in the atmosphere for far less time than carbon dioxide does. The administration has set a goal of reducing methane emissions by 40 to 45 percent from 2012 levels by 2025.

The latest proposed regulations are expected to reduce methane emissions by 20 to 30 percent, Ms. McCabe said, getting the administration about halfway to its overall methane reduction target. Ms. McCabe declined to say how the administration intended to get all the way to its goal."There are a variety of approaches that people are looking at," Ms. McCabe said. "E.P.A. is not the only agency looking at these operations." Oil and gas companies oppose the proposals, calling them unnecessary and costly, while environmental advocacy groups say they do not go far enough because they apply mainly to new wells and not most existing ones.

Representative Lamar Smith, a Republican from Texas who is the chairman of the House Science, Space and Technology Committee, released a statement on Tuesday saying the proposals are part of the administration's "war on American energy jobs."

"The E.P.A.'s own data shows that methane emissions in the United States decreased by almost 15 percent between 1990 and 2013, yet E.P.A. is forging ahead," he wrote. But new studies suggest that methane emissions from the oil and gas industry may be far higher than federal estimates, in part because of leaks from parts of drilling and gas gathering and storage systems that are rarely monitored. The environmental agency has proposed improved monitoring.

Faced with the E.P.A.'s plan and another one that is expected from the Bureau of Land Management regarding methane, oil and gas producers are grappling with regulations that could prove costly just as many of them are coping with lower prices for their products, said Sandra Snyder, an environmental lawyer in Washington who represents producers. "There's a lot hitting the oil and gas industry at once," Ms. Snyder said. Environmentalists offered tepid praise of Tuesday's proposals, which must go through a public comment period and analysis that often takes a year before being completed. Many faulted the administration for focusing the proposals on only new wells. "The largest source of this pollution, however, is the oil and gas infrastructure that already exists across the country," Meleah Geertsma, a senior lawyer at the Natural Resources Defense Council, said in a written statement. "That must be addressed next." Jack N. Gerard, the president of the American Petroleum Institute, an industry trade association, said Tuesday's proposals were unnecessary because the industry was reducing methane emissions on its own. "The last thing we need is more duplicative and costly regulation that could increase the cost of energy for Americans," Mr. Gerard said.

EPA proposes reducing methane leaks from oil and gas production

Date: 19th August, 2015 Source: HCN

The Environmental Protection Agency proposed yesterday to reduce emissions of methane from the oil and gas industry across the country, targeting new wells and equipment but also providing guidelines for existing wells and equipment in areas with poor air quality.

Methane, the primary constituent of natural gas, is a potent greenhouse gas, and reigning in emissions is a key part of President Barack Obama's strategy to combat climate change. The Obama administration wants to bolster oil and gas production while cleaning it up too. "This valuable resource must be developed responsibly and safely," Janet McCabe, an acting assistant EPA administrator, says. The EPA's proposal also would reduce toxic volatile organic compounds, or VOCs, such as benzene, toluene and xylene, which can degrade regional air quality and cause acute health effects for people who live, work or play near wells

and production equipment. Under the proposal, companies would be required to find and repair leaks; capture the gas that flows out during oil well completions, after companies drill and before they connect wells to pipelines; and limit methane leaks from equipment used in compressor stations. This rule is separate from the Obama administration's Clean Power Plan that was recently announced, and which proposes regulations for emissions from power plants.

In yesterday's announcement, the EPA also proposed updating the permitting process for oil and gas in tribal lands to limit harmful emissions for this rapidly growing industry."If you put them together, (industry) reductions could be as high as 20 to 30 percent of national emissions of methane for 2012," McCabe says.

The oil and gas industry is responsible for about 30 percent of methane emissions nationwide. But its representatives argue that they have been reducing emissions even while expanding production, so the EPA's costly, bureaucratic proposal is unnecessary.

"The problem with EPA making mandatory what industry is already doing is that it simply adds bureaucratic layers that remove flexibility and innovation, while discouraging the development of the single most significant source of U.S. greenhouse gas reductions," Kathleen Sgamma, a vice president of Western Energy Alliance, an industry group, says.

The EPA predicts its proposal would cost industry $320 million to $420 million but save more than that in reduced health impacts and other benefits. Sen. James Inhofe, R-Okla., who heads the Senate Environment Committee, called the rule "another example of the administration's punitive expansion of their war on fossil fuels." Environmentalists applauded the administration for proposing the rule but said that more needs to be done to clean up existing wells and production equipment. These wells and equipment were grandfathered into the proposal, even though the EPA predicts they still will make up 90 percent of the problem in 2018. The question of how much methane leaks from oil and gas production has been the subject of hot debate in recent years.

The debate is important because hydraulic fracturing and other drilling advances have encouraged a drilling boom. The combination of low natural gas prices and regulations has incentivized power companies to shift from coal to natural gas. Coal emits a lot more greenhouse gases when used to generate electricity than natural gas. But it's difficult to measure methane leaks because the oil and gas industry is widely scattered. So scientists still are grappling with how much the climate change gains from shifting from coal to gas are offset by methane leaks. A new study published this week in the journal Environmental Science and Technology illuminated one piece of the puzzle. It shows that methane emissions from the facilities that collect natural gas from wells appear to be "substantially higher" than the EPA estimates.

Fossil Fuel Leasing on Public Lands Must End to Prevent Global Climate Crisis, Report Finds

Date:19th August, 2015 Source: Ecowatch

The Bureau of Land Management has leased 2.2 billion tons of publicly owned coal during the Obama administration, unlocking 3.9 billion metric tons of carbon pollution. Photo credit: Tim Aubry / Greenpeace Ending new fossil fuel leasing on lands and offshore areas controlled by the U.S. government would keep up to 450 billion tons of greenhouse gases (GHG) from polluting the atmosphere, according to a first-of-its-kind analysis by EcoShift on behalf of the Center for Biological Diversity and Friends of the Earth released today. The analysis, The Potential Greenhouse Gas Emissions of

U.S. Federal Fossil Fuels, models the life-cycle greenhouse gas pollution that would result from developing federally-controlled coal, oil shale, natural gas, crude oil and tar sands on public lands and offshore ocean areas under government control. Allowing these publicly owned fossil fuels to be developed would cripple the U.S.' ability to meet its obligations to avert the worst effects of the global climate crisis, the report finds. "The facts have been increasingly clear for a long time and we believe that this analysis finally puts the issue of continued development of federal fossil reserves to rest. We cannot afford to continue ignoring reality," said EcoShift Principal Dr. Alexander Gershenson.

Among the key findings:

- Potential GHG emissions of federal fossil fuels (leased and unleased) if developed would release up to 492 gigatons (Gt) (one gigaton equals 1 billion tons) of carbon dioxide equivalent pollution (CO2e); representing 46 percent to 50 percent of potential emissions from all remaining U.S. fossil fuels.
- Of that amount, up to 450 Gt CO2e have not yet been leased to private industry for extraction.
- Releasing those 450 Gt CO2e (the equivalent annual pollution of more than 118,000 coal-fired power plants) would be incompatible with any U.S. share of global carbon limits that would keep emissions below scientifically advised levels.

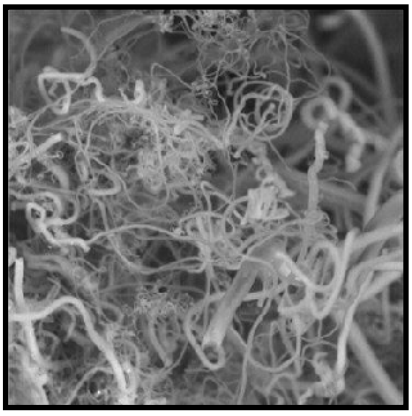
"Our climate can't afford the pollution from more federal fossil fuel leasing," said Taylor McKinnon with the Center for Biological Diversity. "The natural place for President Obama to start leading the global fight to keep fossil fuels in the ground is on our public lands and oceans." The Intergovernmental Panel on Climate Change projects that maintaining a good chance of avoiding 2°C warming by century's end requires limiting global emissions to about 1390 Gt CO2e (or 1000 Gt CO2). Emissions from unleased federal fossil fuels exceed U.S. emissions quotas for maintaining only a 50 percent chance of avoiding 2°C of warming. The potential emissions of unleased federal fossil fuels are entirely precluded after factoring in the emissions of developing non-federal and already leased federal fossil fuels.

"Our government has already leased more public fossil fuels than can safely be burned," said Marissa Knodel, climate campaigner at Friends of the Earth. "Each new lease puts us farther down the path toward climate catastrophe and is a direct contradiction to the president's pledge to attack the climate crisis head-on." Federal agencies do not track or report the nationwide cumulative greenhouse gas emissions that result from federal leasing of fossil fuel reserves. Likewise, they do not assess the potential emissions of remaining fossil fuel resources and reserves.

"This analysis shows that the U.S.' remaining federal fossil fuels contain vast potential for greenhouse gas pollution," said EcoShift Principal Dr. Dustin Mulvaney. "To our knowledge, this is the first-ever attempt to understand the pollution potential of the publicly-owned fossil fuels that the federal government controls."

'Diamonds from the sky' approach turns CO2 into valuable products

Date:19th August, 2015 Source: Science Daily



Finding a technology to shift carbon dioxide (CO2), the most abundant anthropogenic greenhouse gas, from a climate change problem to a valuable commodity has long been a dream of many scientists and government officials. Now, a team of chemists says they have developed a technology to economically convert atmospheric CO2 directly into highly valued carbon nanofibers for industrial and consumer products. The team will present brand-new research on this new CO2 capture and utilization technology at the 250th National Meeting & Exposition of the American Chemical Society (ACS). "We have found a way to use atmospheric CO2 to produce high-yield carbon

nanofibers," says Stuart Licht, Ph.D., who leads a research team at George Washington University. "Such nanofibers are used to make strong carbon composites, such as those used in the Boeing Dreamliner, as well as in high-end sports equipment, wind turbine blades and a host of other products." Previously, the researchers had made fertilizer and cement without emitting CO_2 , which they reported. Now, the team, which includes postdoctoral fellow Jiawen Ren, Ph.D., and graduate student Jessica Stuart, says their research could shift CO_2 from a global-warming problem to a feed stock for the manufacture of in-demand carbon nanofibers.

Licht calls his approach "diamonds from the sky." That refers to carbon being the material that diamonds are made of, and also hints at the high value of the products, such as the carbon nanofibers that can be made from atmospheric carbon and oxygen. Because of its efficiency, this low-energy process can be run using only a few volts of electricity, sunlight and a whole lot of carbon dioxide. At its root, the system uses electrolytic syntheses to make the nanofibers. CO_2 is broken down in a high-temperature electrolytic bath of molten carbonates at 1,380 degrees F (750 degrees C). Atmospheric air is added to an electrolytic cell. Once there, the CO_2 dissolves when subjected to the heat and direct current through electrodes of nickel and steel. The carbon nanofibers build up on the steel electrode, where they can be removed, Licht says.

To power the syntheses, heat and electricity are produced through a hybrid and extremely efficient concentrating solar-energy system. The system focuses the sun's rays on a photovoltaic solar cell to generate electricity and on a second system to generate heat and thermal energy, which raises the temperature of the electrolytic cell.
Licht estimates electrical energy costs of this "solar thermal electrochemical process" to be around $1,000 per ton of carbon nanofiber product, which means the cost of running the system is hundreds of times less than the value of product output. "We calculate that with a physical area less than 10 percent the size of the Sahara Desert, our process could remove enough CO_2 to decrease atmospheric levels to those of the pre-industrial revolution within 10 years," he says. At this time, the system is experimental, and Licht's biggest challenge will be to ramp up the process and gain experience to make consistently sized nanofibers. "We are scaling up quickly," he adds, "and soon should be in range of making tens of grams of nanofibers an hour."
Licht explains that one advance the group has recently achieved is the ability to synthesize carbon fibers using even less energy than when the process was initially developed. "Carbon nanofiber growth can occur at less than 1 volt at 750 degrees C, which for example is much less than the 3-5 volts used in the 1,000 degree
C industrial formation of aluminum," he says.

Beijing Pollution Awaits Runners at Worlds, Just Like '08

Date:20th August, 2015 Source: ABC News

The drifting smoke from forest fires sometimes makes it difficult for marathoner Heather Lieberg to take a deep breath during her afternoon training runs in the hills of Montana. Even on days when the local advisory lists the air quality as "unhealthy for sensitive groups," Lieberg is out there chugging away through the hazy and hot conditions. No better way to acclimate her body to what awaits in Beijing for the world championships.
"I've literally trained when there's ash falling on me, where they say 'Do not go outside,'" said Lieberg, a 36-year-old from Helena. "My lungs are definitely ready."

Seven years after the Olympics sparked talk of a dramatic clean-up of pollution in Beijing, a milky haze still covers the city on most days and is expected to be there when the marathons take place — Saturday for the men, and Aug. 30 for the women.

According to a recent study conducted by physicists at the University of California, Berkeley, 1.6 million people die each year in China from heart, lung and stroke-related problems due to polluted air. The statistic is a reminder that while the Olympics may serve to shed light on a host city's environmental problems, they don't necessarily solve them.

With the 2022 Winter Olympics set to also take place in Beijing, the environment is likely to stay in the spotlight, in part because of plans to bring tons of artificial snow to the relatively dry mountains outside Beijing. It's as true for Rio de Janeiro today as it was for Beijing in 2008, Athens in 2004, Sydney in 2000 or almost any other host, all of which have had their problems with air and/or water, said John Karamichas, author of the 2013 book "The Olympic Games and the Environment."

"All these issues were, in one way or another, addressed for the duration of the games," Karamichas said. "Environmental legacy will depend on the post-event political processes."

An expert from the World Health Organization, Martin Taylor, said government figures have shown some improvements in Beijing's air quality since the Olympics left town "but there is still some way to go before (it) meets international safe standards." Competition conditions for the Olympic athletes have been at the forefront recently with the Rio Games less than a year away. An analysis commissioned by The Associated Press found viruses running rampant in Rio's sewage-strewn water. The International Olympic Committee has made no plans to test for viruses, sticking with a plan to only monitor bacteria. Some swimmers have fallen ill after competing in the water, though the direct correlation between the water and the illness is difficult to make.

Running in heavily polluted air carries some health risk because of particulates that can clog up passageways and increased ozone that mainly bothers people with asthma. It can also affect finely tuned athletes who operate at maximum lung capacity. In 2008, the marathon world record holder, asthma sufferer Haile Gebrselassie, said he wouldn't run the race. "The pollution in China is a threat to my health," he said. But he was an exception. And even though pollution readings distributed by the U.S. Embassy's Beijing Air Quality Monitor frequently shows the air quality in the "unhealthy" range, the races at world championships will go on.

California Drought Is Made Worse by Global Warming, Scientists Say

Date: 20th August, 2015 Source: The New Yark Time

Visitors along the recessed shores of Beal's Point in California's Folsom Lake State Recreation Area. A new study has found that inevitable droughts in California were made worse by global warming. Global warming caused by human emissions has most likely intensified the drought in California by 15 to 20 percent, scientists said on Thursday, warning that future dry spells in the state are almost certain to be worse than this one as the world continues to heat up. Even though the findings suggest that the drought is primarily a consequence of natural climate variability, the scientists added that the likelihood of any drought becoming acute is rising because of climate change. The odds of California suffering droughts at the far end of the scale, like the current one that began in 2012, have roughly doubled over the past century, they said. “This would be a drought no matter what,” said A. Park Williams, a climate scientist at the Lamont-Doherty Earth Observatory of Columbia University and the lead author of a paper published by the journal Geophysical Research Letters. “It would be a fairly bad drought no matter what. But it’s definitely made worse by global warming.” The National Oceanic and Atmospheric Administration also

reported Thursday that global temperatures in July had been the hottest for any month since record-keeping began in 1880, and that the first seven months of 2015 had also been the hottest such period ever. Heat waves on several continents this summer have killed thousands of people.

The paper on the California drought echoes a growing body of research that has cited the effects of human emissions, but scientists not involved in the work described it as more thorough than any previous effort because it analyzed nearly every possible combination of data on temperature, rainfall, wind speed and other factors that could be influencing the severity of the drought. The research, said David B. Lobell, a Stanford University climate scientist, is "probably the best I've seen on this question."

The paper provides new scientific support for political leaders, including President Obama and Gov. Jerry Brown of California, who have cited human emissions and the resulting global warming as a factor in the drought. As he races around his battered state, from massive forest fires to parched farms, Mr. Brown has been trying to cajole the Republican presidential candidates into explaining what they would do about climate change.

"To say you're going to ignore that there's a huge risk here, the way we're filling the atmosphere with heat-trapping gases, is folly, ignorance and totally irresponsible," Mr. Brown said Thursday in a telephone interview. "And virtually the entire Republican Party in Congress is saying exactly that. It's inexplicable." Several Republican presidential candidates, including Senator Lindsey Graham of South Carolina and Gov. John R. Kasich of Ohio, do acknowledge that climate change poses risks, but they are skeptical of the way Mr. Obama has gone about trying to limit emissions, with a plan expected to force the shutdown of many coal-fired power plants. Chris Schrimpf, a spokesman for Mr. Kasich, said Thursday that political leaders confronting questions about climate change "can't stick their heads in the sand and pretend it isn't happening. Instead we need to be about the business of taking action, but action that doesn't throw the economy and jobs out the window at the same time."

However, many of the leading Republican candidates are openly skeptical of climate science and play down the risks. In response to a letter from Mr. Brown asking about their plans, several of the candidates retorted last week that California should be building more dams to store water for future droughts. Senator Ted Cruz of Texas said that "alarmists" about global warming were trying to gain "more power over the economy and our lives."

A report this week by researchers at the University of California, Davis, projected that the drought would cost the California economy some $2.7 billion this year. Much of that pain is being felt in the state's huge farming industry, which has been forced to idle a half-million acres and has seen valuable crops like almond trees and grape vines die. As climate scientists analyze the origins of the drought, they have been tackling two related questions: What caused the dearth of rain and snow that began in 2012? And, regardless of the cause, how have the effects been influenced by global warming? The immediate reason for the drought is clear enough: For more than three years, a persistent ridge of high pressure in the western Pacific Ocean has blocked storms from reaching California in the winter, when the state typically gets most of its moisture. That pattern closely resembles past California droughts.

Scientists strengthen link between climate change and drought

Date: 20th August, 2015 Source: HCN

In early August, California Gov. Jerry Brown held a news conference at Cowboy Camp, a spot of BLM land popular with equestrians near Clear Lake, northwest of Sacramento. For more than a week, amid warm, dry conditions, the Rocky Fire had been aggressively racing through the nearby hills, jumping a

highway, forcing thousands to evacuate, and scorching dozens of homes. Brown was there to console families, thank firefighters, and also to deliver a blunt message about climate change.

"Unlike the East, where climate change seems to be adding more storms, here in California and the Southwest it's more dryness. We've got more dryness, less moisture and more devastating fires," he said, according to the L.A. Times. He went on, the paper reported, to issue a challenge to Republican presidential hopefuls, climate leaders none of them: "California is burning," he said. "What the hell are you going to do about it?" This is the point in the story where reporters deliver an obligatory caveat: It is difficult to tie any single fire to climate change. Still, going forward, the warming of the earth will make such events more likely in California and much of the arid West. While that's true, it's also true that scientists are getting better at teasing out the extent to which climate change is or isn't influencing extreme events, from heat waves to floods to blizzards.

Researchers have also begun to define the role climate change has played in the current California drought. In public discussions, climate change and drought are often linked, even if research hasn't yet demonstrated that one is causing the other in the present, says John Abatzoglou, an associate professor who studies weather and climate at the University of Idaho, and co-author of a new study on the subject, published online today in the journal Geophysical Research Letters. "So we set out to put some numbers on how much more severe this drought in California has been as a result of the warming that we have seen." The new study concludes that the lack of rain in California the past few years has been primarily a function of natural variability, not climate change. At the same time, other research has shown that climate change has increased the probability of rare ridges of extreme high-pressure in the atmosphere over the Northeast Pacific, the so-called "Ridiculously Resilient Ridge" that has blocked storms from reaching California and is the underlying cause of the drought.

That's not the same as saying that climate change had a role in causing the current ridge – research hasn't demonstrated that – but it is one indication of how climate change is increasing drought risk. Most models agree that climate change is not likely to significantly affect mean precipitation in the future, says Noah Diffenbaugh, a climatologist at Stanford University (and, full disclosure, the editor of the journal the new study is published in). It is, however, likely to increase the frequency of extremely low precipitation years, he adds.

But the amount of moisture that falls from the sky is not the only thing that determines a drought's severity. Temperature, wind speed, solar radiation and humidity also matter because they influence how rapidly moisture in plants and soils evaporates into the atmosphere. The new study focuses on these other factors, and researchers found that unusually hot temperatures attributable to anthropogenic climate change intensified the current drought. Think of drought like a debt of moisture instead of money, explains lead author Park Williams, a bioclimatologist at Columbia University's Lamont Doherty Earth Observatory. The goal of this study was to figure out how much various factors contributed to California's debt between 2012 and 2014. Anthropogenic warming, Williams and his co-authors concluded, was responsible for between 8 and 27 percent of it.

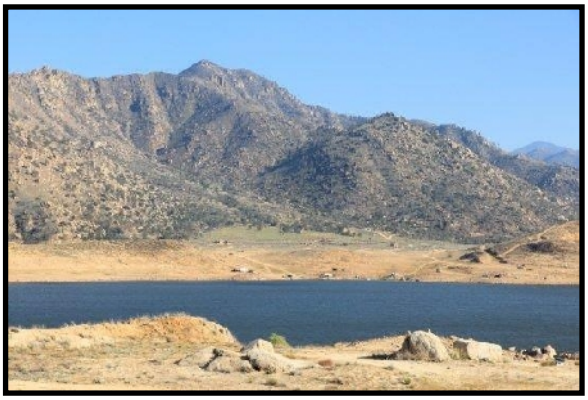
"Global warming is not causing the drought to occur," says Williams. "Instead, it's amplifying a drought that would already be in place. Global warming is important and it's going to become increasingly important." Some of the most striking findings in Williams' study come in a supplemental analysis that looks at the difference between the actual drought conditions, and what they likely would have been without the influence of climate change. Williams calculated how much climate change had shifted the baseline conditions that droughts are measured against on a tool called the Palmer Drought Severity Index. On the index, a value of zero indicates normal conditions, while a value of -1 indicates mild drought; the further you get below -1, the more severe the drought. So far, warming has shifted the baseline on the index from zero to about -0.5, meaning it now takes a slightly less dramatic dip in precipitation to cause a drought.

But the math gets a lot more troubling in a few decades. Climate models that simulated warming in California from 1895 to 2014 did a good job of predicting actual conditions, says Williams, indicating that they can also reliably project the trend into the future. If warming continues at its current pace, Williams found, by about the 2050s it will have shifted the index's baseline value to right around -1. In other words, within just a few decades, even when California receives what we today consider normal amounts of rain and snow, it will be teetering on the edge of drought simply because it's hotter. In the absence of global warming, Williams explains, values below -1 are likely to be reached in California during about 33 percent of years. With global warming, in the 2050s values below -1 become likely to occur around 54 percent of the time. Very severe droughts, represented by values of -3 or lower, go from occurring in about 5 percent of years to 15 percent.

The study's conclusions are consistent with other recent research, including a study Diffenbaugh published in PNAS earlier this year that found that the probability of drought in California has doubled compared to the previous century. That's happened due to higher temperatures, and without any increase in the probability of low precipitation years. "With a lot of extreme events, it doesn't take a lot of change to have a big impact," Diffenbaugh says. "It only takes a degree of warming or so and we're already seeing a doubling of the drought risk." "The warming signal has definitely emerged from the noise, and we can start making very reliable estimations of where we'll be in 10, 20 or 30 years," Williams adds. "It will be a pretty different world than it is even right now."

Warming climate is deepening California drought

Date: 20th August, 2015 Source: Science Daily



A new study says that global warming has measurably worsened the ongoing California drought. While scientists largely agree that natural weather variations have caused a lack of rain, an emerging consensus says that rising temperatures may be making things worse by driving moisture from plants and soil into the air. The new study is the first to estimate how much worse: as much as a quarter. The findings suggest that within a few decades, continually increasing temperatures and resulting moisture losses will push California into even more persistent aridity. The study appears this week in the journal Geophysical Research Letters. "A lot of people think that the amount of rain that falls out the sky is the only thing that matters," said lead author A. Park Williams, a bioclimatologist at Columbia University's Lamont-Doherty Earth Observatory. "But warming changes the baseline amount of water that's available to us, because it sends water back into the sky."

The study adds to growing evidence that climate change is already bringing extreme weather to some regions. California is the world's eighth-largest economy, ahead of most countries, but many scientists think that the nice weather it is famous for may now be in the process of going away. The record-breaking drought is now in its fourth year; it is drying up wells, affecting major produce growers and feeding wildfires now sweeping over vast areas.

The researchers analyzed multiple sets of month-by-month data from 1901 to 2014. They looked at precipitation, temperature, humidity, wind and other factors. They could find no long-term rainfall trend. But average temperatures have been creeping up--about 2.5 degrees Fahrenheit over the 114-year period, in step with building fossil-fuel emissions. Natural weather variations have made California unusually hot over the last several years; added to this was the background trend. Thus, when rainfall declined in 2012, the air

sucked already scant moisture from soil, trees and crops harder than ever. The study did not look directly at snow, but in the past, gradual melting of the high-mountain winter snowpack has helped water the lowlands in warm months. Now, melting has accelerated, or the snowpack has not formed at all, helping make warm months even dryer according to other researchers.

Due to the complexity of the data, the scientists could put only a range, not a single number, on the proportion of the drought caused by global warming. The paper estimates 8 to 27 percent, but Williams said that somewhere in the middle--probably 15 to 20 percent--is most likely.

Last year, the U.S. National Oceanic and Atmospheric Administration sponsored a study that blamed the rain deficit on a persistent ridge of high-pressure air over the northeast Pacific, which has been blocking moisture-laden ocean air from reaching land. Lamont-Doherty climatologist Richard Seager, who led that study (and coauthored the new one), said the blockage probably has nothing to do with global warming; normal weather patterns will eventually push away the obstacle, and rainfall will return. In fact, most projections say that warming will eventually increase California's rainfall a bit. But the new study says that evaporation will overpower any increase in rain, and then some. This means that by around the 2060s, more or less permanent drought will set in, interrupted only by the rainiest years. More intense rainfall is expected to come in short bursts, then disappear.

Many researchers believe that rain will resume as early as this winter. "When this happens, the danger is that it will lull people into thinking that everything is now OK, back to normal," said Williams. "But as time goes on, precipitation will be less able to make up for the intensified warmth. People will have to adapt to a new normal." This study is not the first to make such assertions, but it is the most specific. A paper by scientists from Lamont-Doherty and Cornell University, published this February, warned that climate change will push much of the central and western United States into the driest period for at least 1,000 years. A March study out of Stanford University said that California droughts have been intensified by higher temperatures, and gives similar warnings for the future. A further twist was introduced in a 2010 study by researchers at the NASA Goddard Institute for Space Studies. They showed that massive irrigation from underground aquifers has been offsetting global warming in some areas, because the water cools the air. The effect has been especially sharp in California's heavily irrigated Central Valley--possibly up to 3.5 degrees Fahrenheit during some seasons. Now, aquifers are dropping fast, sending irrigation on a downward trajectory. If irrigation's cooling effect declines, this will boost air temperatures even higher, which will dry aquifers further, and so on. Scientists call this process "positive feedback."

Climatologist Noah Diffenbaugh, who led the earlier Stanford research, said the new study is an important step forward. It has "brought together the most comprehensive set of data for the current drought," he said. "It supports the previous work showing that temperature makes it harder for drought to break, and increases the long-term risk." Jonathan Overpeck, co-director of the Institute of the Environment at the University of Arizona, said, "It's important to have quantitative estimates of how much human-caused warming is already making droughts more severe." But, he said, "it's troubling to know that human influence will continue to make droughts more severe until greenhouse gas emissions are cut back in a big way."

Scientists warn of the risk from air pollution over the megacities of West Africa

Date: 21st August , 2015 Source: Science Daily

New research by European and African scientists, including a team from the University of York, warns of the risks posed by the increasing air pollution over the cities of West Africa -- amid fears it could have an impact on human health, meteorology and regional climate. The atmosphere above West Africa is still one of the least studied and understood on the planet, despite its central role for the health and economic wellbeing of a large and increasing population. Rapidly expanding cities such as Lagos in Nigeria, Accra in

Ghana and Abidjan in Ivory Coast are producing large amounts of harmful aerosols and gaseous pollutants. Scientists say human health, food security and the climate of the region is at risk and there is an urgent need for better observations and models to quantify the magnitude and characteristic of these impacts. The region's climate is characterized by a sensitive monsoon system which controls winds, temperature, clouds and most importantly rain. Changes in air pollutants may be causing changes in the solar heating and clouds, which in turn may lead to changes the rainfall and temperature. As the population of the region grows these changes may intensify, the scientists say. The study, published in Nature Climate Change, is part of a EU-funded research project which is led by Professor Peter Knippertz from the Karlsruhe Institute of Technology, and also involves the University of Leeds and other European and African institutions.

The scientists warn that the region has been, and is projected to be, subject to substantial greenhouse-gas-induced warming with the monsoonal flows particularly sensitive to the impact of aerosols. Professor Mat Evans, based at the Wolfson Atmospheric Chemistry Laboratories at the University of York and one of the authors of the study, said: "The story here is that climate change is happening, there's no doubt about that.

"How that manifests itself with something like rainfall, which is what really matters, is much more complicated. "If we are missing key processes in our models because we have not gone out and tested them in challenging environments then we have less confidence in what is going on." Professor Evans said it was vital that any future policy advice is based on sound scientific observations from the region. "If you are going to make plans for how to deal with this in the future you want to do it from a position of knowledge rather than a position of ignorance. We need to get more observations in the region and we have started to do that. "At the moment we don't have the observations to be able to test the models to even know how good the predictions are." He said the most urgent need now was to collect much needed data from the atmosphere above West Africa. "Ultimately, what we want to be able to do is make predictions about what we think will happen in a five year timescale, 10 year timescale and 50 year timescale. "The environmental degradation maybe local but the implications can be regional and global. One of the potential impacts is population migration. "If people have no food because the climate is changing in their region then they will move. There are knock on effects."

Greenhouse gases caused glacial retreat during last Ice Age

Date:21st August 21, 2015 Source: Science Daily

A recalculation of the dates at which boulders were uncovered by melting glaciers at the end of the last Ice Age has conclusively shown that the glacial retreat was due to rising levels of carbon dioxide and other greenhouse gases, as opposed to other types of forces. Carbon dioxide levels are now significantly higher than they were at that time, as a result of the Industrial Revolution and other human activities since then. Because of that, the study confirms predictions of future glacial retreat, and that most of the world's glaciers may disappear in the next few centuries. The findings were published today in Nature Communications by researchers from Oregon State University, Boston College and other institutions. They erase some of the uncertainties about glacial melting that had been due to a misinterpretation of data from some of these boulders, which were exposed to the atmosphere more than 11,500 years ago. "This shows that at the end of the last Ice Age, it was only the increase in carbon dioxide and other greenhouse gases that could have caused the loss of glaciers around the world at the same time," said Peter Clark, a professor in the OSU College of Earth, Ocean and Atmospheric Sciences, and co-author on the study.

"This study validates predictions that future glacial loss will occur due to the ongoing increase in greenhouse gas levels from human activities," Clark said. "We could lose 80-90 percent of the world's glaciers in the next several centuries if greenhouse gases continue to rise at the current rate." Glacial loss in the future will contribute to rising sea levels and, in some cases, have impacts on local water supplies. As the last Ice Age ended during a period of about 7,000 years, starting around 19,000 years ago, the levels of carbon dioxide in the atmosphere increased from 180 parts per million to 280 parts per million. But just in the past 150 years, they have surged from 280 to about 400 parts per million, far higher than what was required to put an end to the last Ice Age.

The new findings, Clark said, were based on a recalculation of the ages at which more than 1,100 glacial boulders from 159 glacial moraines around the world were exposed to the atmosphere after being buried for thousands of years under ice. The exposure of the boulders to cosmic rays produced cosmogenic nuclides, which had been previously measured and used to date the event. But advances have been made in how to calibrate ages based on that data. Based on the new calculations, the rise in carbon dioxide levels -- determined from ancient ice cores -matches up nicely with the time at which glacial retreat took place.

"There had been a long-standing mystery about why these boulders were uncovered at the time they were, because it didn't properly match the increase in greenhouse gases," said Jeremy Shakun, a professor at Boston College and lead author on the study. "We found that the previous ages assigned to this event were inaccurate. The data now show that as soon as the greenhouse gas levels began to rise, the glaciers began to melt and retreat." There are other forces that can also cause glacial melting on a local or regional scale, the researchers noted, such as changes in the Earth's orbit around the sun, or shifts in ocean heat distribution. These factors probably did have localized effects. But the scientists determined that only the change in greenhouse gas levels could have explained the broader global retreat of glaciers all at the same time. In the study of climate change, glaciers have always been of considerable interest, because their long-term behavior is a more reliable barometer that helps sort out the ups-and-downs caused by year-to-year weather variability, including short-term shifts in temperature and precipitation. Other collaborators on this research were from the University of Wisconsin, Purdue University, and the National Center for Atmospheric Research. The work was supported by the National Oceanic and Atmospheric Administration and the National Science Foundation.

Carbon dioxide melted Ice Age glaciers: study

Date:22nd August, 2015 Source: Business Standard

Says global warming could wipe out 80-90% of remaining glaciers within a few hundred years unless emissions kept under check Greenhouse gases were the driving force behind global glacier retreat at the end of the last Ice Age, echoing current climate change, according to a study published today. More than 11,000 years later, the researchers say, global warming is on track to wipe out 80-90% of remaining glaciers within a few hundred years unless carbon dioxide emissions are held in check. Such an outcome would push sea level rise and rob hundreds of millions of people in Asia and South America of a critical source of water. Using new techniques to resolve an old debate, researchers showed that it was a 55% increase of CO2 in the atmosphere -- from 180 to 280 parts per million (ppm) -- over some 7,000 years that melted the world's glaciers to a level that remained stable until the start of our industrial era. Higher levels of green house gasses, such as CO2, trap more of the Sun's heat on Earth causing global temperatures to rise.

Up to now, scientists disagreed on the cause of Ice Age glacier decline, with some attributing it mainly to solar radiation and regional influences such as ice sheets and ocean currents. A team of scientists led by Jeremy Shakun of Boston College re-examined the ages of more than 1,100 previously studied glacial boulders by measuring a particular isotope -- Beryllium-10 -- produced by exposure to cosmic rays.

They compared their findings, the most accurate so far, to the timing of the rise of carbon dioxide in the atmosphere, data gleaned from ice bubbles trapped in ice cores. The results were unequivocal. "The only factor that explains glaciers melting all around the world in unison during the end of the Ice Age is the rise in greenhouse gases," said Shakun. Scientists are still not sure what triggered the gradual release of CO2 into the atmosphere starting 19,000 years ago, or exactly where it came from. "It's fair to say that the reason CO2 went up and down over the Ice Ages is one of the biggest palaeoclimate mysteries out there," Shakun said by email. The most likely scenario, according to co-author Peter Clark of Oregon State University is that huge quantities of carbon bubbled up from the sea.

CO2 melted Ice Age glaciers

Date: 23rd August, 2015 Source: The Nation

PARIS: Greenhouse gases were the driving force behind global glacier retreat at the end of the last Ice Age, echoing current climate change, according to a study published Friday. More than 11,000 years later, the researchers say, global warming is on track to wipe out 80-90 percent of remaining glaciers within a few hundred years unless carbon dioxide emissions are held in check. Such an outcome would push sea level rise and rob hundreds of millions of people in Asia and South America of a critical source of water. Using new techniques to resolve an old debate, researchers showed that it was a 55 percent increase of CO2 in the atmosphere -- from 180 to 280 parts per million (ppm) -- over some 7,000 years that melted the world's glaciers to a level that remained stable until the start of our industrial era. Higher levels of green house gasses, such as CO2, trap more of the Sun's heat on Earth causing global temperatures to rise. Up to now, scientists disagreed on the cause of Ice Age glacier decline, with some attributing it mainly to solar radiation and regional influences such as ice sheets and ocean currents.–AFP A team of scientists led by Jeremy Shakun of Boston College re-examined the ages of more than 1,100 previously studied glacial boulders by measuring a particular isotope -- Beryllium-10 -- produced by exposure to cosmic rays. They compared their findings, the most accurate so far, to the timing of the rise of carbon dioxide in the atmosphere, data gleaned from ice bubbles trapped in ice cores.

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The impact of greenhouse gas emissions on glaciers today, both scientists say, is similar to the Ice Age endgame, except that -- after 10,000 years of relative stability -- the process is happening fifty times faster.

"Just in the past 150 years, CO2 levels have surged from 280 to about 400 ppm, far higher than was required to put an end to the last Ice Age," said Shakun. And even under the most optimistic scenarios for slashing carbon pollution, he added, those levels will increase by at least another 20 percent, though how long it will take is unclear. The consequences of glacier loss are multiple. The UN's climate science panel says melting glaciers will account for a quarter of total sea level rise, which is pegged at 26 to 98 centimetres (10 to 39 inches) by 2100. This is enough to swamp many small island nations and several highly-populated river deltas in Asia and Africa. But the greatest threat is to the nearly one billion people who depend directly on glaciers -- historically a renewable resource -- for water to drink and irrigate crops. "When you pull back and look at the paleo-record of carbon dioxide and realize that a 180 to 280 ppm rise was enough to help drive a major global meltdown, it give you pause for thought on where 400, 500 or 600 ppm leads," said Shakun.

CO2 Melted Ice Age for Sure, Prepare for Similar Global Melt-Down of Glaciers, Warn Researchers

Date:23rd August, 2015 Source: MF Monitor

While world is aware of a plethora of causes which receded the last Ice Age such as solar radiation, ocean currents and others, a new study has focused on mere carbon dioxide that it said had resulted mainly in eroding the glaciers. The study based on measuring isotopes in boulders uncovered during the global meltdown 11,000 years ago, said the resultant rise of carbon dioxide, which was naturally occurring during those day, was the primary driving factor in the simultaneous global retreat of glaciers. Glaciers, which are very sensitive to temperature, suddenly became sensitive and depleted in a global scale ending the Ice Age point out the need to have a broad, global reason for the world's thermostat's increasing rate, said Boston College researcher Jeremy Shakun. "The only factor that explains glaciers melting all around the world in unison during the end of the Ice Age is the rise in greenhouse gases," he explained. As is visible even today, he said, "In any given decade you can always find some areas where glaciers are holding steady or even advancing, but the big picture across the world and over the long run is clear – carbon dioxide is making the ice melt." Shakun and his team attribute it to the dramatic increase in manmade greenhouse gases behind the possible eradication of many of the world's glaciers by the end of this century. "This has relevance to today since we've already raised CO2 by more than it increased at the end of the Ice Age, and we're on track to go up much higher this century … which adds credence to the view that most of the world's glaciers will be largely gone within the next few centuries, with negative consequences such as rising sea level and depleted water resources," said Shakun. The team reexamined samples taken from boulders that were left by the retreating glaciers, and even experts from Oregon State University, University of Wisconsin-Madison, Purdue University and the National Center for Atmospheric Research in Boulder, Colorado joined the research project.

Each boulder has been exposed to cosmic radiation after melting and the exposure has produced the isotope Beryllium-10 in the boulder, which was measured by scientists to determine when glaciers melted and the process called "surface exposure dating" for more than two decades helped the team to accurately determine the boulder ages. The new exposure ages connected to the timing of the rise of carbon dioxide concentration in the atmosphere, a development recorded in air bubbles taken from ice cores pointed them to the inevitable glacial melting across the globe at the end of the Ice Age.

"Our study really removes any doubt as to the leading cause of the decline of the glaciers by 11,000 years ago – it was the rising levels of carbon dioxide in the Earth's atmosphere," said Shakun.

Carbon dioxide rose from 180 parts per million to 280 ppm at the end of the last Ice Age, which spanned nearly 7,000 years. But now, following more than a century of industrialization, carbon dioxide levels have risen to approximately 400 ppm, which far more than the fate of the last Ice Age that melted. If 400 ppm continues, it si sure to melt more glaciers, they warn. "This tells us we are orchestrating something akin to the end of an Ice Age, but much faster. As the amount of carbon dioxide continues to increase, glaciers around the world will retreat," said Shakun. The report has been published in the journal Nature Communications.

India ready with plan to cut down emission, will submit to UN today

Date: 23rd August, 2015 Source: Hindustan Times

File photo of the solar photovolatic power plant at Tangtse, Ladakh which supplies electricity to a clinic, a school and 347 houses for around five hours every day. Sources said submission will comprise target to install capacity of 175 GW renewable energy, including solar power. Environment minister Prakash Javadekar on Monday will announce India's comprehensive plan to combat its rising emissions and adopt low carbon growth road-map for submission to the United Nations. The plan could be part of a global pact on climate change to be adopted in Paris this winter. The plan called Intended Nationally Determined Contributions (INDCs) is likely to have two components — first, voluntary action India will take from its own resources and second, proposed action depending on technology transfer and funding by the rich nations. China's submission to the UN in June was also on similar lines — one voluntary and other depending on international assistance. "Our INDCs would be most exhaustive and most detailed," Javadekar had told reporters earlier this month. Sources said India's submission will include target to install capacity of 175 gigawatt (GW) of renewable energy, including 100 GW of solar power. It would translate into India meeting at least 15% of its electricity needs from renewables by 2030. China had pegged its renewable target at 20%. India is likely to state that it can fasten its renewable transformation if the rich nations provide necessary technologies for increasing efficiency in wind and solar sector. It is likely to enhance its emission intensity — carbon released for every unit of GDP growth — reduction target of its GDP from 20-25% of 2005 target to about 40% by 2030.

The submission is likely to mention India's push for nuclear energy and use of environment-friendly vehicles such as electric and vehicles running on bio-diesel. India may not give any commitment on reducing its dependence on electricity from power, which is expected to increase in the next 15 years as most of the coal blocks have been auctioned only in 2014 and 2015, sources said. Peaking year — the year for emissions to be maximum — has been ruled out.

Climate change has become the one thing all religions are preaching against

Date:24th August, 2015 Source: Scroll

Along with the Pope and Islamic leaders, Hindus, Buddhists, and Sikhs have made moral arguments against climate change. When Pope Francis chose to champion the battle against climate change via papal encyclical in June this year, the act was lauded as the one that could galvanise the world community far more than 30 years of pleading by climate scientists.

Now Muslim leaders across the world have echoed the moral call against climate change with their Islamic Climate Declaration issued last week calling for a fossil-fuel phase-out. Pope Francis acknowledged, first of all, that climate change is real. He also said that technology alone would not solve the problem and human behaviour must change to ensure that the world's poor don't suffer due to the consumption of the rich. The Islamic Climate Declaration recognises the scientific consensus on climate change is to stabilise greenhouse gas concentration in the atmosphere so that global warming does not exceed 2 degrees above pre-industrial levels. The declaration is clear that a 1.5 degree Celsius warming would be preferable. It calls on people and leaders of all nations to aim to phase out greenhouse gas emissions as soon as possible and commit themselves to 100% renewable energy at the earliest possible. In a recent interview to American science magazine Popular Science, climate scientist Katherine Hayhoe explained why religion is backing the fight against climate change. "Science can tell us why climate change is happening, and what might happen next," she said. "But what we should do about it isn't a science question. It's a question of values."

The Holy See and Islamic leaders have not been the first moral authorities to caution against climate change. Ahead of the United Nations Climate Summit in September 2014, the World Council of Churches and Religions for Peace, both prominent interfaith organisations, held their own summit to push for progress at the negotiations in Lima that December and after. In previous years Hindu, Buddhist and Sikh leaders have declared their war on climate change. Hindu Declaration on Climate Change- Issued at the Parliament of World Religions in Australia in 2009, the Hindu Declaration on Climate Change drew on the Hindu tradition that links man to nature through physical, psychological and spiritual bonds. "The nations of the world have yet to agree upon a plan to ameliorate man's contribution to this complex change," the declaration stated. "This is largely due to powerful forces in some nations which oppose any such attempt, challenging the very concept that unnatural climate change is occurring. Hindus everywhere should work toward an international consensus." Issued just as the Copenhagen round of the Conference of Parties was beginning, the declaration had little impact on the talks that ended with a weak agreement and little binding action.

Buddhist Declaration on Climate Change- In 2009, the Dalai Lama was the first person to sign the Buddhist Declaration on Climate Change that endorsed the catastrophic tipping points of global warming. NASA climatologists had predicted that the safe level of carbon dioxide in the atmosphere was 350 parts per million, a line that has already been breached. In May this year, atmospheric carbon crossed 400 ppm for the first time. "We are challenged not only to reduce carbon emissions, but also to remove large quantities of carbon gas already present in the atmosphere," the Buddhist declaration said. It also emphasised the need to change the priorities of the world economies. "The key to happiness is contentment rather than an ever-increasing abundance of goods. The compulsion to consume more and more is an expression of craving, the very thing the Buddha pinpointed as the root cause of suffering." The Dalai Lama has gone even further to say that the focus in Tibet, which is stuck in a losing battle for independence, should be climate change and not politics.

Sikh Statement on Climate Change- "Our Mother Earth, Mata Dharat, has gone through undeniable changes at the hands of humans. It is abundantly clear that our action has caused great damage to the atmosphere and is projected to cause even more damage if left unhandled," said a statement released by a group called EcoSikh in September 2014. Calling on Sikhs to be the frontrunners of change and inviting the tenet of selfless service, the group asked Sikhs to reduce their carbon footprints, recycle, invest in renewable technologies and also put pressure on governments to take action to mitigate carbon emissions. Orthodox Christians, Protestants, Baha'I and Jewish leaders have, in their turn, accepted the science of climate change and called on the faithful to save the earth. What the Pope and Islamic leaders have added is the influence of over 1.2 billion Roman Catholics and 1.6 million Muslims worldwide, which is almost half the world's population. For now, climate change seems to be the one science that world religions don't seem to have a problem with, whether it will make a difference or not at the "make-or-break" Paris negotiations in December.

Energy and climate change -- recent views and opinions

Date:24th August, 2015 Source: The Hullabaloo

Energy is the most talked about issue these days in the context of the growing world population, climate change, and the need to reduce our carbon footprint. Increasing the renewable energy mix is the way forward for all nations. While there are fast. THE PHILIPPINES is considered one of the leading countries when it comes to laws dealing with climate change and disaster risk reduction and management. No less than the United Nations Development Programme has hailed the country for its being a "leader in climate change policies." The Philippine Disaster Risk Reduction and Management Act of 2010, the Climate Change Act of 2009, the People's Survival Fund of 2012, and the Renewable Energy Act of 2008—these are a few of the laws the Philippines has enacted in relation to disaster risk reduction and climate change adaptation. Such laws may be in place, but it is in their implementation that the Philippine government has a problem. Take the Renewable Energy Act of 2008. Despite its enactment seven years ago, we have not fully maximized until now the use of renewable energy—this, according to the Advocates of Science and Technology for the People. Instead, within two years after President Aquino's declaration—made during the launch in 2011 of the government's National Renewable Energy Plan—that the Philippines intends to "nearly triple the country's renewable energy-based capacity from around 5,400 MW in 2010 to 15,300 MW in 2030," the government approved the construction of 21 coal-powered projects. Despite government incentives to encourage generation companies to harness renewable energy, the latter still opted for the so-called "dirty energy" because of the huge profits it offers.

In fact, since the enactment of the Renewable Energy Act of 2008, the Philippines continues to give the go-signal for the construction of coal plants, practically not minding the strong opposition by various sectors to the use of coal. The rise in the use of coal results in more carbon emission which in turn harms the environment. Already, marine resources are getting scarce, extreme drought is being experienced in some parts of Mindanao, most of them agricultural areas. Yet, the Philippines continues to invest in coal-fired power plants. Touted as a leader in climate change policies, other vulnerable developing countries also look to us as the "face" of and "rallying point" for climate change impacts because of the annual ration of extreme weather events (among the heaviest and most numerous compared to those of others like the 2013 Supertyphoon "Yolanda" [international name: Haiyan]), we cannot escape from. Countries like Germany and Denmark have pledged to transform their power supply system into 100-percent renewables-based by 2050. Costa Rica announced in March 2015 that it has been able to harness renewable energy sources for the whole country. The world's biggest emitter of carbon dioxide, China, has committed to target at least 80-percent clean energy use by 2050.

Yet, the Philippines, sticks to fossil fuel as its main energy source, approving construction of more coal-powered plants on to the next decades. As of this year, only 28 percent of the total energy mix in the country is renewable. This is according to the Renewable Energy Management Bureau of our Department of Energy. If the Philippines wants to show the world that our country is indeed the "rallying point" for climate change mitigation and adaptation, our government needs to "walk the talk" on renewable energy. But then, mere climate adaptation practices are not enough. We need to show other countries the way to climate mitigation and sustainable development, using renewable energy. The Aquino administration's last year in office must be devoted to achieving sustainable, not just fiscal, growth for the entire Philippines; it must not focus on profits alone. This administration can leave a lasting legacy by harnessing renewable energy and ensuring a low-carbon path as part of its strategy to attain inclusive and sustainable development.

President Aquino's last State of the Nation Address, which was delivered last July, disappointed because it did not contain any clear and definitive commitments to promote and institute the use of renewable

energy—an undertaking that has become a race against time as vulnerable Philippine communities continue to suffer from unprecedented droughts and other impacts as a result of abnormal, extreme weather patterns and events.

The Philippines' intended nationally determined contributions (INDC), which is to be submitted before October to the United Nations Framework Convention on Climate Change (UNFCC) to be held this December in Paris, must take into account the country's moral ascendancy on the issue of climate justice. And it should push us to walk our talk on climate action. Investing in renewable energy is the first step. A clear and definitive commitment to the country's INDC must be pledged, with a clear vision of the inputs to be made and outcomes to be expected. Lastly, the Philippines must work hard and with resolve to help the UNFCC reach a fair and binding climate deal come December.

India urges rich world to help in curbing climate change

Date: 24th August, 2015 Source: Hindustan Times

Minister of state (independent charge) of environment, forest and climate change, Prakash Javadekar speaks at the "National Dialogue on an Equal Space: Gender Parity in the media and entertainment sector" in New Delhi on Monday. Environment minister Prakash Javadekar said on Monday that the rich world could not wish away its responsibility for man-made global warming. Javadekar urged developed nations to do more to help India deal with the impact of climate change. India is one of the last major economies still to submit its plans to tackle global warming ahead of a United Nations summit in December where more than 190 countries will seek a deal to halt a damaging rise in temperatures. Despite its low per-capita emissions, India is already the world's third-largest carbon emitter. Its huge population of 1.2 billion, a fast-growing economy and rising use of coal make its role crucial if the UN summit is to succeed. Javadekar said India was in the final stages of preparing its submissions to the UN, and that he was confident a global deal could be reached at the summit in Paris. But, he added, the rich world had so far failed to make sufficient money and cutting-edge technology available to help poorer countries that were not to blame for global warming. "Historical responsibility is a fact. It cannot be wished away. We are just 2.4% of the world's historical emissions," he told reporters in New Delhi. Unlike other large emitters like the United States and China, India has said it will not commit to a "peak year" for its own emissions, arguing that doing so would hamper its drive to beat poverty through economic growth.

China lawmakers discuss new pollution bill, coal cap clause expected

Date:25th August, 2015 Source: Reuters

Chinese legislators are considering a new air pollution law that could give the state new powers to punish negligent local authorities and industrial enterprises and provide a legal mandate to impose caps on coal consumption. Amendments to China's 15-year old Air Pollution Law are expected to be approved this week by the National People's Congress, the country's parliament, and will make local governments directly responsible for failing to meet air quality targets. China's ruling Communist Party has acknowledged the damage that decades of

untrammeled economic growth have done to the country's skies, rivers and soil, and it is now trying to equip its environmental inspection offices with greater powers and more resources to tackle persistent polluters and the local governments that protect them. "Local governments will become responsible to assess and meet standards by a certain time," said Tonny Xie, director of the Clean Air Alliance of China, which has been involved in consultations on the law. "Previously, there was one sentence in the law about 'making plans' to treat air pollution, rather than 'achieving plans'."

A 31-page draft includes sections on controlling pollution from coal combustion and will provide a legal basis for the establishment of consumption caps and restrictions on low-grade imports, but legislators continue to debate the precise details. "We have been lobbying for the inclusion of a specific timeline for coal consumption to peak, but this won't be included," said a source with an environmental group involved in consultations. Coal, China's biggest source of air pollution, accounts for around two thirds of total primary energy use.

According to a notice on Tuesday from the Ministry of Environmental Protection, legislators are still deliberating on whether to include clauses banning the direct combustion of low-grade coal as well as new fuel oil standards.

DISTORTED READINGS- The draft law gives the central government the ability to suspend local authority powers to approve new projects if they fail to meet pollution targets. It bans firms from temporarily switching off polluting equipment during inspections and outlaws other behavior designed to distort emission readings. It also includes provisions to limit pollution from industry and automobiles, though legislators have already excised a clause allowing local governments to set their own restrictions on car use, official news agency Xinhua said.

China's new Environmental Protection Law, which came into force at the beginning of this year, put an end to the "maximum fine" system that allowed firms to pollute with impunity once they had paid a limited penalty. It also puts them at risk of criminal punishments should they continue to break rules. According to the environment ministry, concentrations of hazardous breathable particles known as PM2.5 fell 17.1 percent in the first half to 58 micrograms per cubic meter, but China doesn't expect to meet the state standard of 35 micrograms until 2030.

Smoke continues to thicken the air in S. Alta.

Date: 26th August, 2015 Source: Medicine Hat News

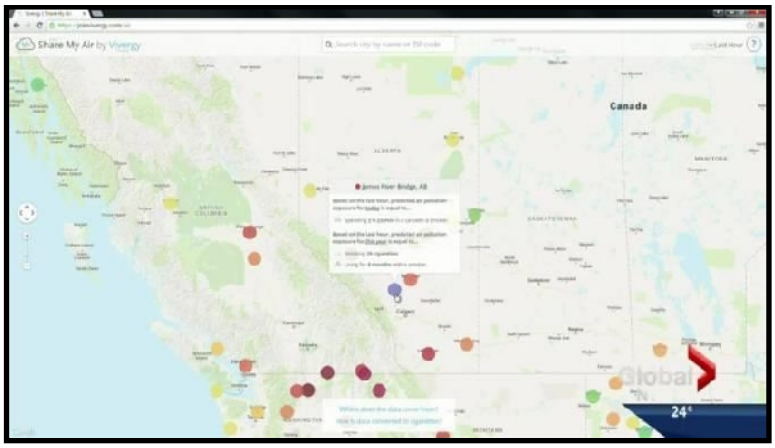
Smoke continued to blanket Medicine Hat on Tuesday with the air quality health index hovering around six and seven. Winds changed direction bringing in more smoke from Washington State, said Dave Phillips, senior climatologist for Environment Canada. “Washington is dealing with the largest fires they’ve ever had. They’re only 10 per cent contained and smoke does not stop at the border,” said Phillips. “We need the winds to change direction or for it to rain.” An air quality advisory for this area, issued by Alberta Health Services on Monday, is still in place. Dr. Karin Goodison, medical officer of health for AHS south zone said the particulate matter from the smoke was a moderate to potentially high risk for people who have pre-existing health conditions with their lungs or their heart. The temperatures experienced are also six degrees warmer than usual for this time of year, said Phillips. Summer has included 34 days with temperatures above 30 degrees. Expect the fall to be

warmer than usual but as winter approaches get ready for a "super El Niño", a warm pool of water from the tropics in the equatorial region of the Pacific Ocean that affects the jet stream above it. "It's a big one. We haven't seen this one in 18 years," said Phillips. "The water temperature is well above normal and they're strengthening and enlarging. It could be two or three times the size of Canada. We're not talking about a little hot tub out there." Since 1950 there have only been six El Niños.

"For Medicine Hat five of those brought a milder and dryer than normal winter," said Phillips. "One was colder and wetter than normal." If the super El Niño does what it's expected to do there is the potential for a dry spring and summer in 2016 too, said Phillips. Information about the air quality in many areas of Alberta is updated regularly on the Alberta Environment and Parks website. Air quality information is also available by telephone 1-877-247-7333.

Calgary air pollution over last day equal to 4hrs in car with smoker: online tool

Date: 26th August, 2015 Source: Global News



WATCH ABOVE: A new online tool called "Share My Air" gets away from scientifically-dense concepts, and puts air pollution into terms people can relate to: cigarette smoke. Erika Tucker looks at Calgary's ratings. CALGARY – A new online tool that makes it easy to understand air pollution is coming in handy for Albertans concerned about the smoke being blown in from western wildfires, especially as the haze aused Calgary's air quality to hit the top of health risk scale on Tuesday. The 23-year-old American creator says "Share My Air" tries to get away from scientifically-dense concepts, and puts air pollution into terms people can relate to: cigarette smoke. To use the tool, just go to the site, click on any city, and see how the air pollution rates. It will give information summaries based on the last 24 hours, the last month and the last six months. The data is updated hourly so ratings will change throughout the day. The web tool converts air pollution exposure in your city of choice to time spent in a car with a smoker, living with a smoker, or the number of equivalent cigarettes smoked. Founder and CEO Kevin Kononenko, who has a background in environmental sciences and entrepreneurship, said he found studies that equated air pollution exposure to cigarette exposure to create Share My Air. He took live feeds of air pollution readings from the U.S. Environmental Protection Agency (EPA) AirNow database—a government site that shares data across Canada and the U.S. hourly—and converted them to cigarette equivalents.

"People can visualize these cigarette-oriented messages. So when I say, in the past 24 hours, in Calgary has been like sitting for four hours plus in a car with a smoker, people can wrap their brain around that and visualize it and say, 'I can tell you how bad that is, it's pretty darn bad,' as opposed to saying, 'Well, what does a 140 micrograms per cubic metre mean?'" Kononenko notes there's an extrapolation factor to the data. "When it says living in Calgary is like spending 11 months, or whatever it would be…based on today's readings, that's an extrapolation. Assuming that if that one day was consistent all year, then it would lead to that number," he said.

Alberta Health Services medical officer of health Dr. Jason Cabaj wasn't initially familiar with the new tool, but said it's important to keep in mind factors that complicate comparisons of health consequences from different exposures. "The website uses open access data from the U.S. government to estimate equivalent levels of one air pollutant (fine particulate matter), which is predominant in wood smoke and a major component of tobacco smoke as well," he said in an email to Global News. Kononenko said particulate matter and smoking are both associated with diseases like lung cancer, heart disease, stroke and asthma attacks. "One of the challenges that you face with air and cigarettes is that it's such a long-term thing," he said. "So the longer you smoke it or inhale air pollution, the more the risk factor arises. For me, with air pollution, I want to talk about a very immediate consequence, which is asthma attacks.

"When you see a day like this, where it's spiking up to 140 micrograms per cubic metre … more children will be having asthma attacks in the Calgary area based on that. And so that's what I choose to focus on because it's very real time." Share My Air was released to public last Thursday, and he said reaction has been positive. "People just love the concept of looking around the map and hovering over one thing or the other and saying, 'Oh, I wonder how it compares to other cities, be it Los Angeles…how does my air pollution compare to that?'" he said. Editor's note: This story's headline has been corrected from saying the air pollution in Calgary over the last 24 hours was equal to smoking over 50 cigarettes to saying it's equal to spending four hours in the car with a smoker. The predicted air pollution this year in Calgary, if air quality were to remain the same as today, would be equal to smoking 52 cigarettes.

'Very high' pollution warning issued for Hong Kong

Date: 26th August , 2015 Source: Channel News Asia

Hong Kong is experiencing high levels of pollution, which are expected to linger until the end of the week. HONG KONG: Hong Kong's Environmental Protection Department warned Tuesday (Aug 25) that the city's air quality will remain poor most of this week. As at 2pm Tuesday its air monitoring stations were reporting readings of "very high" in the Air Quality Health Index. This is the second highest pollution reading, and the general public, especially the elderly and children, were advised to reduce their outdoor activities, particularly strenuous exercise, to a minimum. The poor reading is the result of a continental air-stream bringing in a higher concentration of pollutants, while increased sunshine also raised photochemical activity. Light winds are doing little to disperse the ozone and nitrogen dioxide.

The pollution is expected to remain in the city until Thursday or Friday, when light showers should roll in from the South China Sea. Earlier this month, Hong Kong issued "very high" pollution warning when Typhoon Soudelor brought in a mass of high pressure over the city. Air pollution is a major problem in Hong Kong, with poor visibility less than eight kilometres occurring almost a third of the year.

Kolkata Climate Change Roadmap Soon: British Minister

Date: 26th August, 2015 Source: NDTV

KOLKATA: The eastern metropolis will become one of the first Indian mega cities to have a roadmap, developed with the aid of the British government that will help the West Bengal government deal with climate change and promote sustainable growth in the city, a visiting British minister said on Tuesday. The British government is supporting the Kolkata Municipal Corporation with a roadmap for sustainable growth in the city. According to the Britain's

Minister of State for International Development Desmond Swayne, the roadmap will be launched later this year. "The roadmap makes Kolkata one of the first Indian megacities to have a comprehensive strategy for dealing with the effects of climate change and supporting sustainable urban development. "For other cities facing similar challenges this a model worth replicating and the UK is pleased to be partnering with Kolkata on this project," Swayne said here. He said Britain "plans to replicate the model in other cities facing similar challenges in India and beyond".Under the roadmap, a project to strengthen capacity of the state government to fully access climate finance will begin shortly. Swayne launched a graphic booklet in Hindi and Bengali on low carbon and climate resilient Kolkata, a 'Green Kolkata' poster and a Councillors' Brochure' on rooftop solar energy. According to British Deputy High Commissioner Scott Furssedonn-Wood, the British government is initiating a programme with the state environment department for strengthening capacities of the state government to help towards the implementation of State Action Plan on Climate Change.

Air Pollution: Why We All Need To Be Accountable

Date: 26th August, 2015 Source: The Huffington Post

Dramatic, isn't it? When I first started researching air quality, I found that most pieces made some version of this statement. Considering this to be an exaggeration, I decided to talk to a few friends, family members and colleagues to get a sense of their perspective on the issue. To my surprise, quite a few quoted variations of this statement: "It feels like poison", "it just doesn't feel right", "it is killing us gradually" and so on. This is in line with the concerns raised by the World Health Organization's (WHO) urban air quality index (2014), which showed Delhi's air had the highest levels of PM 2.5 (a toxic pollutant) and declared the national capital as the most polluted city in the world.The problem: Fewer trees, more pollutants- Talk to a few elderly people who were born in Delhi and have lived most part of their lives here to get a sense of where we have reached and where we are headed. They will talk about the big parks and forest land of the city, but this green cover has been declining steadily due to development work and rapid urbanisation.

This disappearing greenery is matched by a continuous rise in the number of vehicles in the capital. A white paper on air pollution in Delhi by the Ministry of Environment and Forests points out that vehicular pollution contributes to 67% of the total air pollution load (approximately 3,000 mt per day) in Delhi. The problem is further exacerbated when we consider the continuous rise in the number of vehicles in the city and the quality of fuels we use in our vehicles. According to the Delhi Economic Survey 2013, the vehicular population in Delhi has registered a 135.59% jump between 1999-2000 and 2011-2012. Simply put, our sources of clean air are decreasing, while those belching out polluting fumes are on the rise. The effects: Overpowering and increasing- How is this affecting us? Air pollution is causing damage to our natural environment i.e. trees, plants, vegetation, water bodies and animals. Along with being an environmental hazard, polluted air is the cause of many health ailments, particularly respiratory problems. The Global Burden of Disease Report (2013) shows that outdoor air pollution is the fifth largest cause of premature deaths in India. A friend who conducts theatre workshops and expeditions with school children in Delhi pointed out that on an average in a class of 60 students at least 20 have respiratory problems. In fact, as I spoke to more people, I found out that they all know somebody who is suffering from asthma and related breathing problems. This number is constantly increasing. A study by scientists from the Kolkata-based Chittaranjan National Cancer Institute (CNCI) found that twice as many of Delhi's children suffer from respiratory problems than those elsewhere. Some families that have been residing in Delhi for a long time want to move out and cite health-related issues as a major reason. Problems of wheezing and coughing are much more common and recurrent now, especially amongst children and elderly who are more prone to

air infections. Young urban couples want to leave Delhi and settle in a smaller city which provides them the quality of life they are looking for, clean air being a key component. Some of them were even willing to sacrifice their high salaries in exchange for healthier lives.

The Solution: A personal stake and small incremental efforts. Unfortunately, each one of us is knowingly contributing to air pollution. We take air and air quality for granted like we do many other aspects of our natural environment. We are all forthcoming in identifying the problem and its effects, but there is no acknowledgement of our personal contribution to it. There's a complete absence of a proactive stance in working towards addressing it. We are all seeking greener pastures elsewhere; we do not take responsibility of where we are. We believe air quality and connected issues are concerns of scientists, environmentalists and the onus to deal with the issue lies with the government. The government should limit the number of vehicle licences it provides, reduce the subsidy on diesel, restrict the days that you can drive your car if there are too many high pollution days, strengthen the public transport system, and monitor the quality of fuel we use and so on. Agreed, policy decisions, political will and government action are all vital pieces of the puzzle. We know how important the introduction of CNG in public transport in Delhi (2002) was to addressing the high level of air pollutants at the beginning of the new millennium. But as clichéd as it sounds, that is one side of the coin. Public concern and action is equally if not more important. We are all in a hurry-- for convenience, for development -- and this impatience is the fuel running our policy making environment. Our policymakers launch short-term populist measures for development without adequate foresight. This costs us. We have adopted a curative approach to life, our lifestyle practices reflect that, we work on something after it has affected us knowing all along that sooner or later it is going to get us. We need to re-examine this and adopt a preventive approach in our lives and in our policy making. A combination of short-term responses and a long-term action plan are needed.

Our approach to development is far from sustainable, and with every problem we solve we unleash a new set of problems. It is only going to get worse from here. It is about time we devise our own solutions, however small in scale. Perhaps we could keep one day in a week to use public transport and gradually increase it to two, be more alert to getting our pollution checks on time, resist buying diesel vehicles, think twice before buying multiple vehicles, reduce smoking, do a car pool and so on. Nothing innovative about these options, but have we exhausted this available list? Not yet.

A friend of my father, who has spent his life in Delhi, pointed out that he loves watching stars and has grown up observing them, but now Delhi's sky rarely twinkle. This took me back to my first night in this city, about 12 years ago when I moved here. I clearly remember looking at the sky and wondering where the stars were. In that one moment this city did not seem very comforting. Is this the kind of environment we are building and leaving behind? I leave you with that thought.

UK Minister promotes Climate Action Plan in Kolkata

Date: 26th August, 2015 Source: NewKerala

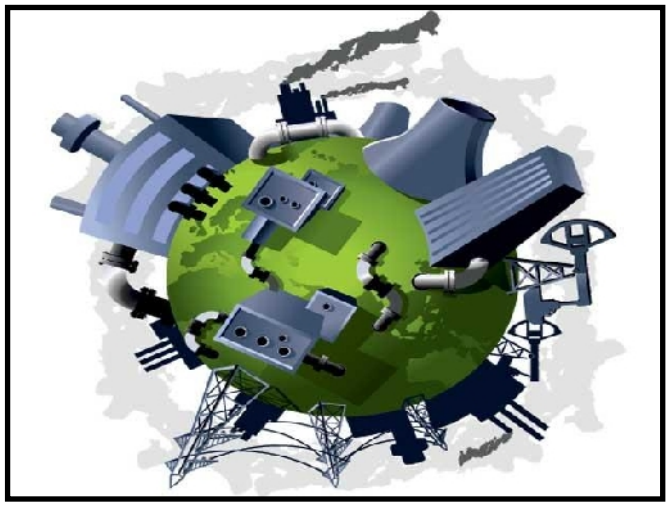
UK Minister of State for International Development Desmond Swayne, visited Kolkata on Tuesday to see work under the UK-Kolkata Municipal Corporation partnership to develop Kolkata into a low-carbon and climate resilient city.The UK government is supporting KMC with a roadmap for sustainable growth in the city. Along with the West Bengal Environment Minister, Sudarshan Ghosh Dastidar, and Kolkata Mayor Sovan Chatterjee, the Minister visited a ward under Borough III and attended a climate change programme for councillors and local community. Swayne said: The roadmap for sustainable growth makes Kolkata one of the first Indian mega-cities to have a comprehensive strategy for dealing with the effects of climate change and supporting sustainable urban development. For other cities facing similar challenges this is a model worth replicating and the UK is pleased to be partnering with Kolkata on this exciting project. Under

the roadmap, a project to strengthen capacity of the Government of West Bengal to fully access climate finance will begin shortly.

On this occasion, the visiting Minister along with Ghosh Dastidar and Chatterjee launched a graphic booklet in Bengali and Hindi on low carbon and climate resilient Kolkata, a Green Kolkata poster and a Councillors Brochure on rooftop solar energy. They also distributed prizes to children taking part in a climate change painting competition in the ward. Speaking on the occasion, Scott Furssedonn-Wood said: The UK Government and the Kolkata Municipal Corporation have been working together to mobilise resources and take effective action for building a climate resilient Kolkata. Local councillors are expected to play one of the most important roles in enabling this transformation. And while doing so, they can create more green jobs for local communities and provide more opportunities of alternative sustainable livelihood for the urban poor. He also added: We are initiating a new programme with the Department of Environment, Government of West Bengal for strengthening the capacities of the State Government to help towards the implementation of the State Action Plan on Climate Change. Apart from capacity building, the programme entails the UK Government working together with the West Bengal Government to identify areas for intervention on climate change, and to conceive and finalise project proposals which can access climate finance. The partnership will result in tangible benefits to the people of Kolkata. Interventions in solid waste management and reduction in green-house gas emissions will improve the quality of life in a less polluted Kolkata. A city mobility plan, disaster management plan and climate smart wastewater treatment will also improve the liveability of the city. Scaling of solar rooftop and energy efficiency in street lighting will help the urban communities get access to cleaner sources of energy while also reducing electricity bills. Such low-carbon and climate resilient intervention will provide economic opportunities for the people of Kolkata.

UK keen to offer technical aid to Odisha on climate change, economic growth

Date: 26th August, 2015 Source: Business Standards



Odisha is one of the first states in the country to have come out with the Climate change Action Plan. Aiming to deepen further its three decade long partnership with Odisha, UK said it is keen to offer its technical expertise to the state in the areas of climate change and economic development. "Climate change is of vital importance today. Odisha is one of the first states in the country to have come out with the Climate change Action Plan. Climate change is one area where we can offer our technical assistance. We are also keen to offer our expertise in economic development as the state needs to create more jobs and the right investment climate," said Desmond Swayne, UK minister of state for international development on the sidelines of the inauguration of 'UK In Odisha Campaign' organised by the British Deputy High Commission. "Odisha has registered impressive growth of 8.7 percent in 2014 -15 and the proportion of people below the poverty line has also declined by 24.6 percentage points. DFID and UK are proud to have been partners in Odisha's development journey for nearly three decades. The state government is making a remarkable effort and we as partners will continue to support it," he said. "Our private sector programme provides development capital investment to private enterprises in the form of equity and loans to support projects that may not have otherwise got off the ground. We invest in enterprises and projects that are both commercially viable and deliver development impact," he added. Striking a note of optimism for Odisha, Swayne said, "Things are happening in Odisha- in infrastructure and industry, in skills and education.

Today, the tremendous potential of Odisha's natural resources and of its people is being realised, more than ever before." Speaking on the occasion, chief minister Naveen Patnaik said, "While the present campaign will strengthen our existing partnership, it will explore new possibilities for alliance in other sectors also. I am happy to note that at present, there are six ongoing programmes supported by the UK government with a total commitment of more than 150 million pound. The current programmes involve strengthening in governance and administration and improving the urban infrastructure facilities in the state." British Deputy High Commissioner, Scott Furssedonn-Wood said, "We want to be a partner for the state as it builds that future. We want more talented young people from Odisha to study at the UK's world class universities. We want more British companies and I have brought 10 British companies with me this week to bring their world class products and services to Odisha. We want to share more UK ideas and expertise as Odisha rises to the challenges of urbanisation and of climate change."

Sea Level Rising Faster Than Expected, NASA Warns

Date: 27th August, 2015 Source: Ecowatch

New research underway indicates that at least three feet of global sea level rise is near certain, National Aeronautics and Space Administration (NASA) scientists warned Wednesday. That's the higher range of the one to three feet level of rise the UN Intergovernmental Panel on Climate Change (IPCC) gave in its 2013 assessment. Sea levels have already risen three inches on average since 1992, with some areas experiencing as much as a 9-inch rise.

"Given what we know now about how the ocean expands as it warms and how ice sheets and glaciers are adding water to the seas, it's pretty certain we are locked into at least three feet of sea level rise and probably more," said Steve Nerem of the University of Colorado, Boulder and lead of NASA's interdisciplinary Sea Level Change Team. "But we don't know whether it will happen within a century or somewhat longer."

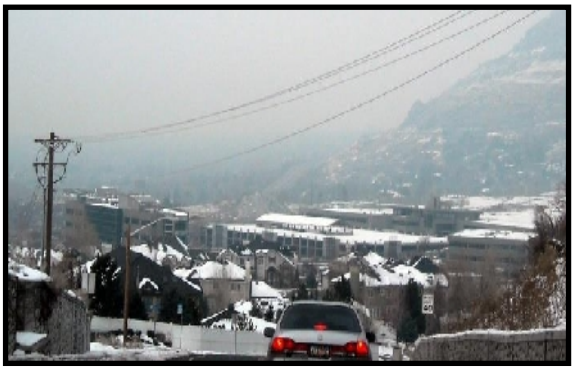
The Greenland ice sheet has contributed more greatly to sea level rise, losing an average of 303 gigatons of ice a year over the past decade, while the Antarctic ice sheet has lost an average of 118 gigatons a year. But scientists at NASA and the University of California, Irvine warned last year that glaciers in the West Antarctic "have passed the point of no return."

Glaciologist Eric Rignot of the UC-Irvine and NASA's JPL and lead author of the West Antarctic study, stated Wednesday that East Antarctica's ice sheet remains a wildcard. "The prevailing view among specialists has been that East Antarctica is stable, but we don't really know," Rignot stated. "Some of the signs we see in the satellite data right now are red flags that these glaciers might not be as stable as we once thought." Exactly how much rise will happen and when is uncertain, they say.

"We've seen from the paleoclimate record that sea level rise of as much as 10 feet in a century or two is possible, if the ice sheets fall apart rapidly," said Tom Wagner, the cryosphere program scientist at NASA Headquarters in Washington. "We're seeing evidence that the ice sheets are waking up, but we need to understand them better before we can say we're in a new era of rapid ice loss."

In Smog Rule Fight, Industry Groups Make their Push in Purple States

Date: 27th August, 2015 Source: National Journal



While the Obama administration spends the month promoting its much-awaited climate-change rule limiting carbon emissions from the power sector, industry groups are instead trying to put the brakes on a different environmental regulation. In a methodical march through swing states, major business groups such as the Chamber of Commerce and the National Association of Manufacturers are launching attacks against the Environmental Protection Agency's proposal to limit ground-level smog (also known as ozone pollution), calling it the most expensive regulation in history. And they may have picked up an influential purple-state Democrat, as Sen. Michael Bennet of Colorado said Wednesday that he was "deeply concerned" about the EPA's proposal, although he stopped short of saying he opposed it. The lobbying campaign has so far targeted Colorado, Ohio, and Virginia, and is expanding this week to Wisconsin and Pennsylvania, with more states on the horizon. They tend to follow the same model: playing up numbers about the employment and cost impact of new rules, a Chamber of Commerce report about harm to local transportation projects, and ads about the EPA cracking down. The Environmental Policy Alliance came out with its own ad branding the Environmental Protection Agency as cops ready to crack down on lawn mowing and parking spaces. Opponents have also recruited members of the U.S. Conference of Mayors and local African-American groups, among others, in a bid to build a local-level opposition campaign and get the issue in front of lawmakers during the August recess.

"Common sense; does it exist in our nation's capital?," asks a National Association of Manufacturers television ad running this week in Wisconsin. The ad goes on to say the new rules will "stifle our economy and kill millions of jobs" and highlights opposition from states and mayors. Environmentalists say the ads are full of exaggerations and are a desperate attempt to derail much-needed regulation, but the flurry of attention shows how significant the ozone rule is. It would lower the legal limit of ground-level smog pollution and require state and local governments to limit pollutants that create ozone, such as manufacturing and transportation emissions.

The timing of the push seems odd—the EPA isn't required the finalize their rule until Oct. 1 and the environmental community has largely been focused on the landmark rule putting limits on greenhouse-gas emissions from existing power plants, the centerpiece of President Obama's climate agenda.

But the ozone rule occupies a massive space in the environmental lobbying war. Industry groups say it's the most expensive regulation that the administration will undertake, with effects that would ripple across the economy. Environmentalists, meanwhile, say it's a public-health necessity and are determined to protect it, especially since the White House pulled the plug on tightening the standard in 2011.

While the White House has given no indication it's going to reverse itself this time, the business lobby is holding out hope that by pushing on soft-purple states, they can build up a groundswell to make history repeat itself. Or, at the very least, they can put the screws on vulnerable members to pass legislation limiting the standards. "Counties and localities are going to be hit over and over again on an economic basis, and we want everyone to understand that," said Jay Timmons, president of the National Association of Manufacturers. "We're rolling this out where the discussion has been most intense "¦ and ultimately we'd like to take this to all 50 states." The EPA last year proposed lowering the ozone standard from 75 parts per billion to between 65 and 70 ppb after agency scientists said the current mark was not sufficient to protect public health. The rule is set to be finalized this fall. Public-health groups are pushing for the EPA to look to the low end of the standard. The EPA has said tightening the standard would avert nearly a million asthma attacks, thousands of cases of acute bronchitis, and up to 180,000 missed work days by reducing pollution-re-

lated symptoms. But industry groups say anything lower than the current standard would plunge the country into nonattainment status, opening counties and states up to costly fines. They say the country has already lowered ozone levels by more than 30 percent since 1980 (coming after standards from the Clean Air Act went into effect), and that more stringent regulations would put a stranglehold on the economy, especially for areas already out of compliance. The new standards wouldn't take effect until 2020 at the earliest; because of the long time line of air quality standards, states are still working on implementation plans for the last revision, set in 2008.

Legal challenges have proven unsuccessful, so industry groups are now trying to build public opposition from the ground up, releasing state-level reports and using local businesses to make the case. The Chamber of Commerce has also been releasing individual reports warning that EPA could imperil local transportation projects if cities fail to meet the new standard (a report for Washington, for example, said an expansion of the Purple Line and I-66 would be in jeopardy). The EPA could penalize transportation funding, but only for states that refuse to file state plans, and it's an authority that hasn't been used before. And recent ad campaigns have pointed out that certain National Parks, including Yellowstone and Acadia, would be out of compliance using the lower end of the proposal, although parks groups have said that's because of pollution from nearby coal-fired power plants. It all adds up to a lobbying blitz meant to mobilize local voters and officials to send a message to the White House.

Climate change: A 'pause' in global warming? Not on this evidence

Date: 28th August, 2015 Source: The Independent

Some have called it the "pause", others the "hiatus". Now it seems neither description is accurate, given that the three hottest years on record have all occurred in the last five years and that nine out of the ten hottest years have all been in this century. Climate sceptics, such as the former Chancellor Lord Lawson and ex-minister Peter Lilley, have repeatedly claimed that global warming has either stopped or slowed down to justify their arguments that action on climate change is premature or unnecessary. Even the Intergovernmental Panel on Climate Change and the UK Met Office have talked about a "slowdown" or "hiatus" in the rate of increase in global surface temperatures, seemingly over the past decade or so, compared to the end of the last century. Other researchers, however, are not so sure that the data can be read this way, especially now that 2015 is likely to follow 2014 and 2010 as the next record hot year (while the chances are that 2016 will be among the top three as well, because of a continuing El Nino). "We really don't have a pause in global warming. I've frankly never really agreed with that," said dr Jessica Blunden, a climate researcher at the US National Oceanic and Atmospheric Administration (NOAA), which collates records on land and sea temperatures. "We've continued to break heat records in the 21st century since 1998 – 2005 was a record warm year, then 2010 was a record and then 2014 was a record and now we're getting ready to beat that record again. I disagree with the thought that there is a warming hiatus."
A major review of global temperatures by NOAA earlier this year found that the rate of increase in global surface temperatures over both land and sea has been just as fast at the start of this century as it was at the end of the last. Its scientists said the "hiatus" is nothing more than an illusion resulting from flaws in the way data was collected, and the fact that 2015 seems destined to break the record again underlined that.

Children exposed to toxic air likelier to have lower GPAs

Date: 29th August, 2015 Source: The Finance Express

A new study has revealed that children who are exposed to toxic air pollutants at home are likelier to have lower GPAs. In the study, University of Texas at El Paso researchers analysed academic performance and socio-demographic data for 1,895 fourth and fifth grade children. They used the Environmental Protection Agency's National Air Toxics Assessment to estimate children's exposure to toxic air pollutants, such as diesel exhaust, around the location of their homes. Children who were exposed to high levels of motor vehicle emissions from cars, trucks and buses on roads and highways were found to have significantly lower GPAs. Author Sara E. Grineski said that some evidence suggested that this association might exist because of illnesses, such as respiratory infections or asthma. Air pollution makes children sick, which leads to absenteeism and poor performance in school. Grineski added that the other hypothesis was that chronic exposure to air toxics could negatively affect children's neurological and brain development. The study is published in the Journal Population and Environment.

Wanted! An army of citizen scientists to tackle air pollution

Date: 30th August, 2015 Source: The Guardian

A Europe-wide project asks iPhone users to help monitor levels of pollution in major cities. Turn off Tinder and exit Instagram – scientists want you to turn your iPhones to research. Launching on Tuesday, the iSpex-EU project aims to recruit people from major cities across Europe, including Manchester and London, to take part in an initiative to monitor levels of air pollution. Run during the International Year of Light, a worldwide celebration of light and light-based technologies this year, the project aims to raise awareness of air pollution and contribute to scientific research by encouraging people to use their mobile phones to record levels of airborne particles and droplets known as atmospheric aerosols. "The point of the project is to measure the concentration of very fine particles in the atmosphere and these can be from natural sources, things like forest fires or volcanic eruptions, through to manmade factors like burning diesel," explains Toby Shannon, the UK national co-ordinator of the International Year of Light, who is based at London's Institute of Physics, one of the organisations supporting the UK side of the iSpex-EU project. Armed with a free accessory dubbed an "iSpex add-on", participants will use their iPhones to scan the sky to capture the spectrum of light reaching the device, the angle of the measurement and a property of light known as its polarisation.

"When there are particles in the air, they change the polarisation state of sunlight and that is what we record with iSpex," says Elise Hendriks, co-ordinator of the iSpex-EU project based at Leiden University in the Netherlands. A free accompanying iPhone app will automatically collect the data and display it on a map, visible both in the app and on a desktop site, together with colour-coded feedback of the aerosol level measured. The data will then be processed and further analysed by the iSpex team. The initiative follows an initial iSpex project, led by Leiden University, which used a similar set-up to monitor such air-pollution across the Netherlands in 2013. Now the project is going further, looking at atmospheric aerosols in a number of cities across Europe. "Cities are involved generally because there is a higher chance of getting pollution, but also because you need a certain density of people to get good measurements," explains Dr

Hugo Ricketts from the National Centre for Atmospheric Science who is involved in the Manchester arm of the project. It's a pressing problem.

The Earth's climate, air traffic and human health are all affected by air pollution. A report from King's College, London published this summer estimates that in London alone around 9,500 premature deaths a year are linked to high levels of air pollution, of which particulates in the air are a component. Indeed, after smoking "it is the second biggest public health challenge," says Professor Frank Kelly, an expert in environmental health at the university. While air pollution is currently monitored using satellite systems as well as ground-based monitoring stations, Kelly believes mobile devices could offer a host of advantages, and is involved in the development of such technologies himself. "In an ideal world you want to know what the pollution is where you are at that particular point in time and for that you need small, mobile, accessible, cheap instrumentation," he says. While iSpex is a step in the right direction, Kelly believes that there is room for development. "It's good for improving awareness and allowing people to make decisions about how they go from A to B," he says. "But beyond that it's not that useful as it doesn't tell you exactly what you are being exposed to." But others believe the data collected by citizen scientists will complement current techniques and could lead to new insights and aid mapping.

"What we are hoping to get out of this project is enough distribution [of measurements] over Manchester that you should be able to start seeing whether there is a particular area that is more affected by pollution or less affected by pollution," says Ricketts.

The iSpex units can be requested by email from co-ordinators within participating cities. Contact details are available at ispex-eu.org. "We're hoping to get 750 citizen scientists in London and then a similar number in Manchester," says Shannon. And with the campaign running until 15 October, he's hoping for an Indian summer. "You need a nice clear blue sky to take the measurements," he says as he looks over rainswept London. "I'm hoping it is not going to be like this for six weeks."

Unlocking the mystery of the Four Corners Methane Hot Spot

Date: 31st August, 2015 Source: HCN

A silver van rolls slowly down a narrow road on the edge of the small town of Bayfield, Colorado, a farming-turned-bedroom community 20 miles east of Durango. With its darkly tinted windows and government plates, the van has an ominous appearance, not helped by the long, fishing-pole-like appendage, accessorized with wires and tubes, that extends from its top. Impatient drivers pull around the creeping vehicle, peering suspiciously as they pass. Just behind the local high school, the van stops abruptly, then reverses, then pulls forward again onto the shoulder before stopping.

The passenger-side door swings open and Gabrielle Petron, an atmospheric scientist with The National Oceanic and Atmospheric Administration and the Cooperative Institute for Research in Environmental Sciences at the University of Colorado, Boulder, hops out, gesturing to the following journalists to pull over and do the same. Petron wears jeans and hiking boots, a black jacket and sunglasses, all given flair by the saffron-orange scarf wrapped loosely around her neck and shoulders. Speaking with a slight French accent, she explains the van's erratic behavior: Its sensors indicate the presence of above-background levels of methane, a potent greenhouse gas.

It's not hard to find the probable source. Inside a chain-link-fenced enclosure next to the school's tennis court, the pipes, valves and other equipment of a BP America natural gas well jut from the ground. Everything's painted gold and purple, the school colors, with "Wolverine Pride" emblazoned on a metal box. Like many of the 40,000 or so oil and gas wells here in the San Juan Basin, this one extracts natural gas from the Fruitland coal formation. The natural gas, which is largely methane, is gathered here,

processed and piped to market. Or at least most of it is: Some of that methane is apparently leaking from the wellhead and drifting into the atmosphere, contributing in its own small way to the notorious Four Corners Methane Hot Spot, a highly concentrated plume of greenhouse gas that hovers over the region. When scientists first noticed the hot spot in satellite imagery captured nearly a decade ago, it was so intense that they thought their equipment was malfunctioning. But more satellite imagery from 2009 confirmed the anomaly's existence, and in 2014 a team of scientists published a paper on it that garnered widespread media attention.

The obvious suspect behind the hot spot is the vast oil and natural gas industry infrastructure, which is woven like rebar into the landscape here, and burps and leaks methane and other hydrocarbons from valves, pipes, compressors and newly fractured wells. Other known contributors include an underground coal mine, from which methane is vented for safety, and a few landfills and two coal-burning power plants, which emit relatively small amounts of the gas.

SEPTEMBER 2015

Devastating Wildfires Are Even Changing the Appearance of the Moon

Date: 01st September, 2015 Source: Ecowatch

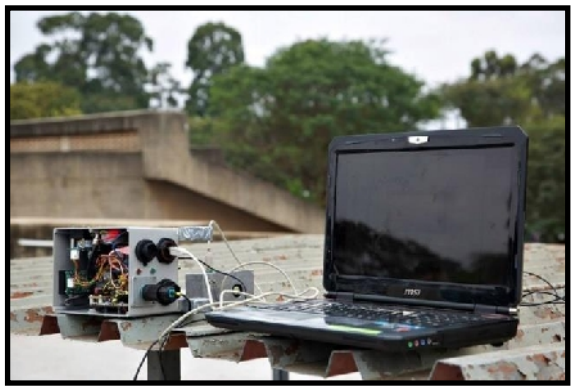
This wildfire season has burned 7.8 million acres to date, an area larger than the state of Massachusetts. In Alaska alone, 5.1 million acres have burned. Washington has officially had its most destructive wildfire season on record, including its largest wildfire in state history. "Even if all the fires went out across the West tomorrow, this year would still rank as the seventh-most destructive wildfire season in terms of acres burned," reports Climate Central. And there is still at least another month to go to see if experts were right in predicting 2015 will top 2006 as the worst wildfire season on record.

Smoke from the wildfires has been seen from space and has even drifted as far east as the Atlantic Ocean. Large stretches of the U.S. are experiencing persistently hazy skies with serious health impacts and the smoke is even altering the moon's appearance. "Heavy smoke from forest fires in Washington, California and Montana has now spread to cover nearly half the country in a smoky pall, soaking up starlight and muting the moonlight," says Universe Today. If there is a silver lining to the fires, it's that the sunrises, sunsets and the moon have looked spectacular in recent days because of the fires. But, of course, there are so many harms to human health and to the environment.

"Forest fire smoke contains carbon monoxide, carbon dioxide and soot," says Universe Today. "On especially smoky days, you can even smell the odor of burning trees in the air at ground level. Some may suffer from burning eyes, asthma or bronchitis on especially smoky days even a thousand miles from the source fires."

New low-cost device to help prevent deaths from air pollution

Date: 02nd September, 2015 Source: Azar Tac



A new device to measure air quality could potentially help avert deaths from air pollution, the UN Environment Programme (UNEP) told UN Radio. UNEP plans to make the blueprints publically available, allowing governments and organizations to manufacture it themselves.The system will cost approximately 100 times less than existing solutions, according to the agency.

The head of the UN Environment Programme (UNEP) unveiled the device in Nairobi on Monday. Achim Steiner said air pollution causes roughly seven million deaths worldwide each year—more than half of them due to outdoor pollution and mostly in developing countries. Tragically, he added, these deaths are preventable. Systems that measure air quality currently cost between US$150,000 and US$200,000 to set up, according to the UN agency. The UNEP model will cost around US$1,500 per unit. It was designed for affordability throughout its lifecycle, which will be up to four years. The pilot project is being conducted in cooperation with the Kenyan Environment Ministry and the Nairobi County.

Scientists discover mechanism for air pollution-induced liver disease

Date: 02nd September, 2015 Source: Medical Express

A research team led by Kezhong Zhang, Ph.D., at the Wayne State University School of Medicine's Center for Molecular Medicine and Genetics, has discovered that exposure to air pollution has a direct adverse health effect on the liver and causes liver fibrosis, an illness associated with metabolic disease and liver cancer. Dr. Zhang, assistant professor of Molecular Medicine and Genetics and of Immunology and Microbiology, and his group have been studying the adverse health effects of air pollution from a unique perspective. While the major research efforts in the field were focused on the effects of air pollution on lung tissues and cardiovascular system, the Zhang lab studied the pathological effects and stress mechanisms of air pollution on the liver, the major organ of detoxification and metabolism. Their work demonstrated that inhalation exposure to high-concentration airborne particulate matter PM2.5 has direct effects on the liver, triggering liver fibrosis, a pathological condition characterized by accumulation of the extracellular matrix protein collagen that occurs in most types of chronic liver diseases.

PM2.5 is fine airborne particulate matter with aerodynamic diameter smaller than 2.5 micrometers. It is a complex mixture of particles and gases from gasoline and diesel engines, together with dust from wear of road surfaces, tires and brakes. PM2.5 is the major and most toxic component of air pollutants in the real-world air environment of intensive traffic or industrial activity. Recent epidemiological studies confirmed that populations exposed to high-level PM2.5 are at a higher risk of developing heart disease and metabolic disease. Dr. Zhang said that PM2.5 pollution has major impact on the public health for the general population in urban areas, such as Detroit, one of the most PM2.5-polluted cities in the United States, according to annual air quality reports by the American Lung Association. Dr. Zhang's group, in collaboration with a research group at the Ohio State University College of Public Health led by Qinghua Sun, M.D., Ph.D., professor and assistant dean for Global Public Health, performed both short-time and long-term inhalation exposure of animal models to real-world PM2.5.

After a 10-week exposure, the animals developed liver fibrosis. Utilizing molecular, cellular and pathological approaches, the team discovered the stress sensor on the cell membrane that initiates PM2.5-triggered stress signals and the mediators inside the cell that transduces the signaling.

The PM2.5-triggered inflammatory stress responses promote collagen deposition—a hallmark of fibrosis—in the liver through activating the transforming growth factor β (TGFβ) signaling. This work will soon be published in the Journal of Hepatology. "Our work has a major impact on medical care and health policy-making for the populationsunder air pollution environment," Dr. Zhang said, "Liver fibrosis is an advanced stage of chronic liver injuries caused by chronic hepatitis viral infection, obesity, alcoholism or autoimmune diseases.

Our work defined that air pollution, specifically PM2.5 pollutant, is an independent risk factor of liver fibrosis. This is very significant in terms of identifying new health risk factors and understanding liver diseases. The molecular and cellular mechanisms we revealed in this work have very important implications in clinical disease diagnosis and treatment associated with air pollution."

The liver is an important target organ and a key player in disease development under high-level PM2.5 exposure. Automobile drivers who experience long-time daily road traffic and car manufacturing employees should pay more attention to the markers or liver enzymes that indicate liver disease, Dr. Zhang said. "Physicians or health care professionals should monitor liver pathology and consider preventive therapeutic strategies for liver disease for populations and patients in urban air pollution environments."

A pro-business tool in the fight against air pollution

Date: 02nd September, 2015 Source: Washigton Times

A little-known tool for fighting air pollution is growing in scope and impact and is disproving the conventional wisdom that every plan to help the environment will inevitably harm businesses. NAMAs, or Nationally Appropriate Mitigation Actions, are not even a decade old, but have already attracted billions in funding and are proving to be a market-friendly way to reduce greenhouse-gas emissions in developing nations, which need the help most. Through these transformational programs in the waste, transport, energy and a range of other sectors, countries cut emissions while creating jobs and businesses, reducing poverty and improving public health. They level the playing field for climate-friendly technologies to compete while they produce real and lasting progress toward the global effort to prevent dangerous climate change. The seed for the NAMA concept was planted in the summer of 2007 at the Center for Clean Air Policy's (CCAP) "Future Actions Dialogue."

The concept was simple: developing countries would devise locally effective ways to reduce greenhouse gas emissions. Developed countries would provide some kick-start financing and other forms of support to help bring these actions to fruition and help them become sustainable, autonomous businesses. Climate experts have recently begun working directly with developing countries in the development of specific NAMAs on the ground. In Colombia, for example, CCAP experts worked to reduce carbon emissions from personal vehicles. The program reduces the need to drive and encourages public transportation by clustering low-income housing and retail shops around mass transit hubs.

Governments and taxpayers will save money through reduced infrastructure costs while private developers are finding new investment opportunities – all while reducing greenhouse gas emissions. Chile faces the threat of a significant expansion in new coal-burning power plants to meet its growing demand for electricity. At the same time, it also has an abundance of wind and sun that can also be tapped. A NAMA-like mechanism was set to stabilize the price of renewable-produced electricity until the marketplace was strong enough to support renewable energy by itself. Clean power from renewable sources is now displacing new coal-generated electricity, which produces large quantities of greenhouse gases. To succeed, NAMAs must be host-country driven, should strive to be sector-wide programs with a national scope and should include both policies and financial mechanisms that address the main barriers to pollution mitigation. They also should create on-going sustainable businesses.

In May 2013, the Center for Clean Air Policy hosted a summit in Copenhagen that brought together developing-country officials from Latin America and Asia with potential funding countries, development banks and financial institutions. Fourteen NAMAs were presented at the summit. In addition, the United Kingdom and Germany announced guidance for the first round of their joint NAMA Facility, the first to specifically focus on financing NAMAs. In its first round of funding, the U.K.-Germany NAMA Facility selected the Colombia transportation NAMA, as well as NAMAs in Chile, Costa Rica, Mexico and Indonesia for funding. The Facility has since pre-approved four more proposals and has opened a call for more. The donor base of the facility has broadened to include Denmark and the European Commission.

John Morton, Chief of Staff of the United States Overseas Private Investment Corporation, said: "It's clear that these NAMAs are filled with bankable private sector investment opportunities." Going forward, financing for ambitious mitigation actions needs to be increased. Fortunately, the international community is responding, principally through the Green Climate Fund.

Established at the 2010 climate conference in Cancun, the GCF received $10 billion in pledges from developed and developing countries to begin work in 2014. The U.S. Congress needs to approve President Obama's budget request for the U.S. part of this funding, following the example set under the George W. Bush administration. NAMAs reduce the emission of pollutants that cause global warming while also promoting growth and improved health and quality of life for citizens. Not only do greenhouse gas

emissions fall, but local people and businesses tangibly benefit. NAMA development has shown that, with the right environment, many of the opportunities to protect the planet are also great opportunities for the private sector. Ned Helme is the president of the Center for Clean Air Policy in Washington, D.C.

Coal ash contains radioactive contaminants: US study

Date: 03rd September 03, 2015 Source: Inter Aksyon

The online news portal of TV5

High levels of radioactive contaminants have been found in coal ash in major coal-producing regions of the United States, raising concern about the dangers of this unregulated waste, researchers said Wednesday. "Levels of radioactivity in the ash were up to five times higher than in normal soil, and up to 10 times higher than in the parent coal itself because of the way combustion concentrates radioactivity," said the study in the September 2 edition of the peer-reviewed journal Environmental Science and Technology. Coal ash is currently unregulated and is stored in holding ponds and landfills near coal-fired power plants, which are blamed for much of the fossil fuel pollution that is leading to climate change. Leaks from these ponds can contaminate groundwater, and experts have long known that coal contains harmful agents such as selenium and arsenic.

"This study raises the possibility we should also be looking for radioactive elements, such as radium isotopes and lead-210, and including them in our monitoring efforts," said study co-author Avner Vengosh, professor of geochemistry and water quality at Duke University's Nicholas School of the Environment. Radium isotopes and lead-210 occur naturally in coal, but when coal is burned "the radium isotopes become concentrated in the coal ash residues, and the lead-210 becomes chemically volatile and reattaches itself to tiny particles of fly ash," said the study. These tiny particles of fly ash "comprise the largest volume of coal ash waste going into holding ponds and landfills," said lead author Nancy Lauer, a PhD student in Vengosh's lab. Currently, coal ash disposal sites are not monitored for radioactivity. "We don't know how much of these contaminants are released to the environment, and how they might affect human health in areas where coal ash ponds and landfills are leaking," said Vengosh.

"Our study opens the door for future evaluation of this potential risk." Worldwide problem- The first-ever US regulations on coal ash disposal are set for implementation by the US Environmental Protection Agency in October. Greenpeace has described coal ash as "highly hazardous, often containing arsenic, mercury and lead," and warned that "living in close proximity to coal ash dumps greatly increases your risk of cancer, heart damage, lung disease and birth defects, among a myriad of other serious illnesses." China, the world's largest coal-user, produces at least 375 million tons of coal ash every year -- 2.5 times the quantity in 2002, the environmental group has said.

The United States generates 140 million tons of coal ash each year, according to the advocacy group EarthJustice. Duke researchers said that their US study found the highest radioactivity in the Illinois basin, followed by the Appalachian and Powder River basins, the latter of which is in Montana and Wyoming.

The ratio of radium to uranium in the parent coal was consistent with the ratio found in its residual coal ash. "This means we can predict how much potential radioactivity will occur in coal ash by measuring the uranium content in the parent coal, which is easily discerned," Vengosh said. "This analysis can be applied to all coal ash worldwide, and is useful information for regulators, industries and scientists alike."

Emissions cuts pledges too weak to achieve 2C 'safety limit'

Date: 03rd September, 2015 Source: The Ecologist

Promises made by governments to cut their greenhouse emissions come nowhere near stopping global warming rising above the 2C danger level, writes Alex Kirby. And in many cases the laws and policies needed to deliver them are absent. With less than three months to go before the start of the UN climate change conference in Paris, the world is a long way short of promising cuts in greenhouse gas emissions big enough to deliver a good chance of climate safety.

The UN Framework Convention on Climate Change (UNFCCC) has asked world governments to submit plans - known as Intended Nationally Determined Contributions (INDCs) - detailing the emissions cuts they will agree to make. By 1st September 29 governments had submitted their INDCs to the UN, among them the EU which covers all its member states. These INDCs collectively cover 56 countries, 43% of global population and 65% of global greenhouse gas emissions.

But a new study reveals that the climate targets so far submitted will lead to global emissions far higher than the levels needed to hold warming to below 2C - the internationally-agreed safety limit. Four research institutes - Climate Analytics, Ecofys, NewClimate Institute and the Potsdam Institute for Climate Impact Research (PIK) - have joined up to form Climate Action Tracker (CAT). They have just released their analysis at climate talks under way in Bonn, Germany, at the start of the last but one week of negotiations before Paris, and they make for dismal reading. Emissions set to rise far above the 2C pathway With the INDCs submitted to date, the CAT report projects that total global emissions are on track to be 53-57 GtCO2e in 2025 and 55-59 GtCO2e (gigatonnes of carbon dioxide equivalent) in 2030, levels it describes as "far above the least-cost global pathways consistent with limiting warming below 2°C." CAT has assessed 15 of the INDCs covering 64.5% of global emissions. Of these it judges seven to be 'inadequate', six as 'medium' and only two as 'sufficient' for reaching the goal of limiting the rise in average global temperatures to within 2C of pre-industrial levels, in order to avert serious climate change. The CAT analysis shows that to hold global warming below 2C, governments need to significantly strengthen their INDCs and collectively reduce global emissions: "Additional reductions in the order of 12-15 GtO2e by 2025 and of 17-21 GtCO2e by 2030 are needed for global emissions to be consistent with a 2°C pathway."

If the current 2030 INDCs are locked in, CAT says that holding warming below 2C would become almost impracticable, as CO2 emission reduction rates would need to exceed 5% a year after 2030, and would make holding warming below 1.5C virtually impossible. Many climate scientists say the 2C safety limit is too high, and argue for a 1.5C maximum instead.

Bill Hare, a physicist who is co-founder and CEO of Climate Analytics, says: "It is clear that if the Paris meeting locks in present climate commitments for 2030, holding warming below 2C could essentially become infeasible, and 1.5C beyond reach. Given the present level of pledged climate action, commitments should only be made until 2025. The INDCs therefore need to be considerably strengthened for the period 2020-2025."

Only two countries are on target: Ethiopia and Morocco

The seven countries whose INDCs are described as inadequate by CAT are Australia, Canada, Japan, New Zealand, Singapore, South Korea and Russia. It says their proposals are not considered to be a fair contribution to limiting warming to 2C - from almost any perspective.China, the EU, Mexico, Norway, Switzerland and the US are judged 'medium', which the CAT says means they are "within the upper and least ambitious end of what could be considered as fair, and if all countries put forward a similar level of ambition warming would exceed 2°C". "One would have expected all the new government climate targets combined to put the world on a lower emissions pathway, but they haven't", says Louise Jeffery, a PIK researcher on climate impacts and vulnerabilities. "One contributing factor is the fact that Russia, Canada, and New Zealand's INDCs are inconsistent with their stated long-term (2050) goals." The INDCs of two African countries, Ethiopia and Morocco, are the only ones assessed by the CAT as being in line with the ambition to limit temperature rise to 2C.

Countries need to step up their targets - and their policies!

In most cases, CAT also found that the policies governments have in place now would not reduce emissions enough even to match their INDCs for 2025. The exceptions are China and the EU, who would have to implement minimal extra policies to meet their targets, and could even exceed them. "Some countries propose INDCs close to the current trajectory giving confidence that they are met (e.g. EU and China). Others have put forward a target that would be a significant change in trend, but these are not yet supported by any significant existing legislation, e.g. Australia and Canada, raising questions about the likely implementation.

"Yet others are showing progress in policy implementation, continuously moving their future trajectories downwards, but policies are not yet sufficient to meet their (still inadequate) INDCs (e.g. USA). The gap between pledges and policies increases through time, highlighting the need for long-term policy action." Niklas Höhne, a founding partner of NewClimate Institute, says: "Most governments that have already submitted an INDC need to review their targets in light of the global goal and, in most cases, will need to strengthen them."

INDCs are yet to come from 140 countries. The ten highest emitters yet to submit INDCs are India, Brazil, Iran, Indonesia, Saudi Arabia, South Africa, Thailand, Turkey, Ukraine, and Pakistan.

Goodbye “parade blue”—air pollution in Beijing is back to the unhealthy levels feared by residents

Date: 03rd September, 2015 Source: Quartz

Chinese president Xi Jinping declared at his nation’s Sept. 3 military parade that justice, peace, and the people will prevail. But apparently, the blue skies in Beijing won’t. Just a week before, residents were still amazed by the city’s rare blue skies, as the level of PM2.5—particulate matter less than 2.5 microns in diameter that can lodge in the lungs—had reached a record low for eight days straight since Aug. 20. The so-called “parade blue” color—perfect for photographs—was ensured by strict government controls, which included banning cars and shutting down factories. With the military parade over, Beijing ended such controls after midnight on Sept. 3 (link in Chinese). Thousands of factories and construction sites resumed operations. Cars are back on the roads, with about half of them having been

restricted based on the time of the day and whether the last numbers of license plates were odd or even (link in Chinese). So the air in Beijing is polluted again, less than 24 hours after the grand victory parade ended. By 10am today (Sept. 4) the city's Air Quality Index hit the red-alarm "unhealthy" level, according to measurements from the US embassy. Beijing residents are now sharing images of the city skies they're used to seeing, on social media platforms like Sina Weibo and messaging apps like WeChat: "The reality and the ideal," retired gymnast Li Xiaopeng wrote on Weibo this morning, posting pictures of the same bit of sky from different days: "Beijing has given its best blue skies to yesterday," one blogger commented under his post. One WeChat user in Beijing also posted images of the different sky colors, and expressed her sadness: "Yesterday it was still parade blue!" To be fair, the weather in Beijing called for rain today. But in any case, the odds of parade blue returning anytime soon seem slim.

Paris will go car-free for a day in September to combat pollution

Date: 04th September, 2015 Source: Mashable

In an effort to curb the amount of air pollution and smog in the city, Paris will go car-free for one day this month. On Sept. 27, the streets of France's capital will be closed to motor vehicles from 11 a.m. to 6 p.m, with the exception of a few main thoroughfares, which will operate with speed limits of about 20 mph. According to Forbes, "Une Journée Sans Voiture," or "A Day Without Cars," was organized by nonprofit environmental group Paris Sans Voiture, who hope to make this an annual event.

The organization presented the idea to Paris Mayor Anne Hidalgo, who accepted and announced the plan in March. "Paris will be completely transformed for a day," she wrote. "This is an opportunity for Parisians and tourists to enjoy the city without noise, pollution and therefore without stress." According to Fast Company, however, the restrictions for cars on the roads aren't too demanding — emergency vehicles and public transit vehicles can still enter designated closed roads, and taxis can enter to pick up and drop off passengers. Residents in the closed areas are also allowed to be on the residential neighborhood roads, so long as they aren't incoming visitors from outside the area. The car-free day is a part of the city-wide effort to clean up its air, and will follow the European Mobility Week that Paris will participate in to promote public transport, cycling, walking, and other means of cutting carbon emissions. In November, Paris will also host COP21, the United Nations climate change conference. In its latest efforts to cut air pollution, the city has also enforced measures to limit the number of cars on the road, by delegating two separate days for odd and even numbered license plated cars last year. Los Angeles is another big city that has made moves to clean up the air go car-free — this year, the city will host its 14th CicLAvia car-free event in a portion of Downtown LA. The events are aimed at getting cars off the road, thereby reducing smog levels, even if just for the day.

How the Paris climate deal can save lives

Date: 04th September , 2015 Source: Rappler

The Philippines is one of the most vulnerable countries to climate change, but its mitigation and adaptation plans are not ambitious.

BONN, Germany - All roads lead to Paris in December to ensure that every country will act on climate change. The Conference of Parties (COP) 21 is expected to come up with a legally binding and universal agreement on climate, with the aim of keeping global warming below 2°C.After the failure of Copenhagen

in 2009 to lock in this agreement, many are looking forward at a successful outcome in Paris. This is especially true because the last 6 years have seen many countries undergo extreme weather events, with thousands of lives lost. After 20 years of talks and little action, there is much hope that the urgency of acting on climate change has become clearer this time around. But if the conference succeeds, it will just be the beginning of a long journey in dealing with climate change. Right now, countries have their own set of commitments which can be seen through their Intended Nationally Determined Contribution (INDC). The INDC serves as their contribution in creating a climate-resilient future and ensuring global warming stays below 2°C. Setting ambitious targets- But climate is changing, and it is changing fast. Every year, typhoons get stronger, drought gets longer, and the temperature increases. This is why it is important that countries set ambitious targets, constantly be able to review it, and make new commitments every so often. This is where the concept of "5 year cycles" comes in. According to the World Research Institute (WRI), the five-year cycles are meant "for assessing and strengthening countries' actions to reduce emissions, adapt to climate change, and support low-carbon growth in a manner that is fair, equitable, and just." Included in this cycles are mitigation, adaptation, and support. "The 5 year cycles is important for the Philippines. Our INDC is just an official offer we will make and its constant review will allow us to take into consideration our Philippine Development Plan and economic growth," Joy Goco, Assistant Secretary of the Climate Change Commission and head of the Philippine delegation in the Bonn climate negotiations, said. The Philippines is one of the most vulnerable countries to climate change. And yet, our mitigation and adaptation plans are not ambitious.

Our adaptation plans, specifically, have fallen short. Our People's Survival Fund Law, passed in 2012 and which created a 1 billion peso fund for local governments' local climate change adaptation plan (LCCAP), has not been implemented. No one has accessed these funds. As a result, we have not been able to prepare for catastrophic events such as Yolanda.

Financing adaptation- In this age where "normal" is defined by typhoons going at 195 miles per hour, the next catastrophy is not a question of if but a question of when. And weak adaptation plans could mean that we will continue to face extreme weather events without strong defenses. With the 5 year cycles, each countries' adaptation plans will be reviewed based on what they have already done, what they still need to do, and what they can do better with more support, including finance, capacity building, and technology and development cycle. Jasper Inventor of Greenpeace Philippines says that the Philppines should champion means of implementation in the agreement in order to ensure resources for adaptation.

"Finance for adaptation should be in the core of interest for the Philippines," he said. Finance for adaptation has been difficult for developing countries like the Philippines. According to a study by the United Nations Environment Programme (UNEP), developing countries need around $300 billion annually by 2050 for adaptation alone.

Where will these resources come from?

"Right now, developed countries are giving us 'peanuts' for financing adaptation," Inventor said. At the Ad Hoc Working Group on the Durban Platform (ADP) on adaptation held in Bonn, the United States made a position that finance should not be included in the adaptation section of the agreement. The G77 countries, led by Bolivia, stood their ground. Bolivia reminded US why finance must be mentioned in adaptation — to ensure developed countries' support for developing countries.

Through the 5-year cycles, vulnerable countries like the Philippines can demand developed countries for support. Developed countries will have the responsibility to support developing countries in its adaptation

needs. Climate change impacts are urgent and happening fast. We need to be just as fast in adapting to it. The 5-year cycle of adaptation and finance will strengthen our adaptation efforts, preparing us for the next Yolanda (Haiyan) and other climate change impacts. It will help save the lives of thousands of Filipinos. – Rappler.com

Renee Juliene Karunungan, 25, is the advocacy director of Dakila. Dakila jas been campaigning for climate justice since 2009. She is also a climate tracker for Adopt A Negotiator.

Rain exit sends Delhi's air into the 'poor' zone a month early

Date: 04th September, 2015 Source: The Times of India

The monsoon dried up early over north India this year and Delhiites are already facing the consequences. With rains gone, the air quality in the capital started deteriorating sharply and has been in the 'poor' zone since August 28 — almost a month ahead of the normal trend. The early surge in air pollution means Delhiites will be exposed to poor air for a longer time this year as air quality usually drops steadily as winter approaches and reaches its peak around January, when cold air and fog trap pollutants, turning the national capital into a chamber of toxic gases.

Data with System of Air Quality and Weather Forecasting Research (SAFAR) under the ministry of earth sciences showed levels of fine, respirable pollution particles (PM 2.5) had started shooting up since August 26. SAFAR's data for 2013, when the monsoon was normal, showed far better air quality during the corresponding period.

The air quality index run by the Central Pollution Control Board too indicated "poor" air quality on September 2 and 3 owing to high PM 2.5 and coarse pollution particles (PM 10). A 'poor' AQI indicates breathing discomfort on prolonged exposure according to CPCB.

Delhi Pollution Control Committee's real time monitoring showed levels of PM 2.5 hovering at about 80 to 100 micrograms per cubic metres at various stations on Thursday. "In general, towards the end of September air moisture content in Delhi begins to fall. But this year, due to dry conditions and a weak monsoon, moisture content seems to be dropping in the first week of September itself. The air is becoming dry, which may be the reason for the rapid build-up of PM2.5," said Gufran Beig, project director, SAFAR.

Sources in DPCC told TOI that Anand Vihar monitoring station has already started recording very high PM 10 levels hovering around 350 to 400 micrograms per cubic metre when the standard is 100 and PM 2.5 about 80 to 90 micrograms per cubic metre while the standard is 60. In other areas there is a small but gradual increase in PM 2.5 levels. "Usually the air quality starts getting poor from October second week. I hope that the air quality will improve in September briefly," said an official.

Delhi and NCR are clearly not prepared to keep levels under check. Since last year, when Delhi's air pollution problem made global headlines, both Centre and Delhi government made a number of announcements to keep air pollution under check. Delhi government, for instance, promised to deploy 10,000 buses and impose a congestion charge on heavy diesel vehicles entering Delhi while the Centre launched an inter-state action plan.

Join TOI Green Drive on Facebook- Environmentalists say these plans haven't gained momentum. Lawyer Vardhaman Kaushik, whose petition in the National Green Tribunal against high air pollution levels in Delhi is still being heard. Any stringent move to reduce vehicular emissions such as streamlining traffic flow, crackdown on polluting trucks entering the city, discouraging private diesel vehicles and action against old or unfit diesel vehicles is being delayed as Centre and Delhi government drag feet.

The Union road transport ministry continues to argue that vehicles, including old diesel ones, were not responsible for the major share of pollution. At the same time, data submitted by Delhi government recently revealed that the city was seeing a steep rise in diesel vehicles — the transport department registered 6,748 more diesel vehicles in 2014 than in 2013. And in the first five months of this year, it had registered 34,261 diesel vehicles — which is more than 40% of the total number of registrations done in 2014.

File: Foul air killing up to 80 Delhiites a day, claims study- There's also little transparency on implementation of NGT's orders imposing Rs 5000 fine for waste burning and Rs 50,000 for flouting pollution norms during constructions. Activists say the number of challans against these violations should be put up online for public scrutiny.

NGO Centre for Science and Environment (CSE) found that even short term measures such as colour-coding pre-Euro III vehicles, launching a public campaign or heavy penalties on visibly polluting vehicles have not been implemented.

The one important thing that was implemented though was a national air quality index (AQI) that gives real time air quality status through colours and description which is easier for people to understand. Meanwhile, CSE researchers who have been mapping air quality trends in Delhi said October onwards PM 2.5 levels would start galloping if steps are not taken immediately.

Weak monsoon pushes Delhi's air quality into downward plummet

Date: 05th September , 2015 Source: Zee News

New Delhi: No rains mean more pollution and pollution is exactly what the people of Delhi are facing. Due to weak monsoons and the rains letting up early this year, the pollution quotient seems to have gone up, thus sending Delhi's air quality into the “poor” zone. Following the normal trends recorded by the System of Air Quality and Weather Forecasting Research (SAFAR), air moisture content in Delhi begins to plummet by the end of September. However, dry conditions and weak monsoons have reduced the moisture levels in the air. The early spate in air pollution means that Delhiites will now be exposed to poor air for a prolonged period this year, since air quality usually drops steadily as winter approaches and reaches its prime around the month of January, when cold air and fog trap pollutants, turning the national capital into a chamber of toxic gases. According to Times of India, data with System of Air Quality and Weather Forecasting Research (SAFAR) under the ministry of earth sciences showed that levels of fine, respirable pollution particles (PM 2.5) had started shooting up since August 26. SAFAR's data for 2013, when the monsoon was normal, showed far better air quality during the corresponding period. Times of India further mentioned that, the air quality index run by the Central Pollution Control Board too indicated "poor" air quality on September 2 and 3 owing to high PM 2.5 and coarse pollution particles (PM 10). A 'poor' AQI indicates breathing discomfort on prolonged exposure according to CPCB. Delhi Pollution Control Committee's real time monitoring showed levels of PM 2.5 hovering at about 80 to 100 micrograms per cubic metres at various stations on Thursday.

Climate change becoming a moral concern

Date: 05th September, 2015 Source: Lebanon Daily News

The notion of climate change rallies some people to activism in order to promote productive change in our society that will lessen its effects upon the world. For other people, this same notion creates strong

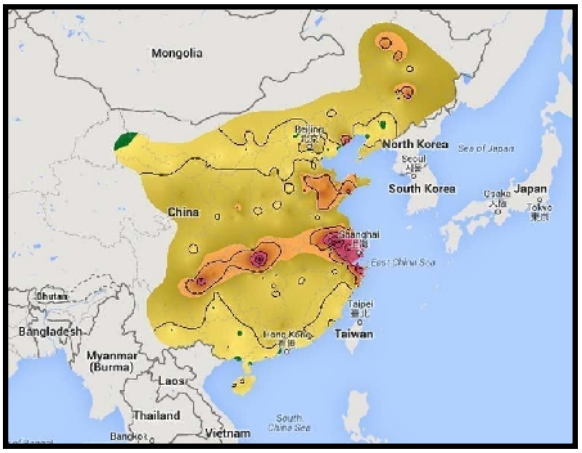
resistance. And for still other people, climate change is a concept shrouded by abstraction, something that feels remote or seems confusing. Climate change remains a hot political issue in our country with one party aiming to find palatable ways to contend with it and another party tending to deny that it exists. Churches and other religious organizations, too, tend to align themselves along these same political lines, with more liberal churches seeking to do something about it and more conservative ones generally denying that it's a problem at all.

At the same time, a newer trend sees even more conservative groups beginning to change their language, if not their stance, not so much due to the preponderance of scientific data, but because more and more, and particularly younger, Americans express their desire to see something done to curtail the risks of climate change. These groups realize that they must change their tack or else they will lose the majority of young folks who will be leaders in our society over the next generation.

Other countries are not as entrenched in oppositional politics as we are and therefore not as bogged down by partisanship. It's hard to see from one week to another what kinds of policy our government enacts to help with the situation, if in fact it does anything at all. At the same time, Germany has been engaged for years in seeking positive change and now gets over three-quarters of its energy from renewable sources.
More and more ecumenical and interfaith groups are framing climate change as a moral concern, as a matter of justice, fairness, and peace, a shift that seems poised to persuade still more people that it is something that ought to be dealt with sooner rather than later. Indeed, Sept. 1 was World Day of Prayer for the Care of Creation, something that feels like a worthy cause even without the concerns of climate change.
Because people of faith are moving from tepid followers into the bellwether ranks of concerned citizens, and because spiritual organizations are better expressing their relevance in the matter of climate change, I want to include the Pope's prayer for the care of creation, which I hope many find inspiring: "All-powerful God, you are present in the whole universe and in the smallest of your creatures. You embrace with your tenderness all that exists. Pour out upon us the power of your love, that we may protect life and beauty. Fill us with peace, that we may live as brothers and sisters, harming no one. O God of the poor, help us to rescue the abandoned and forgotten of this earth, so precious in your eyes. Bring healing to our lives, that we may protect the world and not prey on it, that we may sow beauty, not pollution and destruction. Touch the hearts of those who look only for gain at the expense of the poor and the earth. Teach us to discover the worth of each thing, to be filled with awe and contemplation, to recognize that we are profoundly united with every creature as we journey towards your infinite light. We thank you for being with us each day. Encourage us, we pray, in our struggle for justice, love and peace." Bowles is an ordained minister in the United Church of Christ and serves as pastor of Grace UCC in Lebanon.

Real-Time Map Reveals China's Deadly Air Pollution

Date: 06th September, 2015 Source: Eco watch



Using Google maps and new data on China's air pollution, Berkeley researchers created a real-time map of the country's appalling air quality. The map is based on findings that the scientists published last month in the journal PLoS One. Using hourly air pollution data from more than 1,500 sites, researchers concluded that air pollution is responsible for the deaths of an estimated 1.6 million people in China every year, or about 4,400 people a day. That's roughly 17 percent of all deaths, or put another way, nearly 1 in 5 deaths can be attributed to the country's toxic air pollution. "Earlier studies put China's

annual air pollution death toll at one to two million, but this is the first to use newly released Chinese air monitoring figures," says South China Morning Post. The authors of the study are members of Berkeley Earth, an independent nonprofit devoted to "expanding scientific investigations, educating and communicating about climate change, and evaluating mitigation efforts in developing and developed economies."

Though pollution in China's northeast corridor running from Beijing to Shanghai is "particularly intense," the problem is widespread. "Consistent with prior findings, the greatest pollution occurs in the east, but significant levels are widespread across northern and central China and are not limited to major cities or geologic basins," said researchers. They found that during a four month period from April to August 2014, 92 percent of the population experienced more than 120 hours of "unhealthy air" based on the standards of the U.S. Environmental Protection Agency. And 38 percent experienced long-term average concentrations that were unhealthy.

"[The] map provides near real-time information on particulate matter air pollution less than 2.5 microns in diameter (PM2.5)," researchers said. PM2.5 is microscopic particulate matter that is small enough to "lodge deep inside a person's lungs and cause health problems in the long term," says South China Morning Post. "Under typical conditions, PM2.5 is the most damaging form of air pollution likely to be present, contributing to heart disease, stroke, lung cancer, respiratory infections and other diseases," say the researchers. Today, the map shows the areas around Shanghai, Suzhou, Hangzhou, Nantong, Nanjing, Yichang, Luzhou, Qíngdao and Laiwu as having "unhealthy" air quality. Large portions of the map fall under the category of "unhealthy for sensitive groups" and the vast majority of the mapped area falls under the "moderate" health category. Only a very few small areas fall under the category of "good." The most unsafe air quality index (180.9) can be found near the city of Yichang, a major economic hub for the region. Its PM2.5 air pollution concentration is 113.4.

To put China's air pollution problem in perspective, look at Madera, California. The American Lung Association lists Madera's air pollution as the worst in the country. And yet, "99.9 percent of the eastern half of China has a higher annual average for small particle haze than Madera," said the study's lead author, Dr Robert Rohde. "In other words, nearly everyone in China experiences air that is worse for particulates than the worst air in the U.S." Earlier this year, a documentary exposing China's abysmal air quality went viral within days of its release. The film was hailed by some government officials, but was ultimately banned by the state.

"Safe" Levels Of Air Pollution Still Associated With Increased Risk Of Severe Heart Attacks, Research Finds

Date: 06th September, 2015 Source: Clean Technica

Here's yet another reminder of why we are so interested in seeing the EV revolution advance. Even "safe" levels of particulate and nitric dioxide (NO2) air pollution are associated with a notably increased risk of severe heart attacks, according to new research presented by Dr Jean-Francois Argacha of UZ Brussel-Vrije Universiteit Brussel in Belgium. The "safe levels" in question are actually well below the recommended limits in Europe currently — which means that a great many people on that continent are probably exposed to such levels (at least occasionally). The new findings are the result of researchers investigating the effect of short-term exposure to common levels of air pollution on the risk of ST-segment elevation myocardial infarction (STEMI) — which is, for some background here, a particularly dangerous type of heart attack triggered by prolonged blockage of blood supply within the heart. Of all heart attack types, this one features largely the worst prognosis.

Most common air pollution is a mix of particulate matter and pollutant gases (sulfur dioxide, nitric dioxide, and ozone). Particularly small particulate air pollution (PM2.5) has the ability to be absorbed deeply into the lower respiratory tract — it's a common product of fossil fuel combustion.

Green Car Congress provides more information on the methodology used:
- Data on PM10, PM2.5, O3 and NO2 levels were obtained from Belgian Environmental Agency air pollution records. A statistical model called RIO was used to provide a real-time evaluation of air pollution exposure in each part of Belgium with adjustments for population density.
- Data on STEMI incidence came from the Belgian Interdisciplinary Working Group on Acute Cardiology (BIWAC) STEMI registry, using STEMI hospitalisation as a proxy indicator. The relationship between pollutants and STEMI was assessed using a case-crossover design and performed by the biostatistics department of Université Libre de Bruxelles (ULB), Brussels, Belgium.
- Between 2009 and 2013, there were 11,428 hospitalisations for STEMI. The researchers found that 10 μg/m3 increases in ambient PM2.5 concentrations were associated with a 2.8% increase in STEMI while 10 μg/m3 rises in NO2were associated with a 5.1% increased risk. These associations were only observed in men.

Dr Argacha commented: "The association between STEMI and air pollution was observed within one day of exposure. This was despite the fact that concentrations of air pollutants were within the European air quality standard. It's possible that only men were affected because of the under representation of women in our study population (less than 25%). Nevertheless, previous studies have demonstrated that blood pressure, arterial stiffness and heart rate variability abnormalities secondary to air pollution exposure are more pronounced in men. Sex differences in obesity and blood inflammation may worsen air pollutant effects but this hypothesis requires further investigation." Further analysis showed that those over the age of 75 were particularly affected by PM10 exposure, while those under the age of 54 were more affected by NO2 exposure, interestingly.

"Considering that NO2 is more related to vehicle emissions, one explanation for this finding could be that the younger population may be exposed to excess NO2 from road traffic due to a higher level of social and professional activities. This is the first study to examine the effect of air pollution on STEMI occurrence at a national level using a prospective observational registry of unselected patients. We found that particulate and NO2 air pollution, at levels below European limits, are associated with an increased risk of STEMI. The detrimental impact of NO2 exceeds that of fine particles and raises new public health concerns." Interesting work, though not reassuring to those of us that are exposed to levels of air pollution such as this regularly (which is the vast majority of us reading this, I'm guessing). Yet another quill in the bonnet for electric vehicles. Here's to hoping that the next generation of EVs released see large enough sales to displace gas-powered car use to a significant degree. Though, I'd guess that diesel trucks are really more the issue in this case than cars.

European Citizens Using Smartphones To Measure Air Pollution

Date: 06th September, 2015 Source: HMGN

European citizens have the opportunity to be citizen scientists if they participate in the iSPEX project that targets to monitor air pollution using smartphones.Citizens in major European cities are being requested to get out on the streets to help scientists measure air pollution using their smartphones. The iSPEX-project started on Tuesday and will last until Oct. 15. Participating cities include Athens, Barcelona, Belgrade, Berlin, Copenhagen, London, Manchester, Milan and Rome.

The International Year of Light, a worldwide celebration of light and light-based technologies, is also behind this project on air pollution awareness. It plans to raise awareness and let people become involved in the research process through a mobile phone application that can record the level of atmospheric aerosols in an area. "The point of the project is to measure the concentration of very fine particles in the atmosphere and these can be from natural sources, things like forest fires or volcanic eruptions, through to manmade factors like burning diesel," said Toby Shannon, the UK national coordinator of the International Year of Light, according to The Guardian. An iSPEX sensor is distributed to individuals who wish to participate. This device can be attached to smartphones, turning them into optical sensors. It works by combining the "spectropolarimeters" of the iSPEX sensor with a phone's camera sensor. As a result, it can measure and compute the amount of tiny particles found in the atmosphere.

Through this project, crowd-sourcing measurements can be made on a greater scale, as it has the capacity to reach areas that are currently not covered by air pollution monitoring. It also makes atmospheric science accessible to everyone, by active participation in scientific measurements, Science Daily reported. The iSpex sensors can be requested by email from coordinators within participating cities. You can check out the official website of the project for details.

India launching campaign to publicise measures to fight climate change

Date: 07th September, 2015 Source: The Economic Time

NEW DELHI: The government is launching an aggressive outreach campaign in the country and abroad to publicise all the measures India is taking to reduce carbon dioxide pollution and slow down the global rate of temperature rise, shedding its traditional defensive approach. The outreach campaign will kick off on Monday and continue all the way till the Paris climate summit in December, officials said.

"India is taking many measures to deal with climate change, and specifically mitigation. The government has formulated a plan to inform people about all the efforts that are being made," a senior official told ET. Experts say the move will help India counter the impression that it is not aggressive or ambitious enough when it comes to dealing with climate change.

"There is a need to put out in the public domain all the efforts that India is making to address climate change. Often the impression is that we are not doing much, and this feeds into the India's image of being a naysayer. The government is addressing that through a well thought-out synchronised plan," an official close to the development said. The plan and programme were finalised late last week at a meeting held by the principal secretary to the prime minister and attended by senior officials of each of the ministries. This would be the first time that the government would undertake a planned and coordinated publicity of its efforts. Unlike in the past, the outreach on climate change action will not be done solely by the environment ministry.

Each week starting Monday, one of the ministries involved in the National Climate Action Plan, including the ministries of power, renewable energy, environment, agriculture, earth sciences, water resources, rural development and health, will do a slew of outreach activities to inform people about the policies and measures that have been taken to address climate change, particularly actions to reduce carbon dioxide pollution. The first off the block will be the power ministry on Monday. The following week it will be the turn of the ministry of new and renewable energy.

Given the Narendra Modi government's focus on implementation, the ministries have been asked to provide information on the impact that different climate actions have had, a senior official said. The domestic outreach will be in the form of advertisements in the print and broadcast, and focused interactions to disseminate information.

For international outreach, the plan is to have focused interaction of top officials and ministers with key media outlets. The government also plans to have a slew of well-placed op-eds written by experts. Among the measures India has taken to address climate change is an ambitious renewable energy capacity addition programme that targets adding 175 gigawatts of solar and wind capacities, a cess on coal that has been increased from Rs 50 per tonne to Rs 200 per tonne, an aggressive energy efficiency programme, and setting up of a National Adaptation Fund and a National Clean Energy Fund. The Modi government has been less defensive about the efforts that the country has been making to address climate change.

EPA to add new rule on power plant discharges

Date: 07th September , 2015 Source: The Charlotte Observer

After decades of inaction, the federal government in September will release its second major rule affecting coal ash from power plants in less than a year. Last December, the Environmental Protection Agency released the first federal rules on ash disposal. This month, the agency will set the first federal limits on toxic metals – mostly from ash – in wastewater discharges from power plants.

The rule is significant, but its reach will be limited. Most utilities, including Duke Energy, are moving to dry-handling of ash that avoids discharges. Ponds that store ash in wet form and drain to rivers and lakes are being phased out in North Carolina.The hazards of ash leaped to public attention early last year with Duke's spill into the Dan River. Many metals in ash, such as arsenic and mercury, accumulate in the environment for years once released.

Mercury can lower IQs of children exposed to it in fish. Arsenic can increase cancer risks. Selenium from a Duke power plant in Stokes County wiped out most of a local lake's fish species in the 1970s. Arsenic has been detected at the bottom of Charlotte's main water source, Mountain Island Lake. "The last thing we need is to continue to put toxins in water," Catawba Riverkeeper Sam Perkins said. The nation's 1,100 coal-fired power plants dump 5.5 billion pounds of wastewater into lakes and rivers each year – half of the toxic pollutants discharged by all industries. EPA is considering a range of options that would cut those releases by up to 2.6 billion pounds.

Duke says much of its work to comply with the ash disposal rule will help meet wastewater standards. Moving to dry-ash handling answers many of the requirements of the disposal rule, the company says. Most of Duke's coal units already have or are converting to dry-handling of lightweight fly ash. North Carolina's Coal Ash Management Act requires all units to handle the heavier bottom ash in dry form, or retire, by 019.

North Carolina's coal ash law in some ways exceeds the federal rules, said staff attorney Pete Harrison of the Waterkeeper Alliance. But he said neither addresses ash ponds that are no longer in use, which environmental advocates say pose risks to groundwater.

"That's a huge blind space in that regulation," Harrison said. "No matter what option they end up going with, none will address the legacy ponds." North Carolina's ash law applies to drained ponds and those covered by soil. And some inactive ponds are among the 20 in North Carolina that Duke has either been ordered or will
voluntarily excavate.
The state Department of Environment and Natural Resources proposed new discharge permits for three Charlotte-area Duke plants – the retired Riverbend on Mountain Island Lake, Marshall on Lake Norman and Allen on Lake Wylie – in March. The EPA rule isn't proposed to go into effect until 2017. In addition to coal ash, the rule will cover power plant scrubbers that capture sulfur dioxide air emissions but release wastewater high in metals.

Duke this year set up a claims process for drinking water treatment systems harmed by bromide, which is released by its scrubbers, and has paid about $3.1 million to two cities. Bromide in water supplies can react with chlorine, which treatment systems use to disinfect drinking water, to form toxic trihalomethanes in drinking water. The Marshall power plant – but not its scrubbers – is a suspect in the trihalomethanes found in Charlotte's tap water last month. The chemicals likely came from calcium bromide, which Duke used to wash coal. The washing, which was halted, helped reduce releases of mercury into the air when the coal was burned. Duke expects the upcoming wastewater rule to require special treatment systems for power plants with scrubbers.

Climate deal: India seeks debate on 'lifestyles' at Paris meet

Date: 08th September, 2015 Source: The Econonics Time

NEW DELHI: India on Monday appealed to countries across the globe to include a debate on "lifestyles" while arriving at a climate deal when they assemble in Paris later this year. This followed Prime Minister Narendra Modi's speech last week when he sought to change the discourse on the issue from "climate change to climate justice".India also hit out at rich nations for their extravagant consumption and asked them to seriously look at the needs of developing and poor countries which have a right to emerge out of poverty.
New Delhi's statement is a clear indication that India is more keen to keep the focus on 'adaptation' (sustainable practices) to deal with the climate change as against the developed countries' formulation of 'mitigation' (emission cuts) to save the world from disastrous consequences of global warming. India's stand was articulated by the country's environment minister Prakash Javadekar while making his intervention during a meeting on climate change negotiations in Paris on Monday. He said, "Lifestyle adopted in developed countries is unsustainable" and it will require five earths to fulfill their lifestyle demands. On the other hand, Indian lifestyle is sustainable where one earth is sufficient.

"This is not because of poverty, but because of Indian value systems. We believe in need-based consumption and our lifestyle is against extravagant consumption. We have ingrained sense of responsibility where wasteful consumption is abhorred".

Javadekar quoted the latest 'Earth Overshoot Report' to substantiate his points. The report is brought every year by the Global Footprint Network (GFN) - an international sustainability think tank - which presents objective analysis on 'ecological footprint', mapping consumption and requirement of natural resources to sustain it. "The latest 'Earth Overshoot Report' is an eye-opener", said the minister while emphasizing that the "world must debate seriously the sustainable lifestyle issue, as only sustainable lifestyle can mitigate the challenge of climate change".

Hitting out at rich nations, he said, "Greed and unsustainable lifestyle should have no place in a new world regime to fight climate change and its ill-effects".His remarks came just four days after Prime Minister Modi emphasized that poor and downtrodden are "most adversely" affected by climate change. "The issue is not merely about climate change. It is about climate justice. Again I repeat (it) is not the issue of climate change, it is about climate justice," Modi had said last Thursday while speaking here at 'Samvad-Global Hindu Buddhist Initiative on Conflict Avoidance and Environment Consciousness'. Making his intervention during the meeting in Paris, Javadekar also noted that India and other developing countries have priority of eradicating poverty.

"They (developing countries) cannot be asked to compromise on that goal in the name of Climate Change. Every poor of the World has the right to emerge out of poverty, and poor and developing countries need sufficient carbon space to ensure sustainable development. As climate change impacts the poorer and vulnerable sections severely, we must ensure climate justice", he said. Javadekar visited Paris for "informal" round of meeting ahead of the crucial climate conference (COP21) in the French capital from November 30 to December 11. It is expected that the countries will arrive at a climate deal in Paris in December which may guide the countries' post-2020 action to fight climate change by taking specific actions.

Climate-smart cities could save the world $22tn, say economists

Date: 08th September, 2015 Source: The Guardian

Green buildings and better infrastructure would not only spur economic growth but also cut carbon emissions equal to India's annual outputPutting cities on a course of smart growth – with expanded public transit, energy-saving buildings, and better waste management - could save as much as $22tn and avoid the equivalent in carbon pollution of India's entire annual output of greenhouse gasses, according to leading economists.

The Global Commission on Economy and Climate, an independent initiative by former finance ministers and leading research institutions from Britain and six other countries, found climate-smart cities would spur economic growth and a better quality of life – at the same time as cutting carbon pollution. If national governments back those efforts, the savings on transport, buildings, and waste disposal could reach up to $22tn (£14tn) by 2050, the researchers found. By 2030, those efforts would avoid the equivalent of 3.7 gigatonnes a year – more than India's current greenhouse gas emissions, the report found. The finding upends the notion that it is too expensive to do anything about climate change – or that such efforts would make little real difference. Not true, said the researchers. "There is now increasing evidence that emissions can decrease while economies continue to grow," said Seth Schultz, a researcher for the C40 Cities Climate Leadership Group who consulted on the report.

"Becoming more sustainable and putting the world – specifically cities – on a low carbon trajectory is actually feasible and good economics." The report called on the world's leading cities to commit to low carbon development strategies by 2020. The findings, were released as the United Nations and environmental groups try to spur greater action on climate change ahead of critical negotiations in Paris at the end of the year. The Paris meeting is seen as a linchpin of efforts to hold warming to 2C by moving the global economy away from fossil fuels to cleaner sources of energy. The UN concedes the climate commitments to date fall far short of the 2C goal. But the strategies outlined in the report – some of which are being put into place already – would on their own make up about 20% of that gap, said Amanda Eichel of Bloomberg Philanthropies who also consulted on the report.

Two-thirds of the world's population will live in urban areas by 2050, with Africa's urban population growing at twice the rate of the rest of the world. The right choices now, in terms of long-term planning for

urban development and transport, could improve people's lives and fight climate change, the report found. Investing in public transport would make the biggest immediate difference, the report found. Air pollution is already choking the sprawling cities of India and China. Traffic jams and accidents are taking a toll on the local economy in cities from Cairo to Sao Paulo. But building bus lanes, such as those rolling out in Buenos Aires, could cut commuting time by up to 50%, the report said. Green building standards could cut electricity use, reduce heat island effects, and reduce demand for water. In waste management, biogas from waste could be harnessed as fuel to provide electricity to communities, as was already being done by Lagos in Nigeria and other cities.

Kodela calls for global efforts to tackle climate change

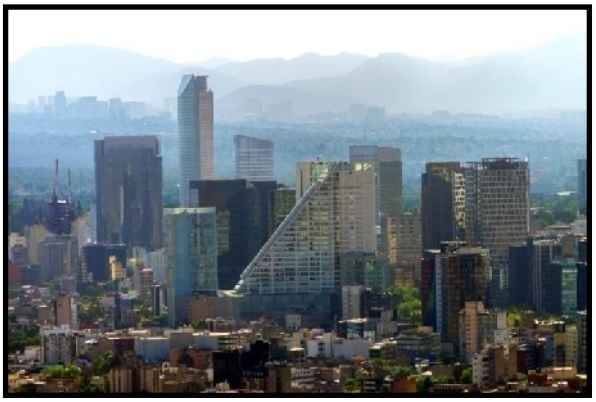
Date: 08th September, 2015 Source: The Hindu

Assembly Speaker Kodela Siva Prasada Rao on Monday urged the United Kingdom's Department of Energy and Climate Change and Carbon Trust, a-not-for-dividend company, to take note of the challenges of climate change on the Indian coast, particularly in Andhra Pradesh and augment the efforts of the Central and State governments to promote infrastructure to face them. Addressing a round-table meet on climate change at London, he said climate change was no longer an abstract concept confined to high-end journals, scientific conferences and seminars. It was no longer the domain of scientists and researchers and its impact was felt all over the world in the past few decades. If anything, over few decades, the changes were characterised by extreme weather events, land turning into desert, of species going into decline, among others, he said.

"In this environment, we all have to pool technologies, talents and resources to work out systems to save the world from perils of climate change," he said. Dr. Siva Prasada Rao said India was in the forefront of global efforts to tackle climate change and had already inked several agreements globally. India had a long coastline of more than 7,500 km and the impact of climate at the coast occurred at long-term scales.

Cities Could Save $17 Trillion Just By Reducing Their Greenhouse Gas Emissions

Date: 08th September, 2015 Source: Climate Progress



Making cities greener could save a lot of, well, green, according to a new report.The report, published Tuesday by the New Climate Economy, found that if cities around the world implemented certain carbon-reducing strategies — including making buildings more efficient and investing in public transportation — they could save a combined total of $17 trillion by 2050.

The report looked at actions such as "aggressively" deploying high-efficiency lighting, "ambitiously" installing solar on buildings, increasing the fraction of methane captured from landfills, and expanding public transit. It found that, if all of the measures were implemented, cities would reduce their combined greenhouse gas emissions by 3.7 metric gigatons of carbon dioxide equivalent by 2030. That's more, the report notes, than the annual emissions of India.

Nick Godfrey, head of policy and urban development at the New Climate Economy, said in a statement that the amount of money saved by cities could be even higher. "US$17 trillion in savings is actually a very conservative estimate, because it only looks at direct energy savings generated from investment,

which are a small proportion of the wider social, economic, and environmental benefits of these investments," he said. The report recommends that cities make commitments to undertake these carbon-saving initiatives by 2020. On the national level, countries should implement support structures that incentivize city-wide efforts to reduce emissions. And on the international level, at least $500 million should be made available for cities to expand existing efforts to tackle climate change. The international community will be key in helping cities in developing nations find the capital they need to make these changes –investing in improving the creditworthiness of these countries, for instance, can help them raise needed funds. That tactic has worked with cities in Uganda and Peru, the report points out. "There is now increasing evidence that emissions can decrease while economies continue to grow," Seth Schultz, a researcher for the C40 Cities Climate Leadership Group, a group of major cities committed to fighting climate change, told the Guardian. "Becoming more sustainable and putting the world — specifically cities — on a low carbon trajectory is actually feasible and good economics."

Cities' roles in fighting climate change have been showcased in recent years. In July, mayors from around the world met at the Vatican to discuss climate change. Last year, a report from the C40 Cities Climate Leadership Group found that, on their own, cities had the potential to cut 8 billion tons of greenhouse gas emissions by 2050. In August, former New York City Mayor Michael Bloomberg wrote in Foreign Policy that cities are "key" to fighting climate change.

"Many of the most important new initiatives of this century — from the smoking ban adopted in New York City to the bus rapid transit system pioneered in Bogotá — have emerged from cities," Bloomberg wrote. "Mayors are turning their city halls into policy labs, conducting experiments on a grand scale and implementing large-scale ideas to address problems, such as climate change, that often divide and paralyze national governments." Cities around the world have suffered severely from climate change and pollution, so it makes sense that some of them are starting to find new ways to tackle climate change. Dry weather and major air pollution has made Santiago, Chile home to some of the worst air in the world. Beijing, China also regularly suffers from dangerous air pollution. Superstorm Sandy hit New York City hard, but the city has implemented a plan to prepare itself for future storms.

Lawsuit says new L.A. streets plan creates more air pollution, not less

Date: 09th September, 2015 Source: Los Angeles Time

A westside-based nonprofit group went to court Wednesday to overturn Los Angeles' sweeping new 20-year transportation plan, saying officials failed to properly examine its effects on public safety, air pollution and other aspects of city life. In its lawsuit, the advocacy group Fix the City said Mobility Plan 2035, which calls for the addition of hundreds of miles of new bus- and bike-only lanes, will lead to increased tailpipe emissions as drivers confront fewer car lanes and greater traffic congestion. The plan, approved by the City Council last month, puts a major emphasis on safety, calling for key streets to be redesigned in ways that rein in traffic speeds. Fix the City contends that public safety would in fact be threatened, with emergency responders struggling to make their way through traffic. "People don't really know about this plan, and they're going to learn the hard way when it comes to their neighborhood," said Laura Lake, an activist who serves on the group's board. The plan's projects will bring "a huge sacrifice in air quality, a huge sacrifice in first-responder times, in lost time from work, lost time from family." Lake said the council should put the plan up for a public vote, saying it would easily be defeated. Councilman Mike Bonin, a supporter of the plan, said the lawsuit simply acknowledges that Angelenos are "desperate to get out of mind-numbing traffic."

“The best way to do that,” he said in a statement, “is by providing people a range of transportation choices so they are not forced into using an automobile on gridlocked streets.” Wednesday's lawsuit is only the latest in a series of legal challenges to the city's high-profile planning decisions. In 2013, Fix the City was part of a coalition that succeeded in striking down the Hollywood Community Plan, which sought to allow taller, denser residential towers near transit stops. New environmental documents are being prepared on that plan. In April, a judge overturned the city's approval of the Millennium Project, a pair of skyscrapers planned in Hollywood, saying traffic circulation had not been properly examined. And on Wednesday, a three-judge panel upheld a decision invalidating permits for the 299-unit Sunset and Gordon apartment tower, also in Hollywood.

That ruling raises the prospect that the building's tenants would be forced out, at least temporarily, as developer CIM Group seeks new permits. A CIM Group executive said he had not yet reviewed the decision. Rob Wilcox, spokesman for City Atty. Mike Feuer, said CIM Group could still pursue a review of the ruling or an appeal to the state Supreme Court. He had no comment on the mobility plan lawsuit, saying the city had not yet been served. Backers of the mobility plan say L.A. lacks the space and money to continue widening streets or adding freeways. The plan's projects are expected to increase walking by 38%, transit use by 56% and bicycling by 170%, if completed by 2035.

The mobility plan is the first major overhaul of the city's transportation policies since 1999. It calls for an additional 300 miles of protected bike lanes, the kind separated from traffic by curbs or other physical barriers, and 117 miles of bus-only lanes. An additional 120 miles of bus lanes would be created for rush-hour-only use. Some corridors, including Sunset, Venice and Lankershim boulevards, would receive both bus-only lanes and protected bike lanes — an arrangement that could reduce space for cars. In its lawsuit, Fix the City contends that the city relied on outdated data on population, traffic and municipal services when analyzing the mobility plan. The group also questioned a key finding of the plan's environmental review: that greenhouse gas emissions would decrease as Angelenos get out of their cars and turn to other forms of travel: walking, bicycling and public transit.

“This conclusion is not backed by any rational or meaningful analysis,” the lawsuit states. Because drivers will be stuck in traffic for longer periods of time, “increased idling time will increase fuel consumption and generate more greenhouse gases and air pollution.” Naomi Iwasaki, a supporter of the mobility plan, said Fix the City's lawsuit wrongly assumes that a significant number of Angelenos won't switch to other forms of travel once L.A.'s streets are restriped. “Obviously, people in Los Angeles are tired of staying in their cars,” said Iwasaki, a policy analyst with the nonprofit Community Health Councils. The city's environmental impact report said the plan's projects would double the percentage of major streets that are heavily congested during the evening rush hour. Nearly 36% of major street segments would be heavily congested in 2035, up from 18% currently, the report said. The same analysis found that if the mobility plan were not approved, the number would reach only 22% in 2035. Backers of the plan, including council members, say those numbers were based on overly conservative assumptions. They also say the plan's various projects are needed to help L.A. achieve its goal of reducing the number of vehicle fatalities to zero by 2035.

Citizen science project to measure air pollution

Date: 09th September, 2015 Source: Manchester

One of the biggest ever citizen science projects needs volunteers from Manchester to help measure air pollution in our environment. And all you need to take part is a smart phone. The aim of the iSPEX-EU project is to get a clearer picture of our atmosphere and the level of air pollution we are breathing in every day. Nearly 10,000 people across Europe will be taking part, from cities including Athens, Barcelona

Belgrade, Berlin, Copenhagen, London, Milan and Rome as well as Manchester. The results will be used to map out just how dirty our air is and hopefully track how pollution spreads through the continent. Such air pollution and the impact it has on our health and the environment is still poorly understood and it is not clear what impact such pollution will have on climate change. By adding a simple piece of equipment to their phone and taking just a couple of minutes out of their day, volunteers can turn their phones into optical sensors which take measurements and upload them automatically for the researchers to study. The add-on equipment is called a 'spectropolarimeter', and it is powerful enough to measure tiny particles in the air. It works with iPhone 4, 4S, 5 or 5S models. All volunteers have to do is scan the cloud free sky during daylight hours, while the phone's camera takes pictures through the spectropolarimeter.

The particles in the atmosphere the equipment will track includes things of natural origin, such as sea salt or tiny ash particles from forest fires or volcanic eruptions, as well as man-made soot and haze produced by traffic and industry. The Dutch group at Leiden Observatory that is leading the ISPEX-EU project, trialled a similar project in the Netherlands two years ago and proved to be extremely successful. Carl Percival, Professor of Atmospheric Chemistry at The University of Manchester, said: "This is a really exciting project to be a part of, both for the way we are going about doing it and for the results it could produce. This is a project that means anyone with the right phone can take part in a real life science experiment, that will produce real data and help us know more about our environment. "We need so many people to get a clear picture of what is going on in our atmosphere. At the moment we have pollution monitoring stations here and there but there just isn't enough coverage to let us now in lots of details what is going on with our air quality."

And Dr Hugo Ricketts, who is leading the project in Manchester said: "This is a very large scale project and we hope it is going to provide us with lots of data. If enough people take part then we should be able to track how air pollution moves through the city. We need as many people from all over Manchester from Rochdale down to Stockport and out to Wigan to take part." Dr David Topping, also of The University of Manchester, said: 'This is one of a growing number of examples where traditional methods are being replaced with new approaches to tackle global problems. Manchester has a fantastic burgeoning technology community and it's a perfect place to run such a project. I fully expect we will see many more such projects in the near future." The team at Manchester need up to 700 people to take part from across the city. If you are interested in taking part of just want more information, visit the website at www.ispex-eu.org and www.europe.light2015.org

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Paddington station air pollution worse than roads outside

Date: 09th September, 2015 Source: E & T

Air pollution from trains at London's Paddington Station is worse than nearby major roads and exceeds EU Recommendations for outdoor air quality, a study has shown. Levels of particulates, nitrogen dioxide and sulphur dioxide - all of which have been implicated in health problems, including lung disease, heart conditions and premature death - were higher than roadside conditions at nearby Marylebone Road and North Kensington, the report in the journal Environmental Research Letters showed. While guidelines are

in place to control 'outdoor' air quality, UK rail stations are not required to comply with air quality standards and emissions from diesel trains quickly accumulate in a semi-enclosed railway station like Paddington.

"We looked at several measures of air quality," said Adam Boies, lead author on the paper. "And we've shown that there are a number of times where the nitrogen dioxide concentrations exceed the EU hourly mean limits for outdoor air quality."

Measurements were made at five locations around Paddington Station, covering two platforms, the main cooking area, a main exit and the roadside. "It was a shame we could not do longer-term measurements," said Boies. "But we were limited partly by the sensors available and partly by the time constraints on the station security. These would have allowed us a more direct comparison to the roadside limits." According to Boies, many older trains do not have a diesel particulate filter installed, which could be fitted cheaply to greatly reduce emissions. The issue is also likely to become less pressing as the Great Western Main Line, one of the major lines feeding into Paddington station, is electrified. "Obviously, replacing these diesel trains with electric trains will also remove the emissions," said Boies. "The majority of the locomotives in use at Paddington were 'grandfathered' (made exempt from the regulations for modern diesel locomotives). Newer diesel locomotives also have much lower emissions." Patrick Hallgate, Network Rail's managing director for the Western route, said: "Our Great Western Electrification Programme will bring Brunel's railway into the 21st century, by electrifying the main line that runs from London Paddington to Swansea in preparation for the arrival of a new fleet of electric trains. "These trains will not only provide passengers with faster journeys, more seats and a more comfortable travelling experience, but they are also quieter and greener, significantly reducing noise and air pollution for passengers and our thousands of line-side neighbours."

Electric vehicles will not improve Hong Kong's air pollution problems

Date: 09th September, 2015 Source: South China Morning Post

I refer to the letter by Sammi Lo ("More electric vehicles can help air quality", August 28). I do not think having more of these vehicle will reduce levels of air pollution. I think they will make things worse. If we are going to genuinely tackle air pollution, we have to take a holistic approach. Having a lot more electric vehicles will shift the greenhouse gas emission problem from cars to power stations as there will be an increased demand for the electricity they generate. Of course, these vehicle will not have any harmful emissions such as carbon monoxide and sulphur dioxide. But your correspondent seems to forget that they need to be charged. And, so a lot more electricity is needed, meaning more emissions from power plants burning fossil fuels. Also, we have to look at other chief sources of pollution, including waste disposal. As people become more affluent, they throw out things that in the past they would try to use again. Our grandparents would try to waste as little as possible.

To deal with this waste, governments build incinerators, which bring toxic emissions that add to our bad air. Yet the Hong Kong government plans to build one. Depending on the wind direction, we also have to deal with pollution from the mainland. That is why we have to take a holistic approach if we want cleaner air.
I agree with your correspondent's suggestion to raise the taxes on petrol and diesel by at least two cents a litre. This would increase running costs for motorists and might deter people from buying a private car in the first place. Another way to put them off is to raise first registration tax on motor vehicles. With higher taxes, private cars would become luxury items. If they face the high running costs that motorists have to pay, for example, in Singapore for private vehicles, they will stick to the MTR, buses and minibuses. When it comes

to reducing the volumes of waste we generate, education is the key. The government should teach citizens to reduce waste at source.

Green groups could hold talks explaining how, for example, a household appliance can often be repaired rather than thrown away. If these ideas can be taught in the classroom, our next generation can grow up to be more eco-friendly and try to reduce waste at source. The government must also have a city-wide cycling network, including along the coast. The present tracks at Tolo Harbour can be extended, for example. Tang Ho-chun, Ma On Shan

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Fires in West Have Residents Gasping on the Soot Left Behind

Date: 09th September, 2015 Source: The New York Times

FRESNO, Calif. — The air in the San Joaquin Valley hangs thick with gray-brown dust, a result of the state's largest fire, which has burned through more than 160 square miles in the nearby hills.

The fire has so far spared lives and homes. But it has exposed one of the obscured effects that four years of record drought has unleashed here: dangerous drops in air quality that exacerbate public health problems in this region and threaten to choke the quality of life. "With the fire, even with my inhaler, I'm still wheezing," Antoinette Wyer, 48, an asthmatic who has lived her whole life here, said at a health clinic on Wednesday. She has kept her 3-year-old grandson inside this week, while a 4-year-old grandson has stayed home from school. The dreadful conditions here — with temperatures soaring over 100 degrees, dry brush everywhere and a miasma of bad air — seem likely to become more common throughout the Western States, where the fire season is shaping up as a record one. This summer, residents of Denver grappled with air pollution that had wafted down from wildfires in Canada; throughout the West, a big blaze in one place can be felt many miles away. In Fresno County, elementary schoolchildren have been kept inside during recess this week because of the soot in the air that blots out the sun, and the Clovis school district may cancel a football tournament this Saturday for the same reason. Public health officials are warning people with heart and lung problems to stay inside. And asthma clinics around Fresno are overflowing with new patients. Normally, particulate matter levels in the air spike in the winter but drop during the summer, said Seyed Sadredin, the executive director of the San Joaquin Valley Air Pollution Control District. But since the drought began, the volume of particles in the air has been spiking year-round, for a variety of reasons: Rain does not clear the air; dust from dry, fallow fields and from farmers digging wells kicks up more easily; and the longer wildfire season means more smoke in the air more often. The San Joaquin Valley lies at the center of the state, surrounded by mountain ranges on the east and the west, receiving little coastal air. The air and soot are effectively trapped in a geographic bowl for much of the summer, and the lack of wind and rain has made it impossible for things to clear out. Mr. Sadredin said that if the drought continued much longer, it would threaten much of the progress the region has made to lower air pollution levels."We have the toughest air regulations in the nation, but we have no control over the geography and the climate," he said. "The Valley is basically a bowl with a lid on top for most of the year." Dr. Vipul Jain, a pulmonologist who runs a chronic lung disease program in Fresno, said the effect of the drought and fires was likely to get worse this week, with temperatures expected to soar to 106 degrees. He said that hospitals could have as many as double the number of patients for acute lung problems in the coming days and weeks. "It's kind of a worst-nightmare situation," said Dr. Jain, an associate professor at the University of California, San Francisco. "And the worst is still yet to come. We can see it, but anyone with a lung problem, they feel it, and there is no way to prevent an

exacerbation of their problems. People have to go outside and work, and they will suffer." For years, California has had the most polluted air in the country, with cities here dominating national lists of the dirtiest urban areas. And the Central Valley has had the worst air in the state for decades: More than 20 percent of all children in the Central Valley have asthma, according to the American Lung Association. Many counties throughout the state and the San Joaquin Valley have successfully reduced the amount of ozone in the air. But levels of soot, or particle pollution known as PM-2.5, have started to increase after years of decline, according to state figures. Officials are blaming the drought. At local asthma clinics, doctors have had an explosion in business since the drought began. Dr. Malik N. Baz said his asthma and allergy practice had grown at least 20 percent each of the past three years, and he has opened five new clinics around the Valley in the past two years — all of them overflowing with patients.

"Our only limitation right now is that there aren't enough parking spots because there are so many people coming in," Dr. Baz said, adding that he could open more clinics if he could find more doctors willing to move here. "Right now, pollution is so high, I even started coughing when I went to Starbucks to get coffee — and I don't have asthma."

As the drought has dragged on, the soot has left the Sierra Nevada covered for weeks at a time. Dust clouds dot the rural roads here, and there is often a stripe of gray haze at sunset. Residents routinely avoid the outdoors in the summer or when they see (or, worse, feel) the film in the air. Sometimes, the air has been so thickly clouded with pollution that it is difficult to see across the California State University football stadium here.

Increasingly this summer, even healthy adults have grown wary of spending time outside. On Wednesday, with soot from what has been called the Rough Fire still blowing into town, some traded morbid jokes, comparing living here to smoking and wondering how many years they were taking off their lives.

"It started last week, with eyes burning, congestion, can't sleep at night," said Randall Cooper, 62, a retiree who moved here from the Bay Area 10 years ago. Those who could have tried to flee, often to the coast for the weekend. But this remains one of the few affordable places to live in California, which keeps many people here, even as the local economy continues to suffer under the drought's weight.

Mr. Cooper said his nose had cleared up when he went to the Bay Area for his son's wedding, but grew clogged again as soon as he came back. "I think about leaving, but from here to the Bay Area, every mile is $1,000 more in housing," he said. "I wasn't raised here. There are a lot of people who have had to deal with this their whole lives." Air and health officials have traded red-coded warnings that indicate "unhealthful" air for purple, calling them "very unhealthful." But everyone has to go outside sometimes.

Obama's smog plan splits black leaders

Date: 10th September, 2015 Source: POLITICO

President Barack Obama's aggressive environmental agenda is running into a surprising source of opposition: Black elected leaders. The administration is slated to tighten the restrictions for ozone, the pollutant that causes smog, by Oct. 1, but some African-American state and local politicians are lining up with business groups to warn that the clampdown would hurt poor communities and manufacturing centers like Gary, Ind., and St. Louis.

Those local and state officials say they are still trying to comply with the ozone requirements that were

issued by George W. Bush's EPA in 2008, and a stricter standard would inflict more pain on their struggling economies and stifle job growth.

“There has to be balance in the application of this policy, particularly when you look at the fact that the standard was recently changed and that industry, particularly the steel industry, have worked hard to achieve the standards and have some challenges in their efforts to achieve the standards,” Gary's mayor, Karen Freeman-Wilson, told POLITICO.

At issue is whether the EPA regulations designed to improve public health will choke off the manufacturing operations in poor, minority areas that are often among the most polluted in nation and tend to lack access to quality healthcare. Improving the air quality and environmental protections in those places is a priority for Obama's EPA, which has made "environmental justice" a top goal.

Obama has often shrugged off criticism from conservatives and business groups that his environmental regulations would be a drag on the overall economy, arguing instead that they would stimulate a green industry. And he’s derided critics of his climate and air pollution agenda for using scare tactics and "stale arguments" to claim that stronger regulations will harm minority and low-income communities.

"[I]f you care about low-income, minority communities, start protecting the air that they breathe, and stop trying to rob them of their health care," Obama said at an Aug. 3 event where he rolled out EPA's greenhouse gas restrictions for power plants. "Whenever America has set clear rules and smarter standards for our air, our water, our children’s health, we get the same scary stories about killing jobs and businesses and freedom."

That’s a position supported by powerful black groups like the NAACP, as well as black members of Congress like [Progressive Caucus Co-Chair Keith Ellison (D-Minn.), Elijah Cummings (D-Md.) and Texas Democrats Sheila Jackson Lee and Eddie Bernice Johnson.

“We understand the skittishness and concerns among many of our local politicians,” said Hilary Shelton, director of NAACP’s Washington bureau and senior vice president for advocacy and policy. But these same critical officials will “see in the longer run the need to make sure our children are safe, secure and healthy so they can more actively participate in our society.” Still, the arguments against the new smog rules may be harder to dismiss when coming from local and state officials who represent the areas that are the target of the environmental efforts to reduce pollution — and who have been staunch supporters of Obama in the past, such as Democratic Missouri state Sen. Jamilah Nasheed.

“I know I speak for the vast majority of my 5th District constituents here in St. Louis when I say I appreciate the job President Obama has done, especially the moral leadership he showed in the face of racial tragedies in Ferguson and other communities over the past year,” Nasheed, who is black, wrote to Obama senior adviser Brian Deese in July.

But lowering the ozone threshold too far would make things worse for a city like St. Louis that is “still feeling the pain of the 2007-2009 recession,” Nasheed said, and would hurt employment and "create new hardships for already struggling low-income urban families.”

While the opposition isn’t universal among black officials in cities and states, it has been supported by several groups, such as the African American Mayors Association, as well as the U.S. Conference of Mayors, the National League of Cities, the National Association of Counties and the National Association of Regional Councils, which have asked for the new ozone pollution rule to be put on hold. Freeman-Wilson, Gary's first female African-American mayor, had originally backed EPA's plan to lower the ozone limits. But she changed her mind after 300 residents were laid off and the city lost significant tax revenue from the closure of a U.S. Steel coke plant.

“From a public health perspective, the benefits gained from improving air quality are greater than any cost associated with a higher standard,” she said in an op-ed explaining her change of heart. “Then the bleeding started in my own front yard.”

Some black politicians say they fear the new regulations will go too far, and that even the rules in place now are difficult to meet. That echoes the arguments made by the National Association of Manufacturers, which has launched a multimillion dollar campaign against a tighter ozone standard.Democratic Pennsylvania state Rep. Jake Wheatley, who is black and represents Pittsburgh, said he has heard from both environmentalists who support a tighter rule and also local business leaders who worry that tougher smog standards will hurt his district's effort to build facility that would process oil and gas from the Marcellus Shale.

"It could be a major economic boon," Wheatley said. "So it's a balancing act for me."

Columbia, S.C., Mayor Steve Benjamin, who is also president of the African American Mayors Association, said in a letter to Obama late last month that many localities are struggling to pinpoint the sources of the ozone pollution and put in place measures to bring them into compliance with the existing rule. And even in areas where the source of the pollution is easier to identify, “mayors, county officials and governors still face the challenge of curtailing ozone while expanding the industrial production, construction, and infrastructure projects that create jobs and grow our tax base,” he wrote. EPA and green groups say the health benefits from the rule are huge: up to 4,300 fewer premature deaths in the next decade and hundreds of thousands of avoided asthma attacks in children.

“Lives are literally on the line,” said Mary Anne Hitt, director of the Sierra Club’s Beyond Coal Campaign. Low-income and minority areas are disproportionately affected by smog, she said, noting that 70 percent of African Americans live in areas with unsafe air.

Paddington station air pollution worse than roads outside

Date: 09th September, 2015 Source: E & T

Air pollution from trains at London's Paddington Station is worse than nearby major roads and exceeds EU recommendations for outdoor air quality, a study has shown.Levels of particulates, nitrogen dioxide and sulphur dioxide - all of which have been implicated in health problems, including lung disease, heart conditions and premature death - were higher than roadside conditions at nearby Marylebone Road and North Kensington, the report in the journal Environmental Research Letters showed. While guidelines are in place to control ‘outdoor’ air quality, UK rail stations are not required to comply with air quality standards and emissions from diesel trains quickly accumulate in a semi-enclosed railway station like Paddington.

“We looked at several measures of air quality,” said Adam Boies, lead author on the paper. “And we’ve shown that there are a number of times where the nitrogen dioxide concentrations exceed the EU hourly mean limits for outdoor air quality.”

Measurements were made at five locations around Paddington Station, covering two platforms, the main cooking area, a main exit and the roadside. “It was a shame we could not do longer-term measurements,” said Boies. “But we were limited partly by the sensors available and partly by the time constraints on the

station security. These would have allowed us a more direct comparison to the roadside limits." According to Boies, many older trains do not have a diesel particulate filter installed, which could be fitted cheaply to greatly reduce emissions. The issue is also likely to become less pressing as the Great Western Main Line, one of the major lines feeding into Paddington station, is electrified.

"Obviously, replacing these diesel trains with electric trains will also remove the emissions," said Boies. "The majority of the locomotives in use at Paddington were 'grandfathered' (made exempt from the regulations for modern diesel locomotives). Newer diesel locomotives also have much lower emissions." Patrick Hallgate, Network Rail's managing director for the Western route, said: "Our Great Western Electrification Programme will bring Brunel's railway into the 21st century, by electrifying the main line that runs from London Paddington to Swansea in preparation for the arrival of a new fleet of electric trains. "These trains will not only provide passengers with faster journeys, more seats and a more comfortable travelling experience, but they are also quieter and greener, significantly reducing noise and air pollution for passengers and our thousands of line-side neighbours."

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President Barack Obama's aggressive environmental agenda is running into a surprising source of opposition: Black elected leaders. The administration is slated to tighten the restrictions for ozone, the pollutant that causes smog, by Oct. 1, but some African-American state and local politicians are lining up with business groups to warn that the clampdown would hurt poor communities and manufacturing centers like Gary, Ind., and St. Louis. Those local and state officials say they are still trying to comply with the ozone requirements that were issued by George W. Bush's EPA in 2008, and a stricter standard would inflict more pain on their struggling economies and stifle job growth. "There has to be balance in the application of this policy, particularly when you look at the fact that the standard was recently changed and that industry, particularly the steel industry, have worked hard to achieve the standards and have some challenges in their efforts to achieve the standards," Gary's mayor, Karen Freeman-Wilson, told POLITICO. At issue is whether the EPA regulations designed to improve public health will choke off the manufacturing operations in poor, minority areas that are often among the most polluted in nation and tend to lack access to quality healthcare. Improving the air quality and environmental protections in those places is a priority for Obama's EPA, which has made "environmental justice" a top goal. Obama has often shrugged off criticism from conservatives and business groups that his environmental regulations would be a drag on the overall economy, arguing instead that they would stimulate a green industry. And he's derided critics of his climate and air pollution agenda for using scare tactics and "stale arguments" to claim that stronger regulations will harm minority and low-income communities.

"[I]f you care about low-income, minority communities, start protecting the air that they breathe, and stop trying to rob them of their health care," Obama said at an Aug. 3 event where he rolled out EPA's greenhouse gas restrictions for power plants. "Whenever America has set clear rules and smarter standards for our air, our water, our children's health, we get the same scary stories about killing jobs and businesses and freedom." That's a position supported by powerful black groups like the NAACP, as well as black members of Congress like [Progressive Caucus Co-Chair Keith Ellison (D-Minn.), Elijah Cummings (D-Md.) and Texas Democrats Sheila Jackson Lee and Eddie Bernice Johnson. "We understand the skittishness and concerns among many of our local politicians," said Hilary Shelton, director of NAACP's Washington bureau and senior vice president for advocacy and policy. But these same critical officials will

“see in the longer run the need to make sure our children are safe, secure and healthy so they can more actively participate in our society.” Still, the arguments against the new smog rules may be harder to dismiss when coming from local and state officials who represent the areas that are the target of the environmental efforts to reduce pollution — and who have been staunch supporters of Obama in the past, such as Democratic Missouri state Sen. Jamilah Nasheed.

“I know I speak for the vast majority of my 5th District constituents here in St. Louis when I say I appreciate the job President Obama has done, especially the moral leadership he showed in the face of racial tragedies in Ferguson and other communities over the past year,” Nasheed, who is black, wrote to Obama senior adviser Brian Deese in July. But lowering the ozone threshold too far would make things worse for a city like St. Louis that is “still feeling the pain of the 2007-2009 recession,” Nasheed said, and would hurt employment and "create new hardships for already struggling low-income urban families.”

While the opposition isn’t universal among black officials in cities and states, it has been supported by several groups, such as the African American Mayors Association, as well as the U.S. Conference of Mayors, the National League of Cities, the National Association of Counties and the National Association of Regional Councils, which have asked for the new ozone pollution rule to be put on hold. Freeman-Wilson, Gary's first female African-American mayor, had originally backed EPA's plan to lower the ozone limits. But she changed her mind after 300 residents were laid off and the city lost significant tax revenue from the closure of a U.S. Steel coke plant.

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EPA and green groups say the health benefits from the rule are huge: up to 4,300 fewer premature deaths in the next decade and hundreds of thousands of avoided asthma attacks in children. “Lives are literally on the line,” said Mary Anne Hitt, director of the Sierra Club’s Beyond Coal Campaign. Low-income and minority areas are disproportionately affected by smog, she said, noting that 70 percent of African Americans live in areas with unsafe air.

A Small Town and the Effects of Air Pollution

Date: 11th September, 2015 Source: UTNE

The CPV gas power plant's total VOC emissions annually are 140 tons, more than twice the local limit. On an average day, the plant would emit a volume of VOCs that could fill a large barn. Above, a gas compressor station near Rhome, Texas. Community fears about toxic emissions from the Competitive Power Ventures (CPV) gas power plant planned for Wawayanda, New York, have not troubled town

supervisor John Razzano. He expressed skepticism about reports of adverse health effects among residents

near the Minisink gas compressor seven miles away.The compressor releases just a fraction of the same emissions the plant would produce. One Minisink family, unable to sell their house, abandoned it. Others sold at a loss, fearing the health implications of symptoms that appeared when the compressor began operation. "People often oppose projects," said Razzano, "but we hired environmental consultants, and the Department of Environmental Conservation issued a permit."

He points to the $1 million a year the plant would pay in school taxes and the $100 million construction payroll that would result from building the plant. But Pramilla Malick, of Minisink, founder of Protect Orange County, says only 25 jobs would remain in the area, and construction workers would come from elsewhere. She is also concerned by the impending acquisition of CPV by foreign investors, Global Infrastructure Partners II. While ownership becomes more distant, health hazards are local. Malick cites the work of environmental health expert David Brown, who has documented symptom patterns among Minisink residents. Brown, at 78, is a veteran in the world of environmental health, having been Connecticut Chief of Environmental Epidemiology and Occupational Health and an investigator of Superfund sites for the U.S. Centers for Disease Control. Employing a doctor to survey residents, Brown found that common Minisink ailments mirror what another environmental health expert, Wilma Subra, has found around the country, not only near gas compressor stations, but also gas power plants and gas drilling sites. Subra typically finds symptoms such as asthma, allergies, coughs, nosebleeds, dizziness, weakness, and rashes among 90 percent of residents and workers in a two- to three-mile radius of gas infrastructure. Symptoms are "more frequent and severe" around power plants, Subra says. Resulting chronic ailments she cites include lung, cardiovascular, reproductive, liver, kidney, and neurological damage; birth defects; and leukemia.

"People have memory loss and confusion and trouble picking things up," Subra says. "Babies are born missing fingers and toes." Subra was awarded a MacArthur Fellowship "genius grant" for her community environmental work and periodically consults for the U.S. Environmental Protection Agency. She identified symptom patterns using surveys and found toxic chemicals from gas infrastructure emissions in residents' air.

Study Predicts Antarctica Ice Melt if All Fossil Fuels Are Burned

Date: 11th September, 2015 Source: The New York Times

Calving ice near Paradise Harbor in Antarctica in Jan. 2015. The continent's ice sheet and the rest of the world's land ice would melt if all the world's fossil fuels were burned, a new climate study found. Burning all the world's deposits of coal, oil and natural gas would raise the temperature enough to melt the entire ice sheet covering Antarctica, driving the level of the sea up by more than 160 feet, scientists reported Friday.

In a major surprise to the scientists, they found that half the melting could occur in as little as a thousand years, causing the ocean to rise by something on the order of a foot per decade, roughly 10 times the rate at which it is rising now. Such a pace would almost certainly throw human society into chaos, forcing a rapid retreat from the world's coastal cities.

The rest of the earth's land ice would melt along with Antarctica, and warming ocean waters would expand, so that the total rise of the sea would likely exceed 200 feet, the scientists said. "To be blunt: If we burn it all, we melt it all," said Ricarda Winkelmann, a researcher at the Potsdam Institute for Climate Impact Research in Germany and the lead author of a paper published Friday in the journal Science Advances.

A sea level rise of 200 feet would put almost all of Florida, much of Louisiana and Texas, the entire East Coast of the United States, large parts of Britain, much of the European Plain, and huge parts of coastal Asia under water. The cities lost would include Miami, New Orleans, Houston, Washington, New York, Amsterdam, Stockholm, London, Paris, Berlin, Venice, Buenos Aires, Beijing, Shanghai, Sydney, Rome and Tokyo. Nobody alive today, nor even their grandchildren, would live to see such a calamity unfold, given the time the melting would take. Yet the new study gives a sense of the risks that future generations face if emissions of greenhouse gases are not brought under control.

"This is humanity as a geologic force," said Ken Caldeira, a researcher at the Carnegie Institution for Science in Stanford, Calif., and another author of the paper. "We're not a subtle influence on the climate system – we are really hitting it with a hammer."

Climate scientists have long assumed that countries would recognize the dangers of continuing to dig up and burn the world's fossil fuels. Yet they have been saying that for 30 years, and political efforts in that time to limit the burning have been ineffectual. With a major push from President Obama, the nations of the world will convene in Paris in December in another attempt to reach an ambitious deal for reducing emissions. Yet Mr. Obama faces fierce opposition from the Republican Party in putting limits into effect in the United States, which uses more fossil fuels per person than any other large country. The long-running political gridlock has prompted scientists to start thinking about worst-case scenarios. And recently, major advances have been made in the computerized analysis of the huge ice sheets covering Antarctica and Greenland.

The researchers involved in Friday's paper decided to use one of these ice-sheet models to attempt the most detailed analysis yet of the potential consequences of burning all fossil fuels. As the first of its kind, the paper is likely to undergo intense scientific scrutiny. In certain ways, the findings are reassuring. They offer no reason, for instance, to revise the sea-level forecast for the coming century. A United Nations panel has said that the rise of the sea would not likely exceed three feet in that period, and would probably be less. While some island nations may be wiped out by a rise of that magnitude, experts believe most major cities could be protected from it, though at a likely cost in the trillions of dollars.

The ice sheets respond slowly enough to changes in the climate that it simply takes longer than a century for large-scale melting to begin. But from that point, the paper found, about half the Antarctic ice sheet would melt or fall into the sea in the first thousand years.

"I didn't expect it would go so fast," Dr. Caldeira said. "To melt all of Antarctica, I thought it would take something like 10,000 years." The more basic finding that the whole ice sheet could eventually melt is less surprising, at least to scientists who specialize in studying the history of the earth. "As a paleoclimate person, I don't feel like this is necessarily a shock to me," said Robert E. Kopp, a professor of earth system history at Rutgers University, who studies sea level but was not involved in the new research.

Paleoclimatologists have established that Antarctica was once a lush, green continent, icing over only in the past 35 million years, amid a general cooling of the world's climate. Moreover, rates of sea level rise like those outlined in the paper have occurred in the past.

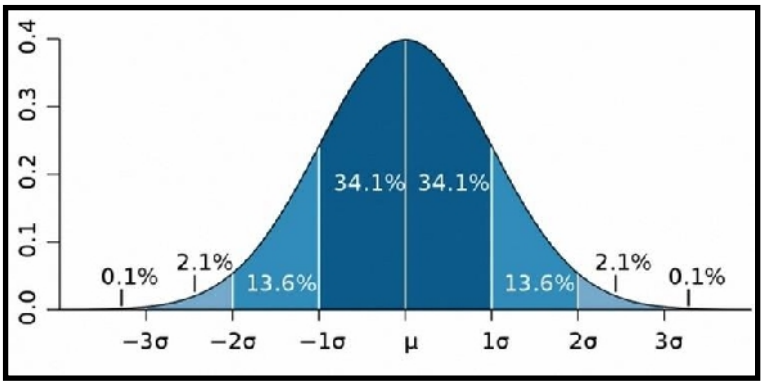
Human civilization is built on the premise that the level of the sea is stable, as indeed it has been for several thousand years. But the deeper history of the earth reveals enormous shifts, on the order of a hundred feet or more within a few thousand years. Sea levels far higher than those of today have been documented at

more than a thousand sites around the world. Along the East Coast, seashells from just 3 million years ago can be dug up by the shovel-full a hundred miles inland from the current shore.

Studying this evidence, scientists concluded long ago that the great ice sheets are sensitive to small changes in the earth's average temperature, caused by wobbles in its orbit around the sun. They believe that human emissions are about to produce a large change. Though the climate is still in the earliest stages of this shift, the ice sheets in both Greenland and the low-lying, western part of Antarctica are already showing serious signs of instability. The higher, colder ice sheet in eastern Antarctica, by far the largest chunk of land ice on the planet, had long been assumed to be more stable. But for several years, evidence has been accumulating that at least large parts of that ice sheet are vulnerable, too.

Climate Shock: The Economic Consequences of a Hotter Planet

Date: 11th September, 2015 Source: Ecowatch



One of the most under-appreciated aspects of the climate change problem is the so-called "fat tail" of risk. In short, the likelihood of very large impacts is greater than we would expect under typical statistical assumptions. We are used to thinking about likelihoods and probabilities in terms of the familiar "normal" distribution—otherwise known as the "bell curve."

Roughly 68 percent of the area falls within the region bounded by 1 standard deviation below (-1 sigma) and above (+1 sigma) the "mean" or "average," and a substantially greater 96 percent of the area falls between two standard deviations below (-2 sigma) and above (+2 sigma) the mean. So given this statistical distribution, we would expect values to fall above the +2 sigma (two standard deviation) limit only about 2 percent of the time. Call that the positive "tail" of the distribution.

There are many phenomena that follow a normal distribution, from the heights of adult men in the U.S. to the day-to-day fluctuations in summer temperature in New York City. But the predicted warming due to increased greenhouse gas concentrations isn't one of them. Global warming instead displays what we call a "heavy-tailed" or "fat-tailed" distribution. There is more area under the far right extreme of the curve than we would expect for a normal distribution, a greater likelihood of warming that is well in excess of the average amount of warming predicted by climate models.

An important new book, Climate Shock: The Economic Consequences of a Hotter Planet, by Environmental Defense Fund senior economist Gernot Wagner and Harvard economist Martin Weitzman, explores the deep implications this has for the debate over climate policy. Here's the blurb I wrote for the book (a shortened version of which appears on the back cover):

Think climate change is a low-priority problem? Something to put off while we deal with more immediate threats? Then Climate Shock will open your eyes. Leading economists Wagner and Weitzman explain, in simple, understandable terms, why we face an existential threat in human-caused climate change. The authors lay out the case for taking out a planetary insurance policy, without delay, in the form of market mechanisms aimed at keeping carbon emissions below dangerous levels. —Michael E. Mann, author of The Hockey Stick and the Climate WarsThe "insurance policy" analogy is appropriate here. We don't purchase fire insurance on our homes because our homes are likely to burn down. Far from it in fact: less

than one-in-four homeowners are likely to ever experience a house fire. We purchase fire insurance because we understand that, even though such a catastrophic event is unlikely (less than 25 percent chance of happening), if it did happen, it would be catastrophic. So it is worth hedging against, by investing money now—in the form of fire insurance. Let us consider, in that context, the prospects for warming well in excess of what we might term "dangerous" (typically considered to be at least 2C or 3.6F warming of the planet). How likely, for example, are we to experience a catastrophic 6C = 11F warming of the globe, if we allow greenhouse gas concentrations to reach double their pre-industrial levels (something we're on course to do by the middle of this century given business-as-usual burning of fossil fuels)? Well, the mean or average warming that is predicted by models in that scenario is about 3C, and the standard deviation about 1.5C. So the positive tail, defined as the +2 sigma limit, is about 6C of warming. As shown by Wagner & Weitzman (see figure below), the likelihood of exceeding that amount of warming isn't 2 percent as we would expect for a bell-curve distribution. It's closer to 10 percent! In fact, it's actually even worse than that when we consider the associated risk.

Awareness drive on ozone layer

Date: 12th September, 2015 Source: The Hindu

In a move to inculcate a sense of responsibility, encourage young minds to protect ozone layer, and consider remedial measures to conserve environment, a number of schools across the city plan to launch a massive awareness drive to mark 'International Day for the Preservation of the Ozone Layer' to be observed on September 16. Besides doling out essay writing and elocution competitions for the purpose, quiz contests, photo exhibitions, and lectures are in store for the students.

To hone the creative skills of the students, Siva Sivani Public School is all set to organise a science fair on World Ozone Day. Those studying in Classes V to VII (junior group) and Classes VIII to X (senior group) will come up with their science models. Global warming, renewable sources of energy, water resource management, pollution control, disaster and traffic management are the topics that will be covered as part of the fair. "Students will come up with different projects suggesting measures to reduce the effect of global warming, utilise renewable sources of energy, conserve water resources, and provide solution to control pollution," says K.V. Ramani, headmistress of the school, Lawson's Bay branch. Creating awareness on the adverse effects of ozone depletion, Pollocks School is hosting a quiz competition on the day. The theme for the contest is environment and means to conserve the same. "The objective is to make students understand what individual contribution means, how each one of us can do our bit to reduce carbon footprints and create a better world for future generation," says Sandeep Chitra, principal and correspondent of the school.

One-minute talk, quiz contest, and elocution competition on environment conservation are in store for those studying in Classes VI to X at Keystone English Medium School to mark the day. The harmful effects of global warming and ozone depletion and the remedial measures to be taken to protect the ozone layer will be highlighted by the team of Green Climate, a voluntary organisation, through a week-long awareness drive. A photo exhibition is lined up at M.V.D.M. High School and Andhra University High School, among several others, on September 15 and 16 respectively.

Tories ignore clean air rules - despite 29,000 deaths from pollution each year

Date: 12th September, 2015 Source: Independent

Fears that the Government is weakening its commitment to the environment have been heightened after it emerged that at least two Whitehall departments have admitted ignoring a Supreme Court ruling on clean air. Just over a week before the election, the Supreme Court ruled that the new government must take steps

to tackle air pollution – which contributes to 29,000 deaths a year in the UK – by carrying out rigorous assessments on the impact of policy decisions on air quality. Yet requests for information by the environmental law firm Client-Earth reveal that the Department for Transport (DfT) and the Department of Energy and Climate Change (DECC) have failed to take the court ruling into account when drawing up policies and legislation.

The Supreme Court stated on 29 April that "the new government, whatever its political complexion, should be left in no doubt as to the need for immediate action to address this issue". The judgment also ordered the then (and now current) Environment Secretary, Liz Truss, to prepare new air quality plans to bring air quality within legal limits in the shortest time possible.

However, the information requests reveal that the DfT made no assessment of the impact on air quality before announcing the "pause" of the electrification of two major rail routes shortly after the election. The pause means diesel trains will continue to run on routes in and out of major cities like Leeds and Manchester. In a letter to ClientEarth, the DfT said that because the decision was a "pause, not a stop", "no additional assessment of the impact on ambient air quality has been undertaken by the department".

On a second major decision, the announcement of a new vehicle excise-duty banding system that cuts tax breaks for low-polluting cars, the DfT said it had "not produced any assessment of the announced VED changes on air quality". The Government also quietly scrapped funding for the Green Deal Finance Company (GDFC) – which enables people to make their homes more energy efficient – just as the Commons rose for the summer recess, preventing detailed scrutiny of the plans by MPs. In a letter to ClientEarth, DECC said it had "not carried out any assessment on the impact on air quality of the decision not to invest further in the GDFC". Alan Andrews, a lawyer at ClientEarth, said: "This reveals a worrying disregard for the decision of the Supreme Court and a shocking lack of joined-up thinking in government." It is understood that Department for Environment, Food and Rural Affairs (Defra) will produce a consultation document on new air- quality plans required by the Supreme Court ruling in the next few weeks.

Air pollution is like smoking a cigarette each day, doctors warn

Date: 13th September, 2015 Source: The Sydney Morning Herald

Air pollution in parts of NSW is so bad that it is equivalent to smoking a cigarette a day, according to a group of doctors who have called on the state government to take immediate action. Twenty-four doctors have written to Health Minister Jillian Skinner and the Environment Minister Mark Speakman, warning that the latest pollution monitoring in Newcastle showed that three out of six sites revealed air pollution above the accepted advisory standard. The doctors are concerned that the unacceptably high levels are having an impact on residents health, particularly children.

The doctors wrote an open letter to the NSW ministers after seeing the first year's result from the EPA's new air quality monitors in Newcastle that showed three out of six sites had fine particulate matter (PM2.5) above the advisory standard of 8.0 ug/m3. The monitors showed the average reading for Carrington was 8.2, Stockton 9.0 and central Newcastle 8.5 ug/m3. "This concentration of particulates has the same mortality impact as smoking a cigarette each day for every child as well as adult in town; it is therefore a big problem," said Newcastle GP and member of Doctors for the Environment Australia, Dr

Ben Ewald. "We are doing our best to look after patients with heart and lung disease but the air quality in suburbs adjacent to industry is a drag on their health."

State and federal environment ministers met in July to discuss air quality and agreed in principle to adopt tighter standards over the long term. However they delayed that adoption until at least the end of the year. Dr Ewald said that "it's unacceptable that after having non-enforceable advisory standards on fine particulates for 12 years, a one-year period of public consultation, and strong advice from the government's experts, the Council of Australian Governments meeting in mid July still could not implement new standards and put the decision off 'til December".

"The government has a duty of care to protect public health and must tackle the problem of air quality as a priority." A spokeswoman for NSW Health said the development of air quality targets is a national process. "In NSW the lead agency is the EPA. NSW Health is not a regulatory agency for air quality, but works closely with EPA on air quality issues, " she said.

A spokesman for the Minister for the Environment Mark Speakman said there are as yet no new standards for PM emissions, but the NSW government was leading the national push in this regard. He said that ministers also agreed to finalise their consideration of the national standards by 31 December 2015. Dr Ewald said the doctors group wants action now. He said people with chronic lung disease and are being affected and long-term exposure to pollution could lead to impaired lung growth in children.

The Big Read: Climate change and the fate of Antarctica

Date: 13th September, 2015 Source: National

A world-renowned climate scientist visiting New Zealand will this week present new evidence suggesting a behemoth "sleeping giant" ice sheet is more sensitive to climate change than we ever thought. To climate scientists, the vast East Antarctic Ice Sheet represents something of the elephant in the room in terms of what it could contribute to global sea level rise.If all of it melted, the ice sheet, which forms most of Antarctica, would contribute an equivalent of around 50 metres of sea level rise - the vast majority of the total 58 metres that could come from the frozen continent. The part of the ice sheet that rests on bedrock below sea level is most vulnerable and holds an equivalent of 19 metres of sea level rise.

In the face of climate change, which has brought warmer ocean water to the edges of Antarctica, the vast ice sheet has been long regarded by scientists to be much more stable when compared with the smaller, 25 million square kilometre West Antarctic Ice Sheet, which satellite measurements estimated was losing more than 150 cubic kilometres of ice each year. But an Australian expedition that managed to reach the typically inaccessible Totten Glacier in East Antarctica in January revealed some of the first direct evidence that warmer waters were having a significant impact there as well.

This means the wider ice sheet's contribution to future sea level rise could be much greater than realised. CSIRO physical oceanographer and climate scientist Dr Stephen Rintoul, who was onboard the Australian icebreaker research ship Aurora Australis when it managed to reach the remote glacier, said the region that the Totten drains holds enough ice to produce an equivalent 3.9 metres of global sea level rise - about half the amount that could come from the Greenland ice sheet in the Northern Hemisphere.

"There was good evidence from other places in Antarctica that the ocean was responsible for the thinning of glaciers, like the Pine Island glacier in West Antarctica, but we couldn't say why the Totten was thinning because no one had been there before," said Dr Rintoul, who will give a public lecture at Victoria University in Wellington on Tuesday night.

"What we found was, sure enough, there was warm water reaching the glacier - and that really goes counter to what we'd long thought. "While the ice sheet in West Antarctica has grown and shrunk over time, East Antarctica, we'd always thought, was pretty stable and unlikely to make much of a contribution to sea level rise. "Our observations, along with new geological evidence that East Antarctica contributed to sea level rise in the past, suggest that we need to reassess that assumption, and realise that East Antarctica may play a bigger role in future sea level rise than we thought."

While the West Antarctic Ice Sheet would respond more quickly to climate change, Dr Rintoul said the new evidence warranted shifting more of the scientific focus to the east. The first direct evidence that ocean heat was able to erode the ice shelf in the east added to evidence that East Antarctica was more dynamic than we understood.

"For example, if we go back to the last time in Earth's history when atmospheric CO2 was as high as it is today - which was about three million years ago - the sea level during that climate was about 20 metres higher than it is today. "Twenty metres is an important number because it means even if we melted all of the ice on Greenland at that time, along with all of the ice in West Antarctica, that's still not enough to give 20 metres of sea level rise. "The only other place that ice could have melted is East Antarctica." While that climate period, called the Pliocene, was not a perfect analogue for what might happen in the future, it did tell us that East Antarctica wasn't just a big chunk of ice that sat at the bottom of the globe and didn't change over time. "It tells us that the East Antarctic Ice Sheet can change, and what will drive those changes is warm ocean waters reaching the ice shelves - and our results are the first to show that that is happening today."

Dr Rintoul's talk will also discuss recent research on the highly vulnerable West Antarctic Ice Sheet. This showed that some parts of that sheet may already be on the verge of unstoppable collapse and has potential to contribute up to three metres of global sea-level rise over hundreds to thousands of years in the future, even if greenhouse gas emissions were to be stabilised tomorrow. Climate change and warmer oceansThe new findings link in with what is another big part of Dr Rintoul's work - the role of oceans in climate change. "One of the things that many people don't realise is that, in a sense, global warming is ocean warming - more than 93 per cent of the extra heat that's been stored by the planet over the last 50 years is found in the oceans. "So that means if we want to understand how the climate is evolving and how the climate is changing, we need to be tracking and understanding what's happening in the oceans." Of all the carbon dioxide and greenhouse gases that humans emit, around 25 to 30 per cent ends up in the oceans, and this absorption helps to slow the rate of climate change. "In that sense, the oceans provide a service by soaking up heat and soaking up carbon dioxide, but that benefit we get from them comes at a cost."

As the oceans soaked up the heat, this caused them to expand, which in turn caused sea levels to rise. "And as the oceans soak up carbon dioxide, they tend to acidify and the chemistry changes - therefore, if we want to understand the impacts of releasing CO2 into the atmosphere, we need to take ocean acidification into account as well as climate change." With climate change came global impacts on ocean currents, creating the potential for oceans to change in a way that they fed back on the climate system and caused the change to happen more rapidly. "So, for example, if climate change caused the ocean to take up less heat, and less carbon dioxide, that would tend to speed up the rate of climate change." Presently, data collected from ships and ARGO floats - torpedo-like instruments deployed around the globe - showed that the Southern Ocean was taking up much of the heat, and that its waters were "freshening", or becoming less saline.

Global warming to pick up in 2015, 2016

Date: 14th September, 2015 Source: The Star Online

LONDON: Man-made global warming is set to produce exceptionally high average temperatures this year and next, boosted by natural weather phenomena such as El Nino, Britain's top climate and weather body said in a report Monday.

"It looks very likely that globally 2014, 2015 and 2016 will all be amongst the very warmest years ever recorded," Rowan Sutton of the National Centre for Atmospheric Science, which contributed to the report, told journalists. "This is not a fluke," he said. "We are seeing the effects of energy steadily accumulating in the Earth's oceans and atmosphere, caused by greenhouse gas emissions."

The rate at which global temperatures are increasing is also on track to pick up in the coming years, ending a period of more than a decade in which the pace of warming worldwide had appeared to slow down, the report said. This "pause" has been seized upon by sceptics as evidence that climate change was driven more by natural cycles than human activity. Some scientists, however, argue that there was no significant slowdown, pointing instead to flawed calculations. The 20-page report from Britain's Met Office, entitled "Big changes underway in the climate system?", highlights current transitions in major weather patterns that affect rainfall and temperatures at a regional level. An El Nino weather pattern centred in the tropical Pacific Ocean is "well underway", the report says, and shaping up to be one of the most intense on record. Very strong El Ninos also occurred over the winters of 1997 and 1982. Set to grow stronger in the coming months, the current El Nino -- a result of shifting winds and ocean circulation -- is likely to result is dry conditions in parts of Asia and Australia, as well as southern and sub-Saharan North Africa, the Met Office said.

By contrast, the southwestern United States -- including parched California, suffering from an historic drought -- has a strong chance of seeing higher-than-average rainfall. El Ninos also affect tropical storms, making them less likely in the North Atlantic and more intense in the West Pacific, where they are known as typhoons. Overall, an El Nino is also likely to add a little heat to the general impact of global warming. Meanwhile, warming sea surface temperatures along the North American west coast point to a reversal of another natural pattern called the Pacific Decadal Oscillation.

This, too, could temporarily nudge regional temperatures higher, but has yet to be confirmed, the report said. Finally, the interplay of ocean currents and atmosphere in the Atlantic -- another multi-decade oscillation -- is moving the other way, and will have a cooling effect. "The current warm phase is now 20 years long and historical precedent suggests a return to relatively cool conditions could occur within a few years," the report says. By itself, that would mean cooler and drying summers in northern Europe, and increased rainfall in the northeastern United States. While all of these cyclical forces affect weather and temperatures trends, global warming is the main driver of change today, the report concluded. "We know that natural patterns contribute to global temperature in any given year, but very warm temperatures so far this year indicate the continued impact of increasing greenhouse gases," said Stephen Belcher, director of the Met Office Hadley Centre. -AFP

Beijing to impose fee on emitters to curb pollution: Xinhua

Date: 15th September, 2015 Source: Reuters

Manufacturers of furniture, petrochemicals, automobiles and electronics in Beijing will start paying fees in October for emitting volatile organic compounds (VOCs), a source of air pollution, the Xinhua state news agency said on Tuesday. Pollution has triggered increasing unease in China, where smog blankets many

major cities, including Beijing, home to 21 million people. The polluters will be charged 10 yuan ($1.57) per kg of discharged gas if their VOC emissions do not exceed 50 percent of the city's limit, Xinhua said, citing Wang Chunlin, director of pollution prevention and control with Beijing Municipal Environmental Protection Bureau. Entities whose emissions are higher than half of the limit but do not exceed the standards will be charged 20 yuan per kg. Polluters whose VOCs emissions pass the limits will pay 40 yuan per kg. The fees are higher than the treatment cost for polluters, so it "will stimulate polluters to adopt cleaner methods", Xinhua quoted Wang as saying. The government has launched a war on pollution, vowing to abandon a decades-old economic model of growth at all costs that has damaged the water, air and soil.

Vehicle emissions, the use of solvents, storage and transport of gasoline may generate VOCs, which can form hazardous, breathable particles known as PM2.5 following chemical reactions in the atmosphere, Xinhua said. PM 2.5, which refers to particles smaller than 2.5 micrometers in diameter, leads to hazardous smog that is a major cause of asthma and respiratory diseases, experts say. Lung cancer rates are rising in Beijing, say health officials, with the capital ranked among the world's most polluted cities.

Study: Air Pollution Kills 3.3 Million Worldwide, May Double

Date: 16th September, 2015 Source: ABC News

Air pollution is killing 3.3 million people a year worldwide, according to a new study that includes this surprise: Farming plays a large role in smog and soot deaths in industrial nations. Scientists in Germany, Cyprus, Saudi Arabia and Harvard University calculated the most detailed estimates yet of the toll of air pollution, looking at what caused it. The study also projects that if trends don't change, the yearly death total will double to about 6.6 million a year by 2050. The study, published Wednesday in the journal Nature, used health statistics and computer models. About three quarters of the deaths are from strokes and heart attacks, said lead author Jos Lelieveld at the Max Planck Institute for Chemistry in Germany.

The findings are similar to other less detailed pollution death estimates, outside experts said. "About 6 percent of all global deaths each year occur prematurely due to exposure to ambient air pollution. This number is higher than most experts would have expected, say, 10 years ago," said Jason West, a University of North Carolina environmental sciences professor who wasn't part of the study but praised it. Air pollution kills more than HIV and malaria combined, Lelieveld said.With nearly 1.4 million deaths a year, China has the most air pollution fatalities, followed by India with 645,000 and Pakistan with 110,000.

The United States, with 54,905 deaths in 2010 from soot and smog, ranks seventh highest for air pollution deaths. What's unusual is that the study says that agriculture caused 16,221 of those deaths, second only to 16,929 deaths blamed on power plants. In the U.S. Northeast, all of Europe, Russia, Japan and South Korea, agriculture is the No. 1 cause of the soot and smog deaths, according to the study. Worldwide, agriculture is the No. 2 cause with 664,100 deaths, behind the more than 1 million deaths from in-home heating and cooking done with wood and other biofuels in developing world.

The problem with farms is ammonia from fertilizer and animal waste, Lelieveld said. That ammonia then combines with sulfates from coal-fired power plants and nitrates from car exhaust to form the soot particles that are the big air pollution killers, he said. In London, for example, the pollution from traffic takes time to be converted into soot, and then it is mixed with ammonia and transported downwind to the next city, he said. "We were very surprised, but in the end it makes sense," Lelieveld said. He said the scientists had assumed that traffic and power plants would be the biggest cause of deadly soot and smog. Agricultural emissions are becoming increasingly important but are not regulated, said Allen Robinson, an engineering professor at Carnegie Mellon University, who wasn't part of the study but praised it. Ammonia air pollution from farms can be reduced "at relatively low costs," Robinson said. "Maybe this will help bring more attention to the issue."

In the central United States, the main cause of soot and smog premature deaths is power plants; in much of the West, it's traffic emissions. Jason West and other outside scientists did dispute the study's projections that deaths would double by 2050. That's based on no change in air pollution. West and others said it's likely that some places, such as China, will dramatically cut their air pollution by 2050. And Lelieveld said that if the world reduces a different air pollutant — carbon dioxide, the main gas causing global warming — soot and smog levels will be reduced as well, in a "win-win situation in both directions."

Ozone Layer Recovering but Health Hazards Still High

Date: 17th September, 2015 Source: The Gleaner

Despite studies indicating that the ozone layer is showing encouraging signs of recovery, Nicol Walker, head of the Ozone Unit at the National Environment Planning Agency (NEPA), is urging citizens to be mindful of health impacts that may result from overexposure to sunlight. Speaking with The Gleaner in recognition of International Day for the Preservation of the Ozone Layer, which is celebrated annually on September 16, Walker indicated that the country has been making an effort to reduce ozone-depleting substances (Ods), however, overexposure to sunlight can be detrimental to the society.

"Jamaica has been pretty much ahead of the game in terms of phasing out the substances. What we have done is to reduce and ultimately phase out the use of ozone depleting-substances, so if you try to import one of these substances now, you will not be able to get it," she said. "We are still encouraging persons to protect themselves from overexposure to the sun. Wear your sunscreens, sun shades, and do what you can to ensure that you reduce your exposure to sunlight as the impacts can be detrimental," she continued.

Walker's sentiments were supported by renowned dermatologist Dr Patricia Dunwell, who told The Gleaner that there was a strong correlation between the ozone layer and skin health."When it comes to issues with the sun and skin care, we see most patients during the summer months. I also see a lot of persons who go bird hunting and hiking. So while skin cancer is not popular here, persons are still at risk. On an average, we attend to about two to three persons per week during summer, and we see the decrease when we approach the winter months," she said. Everyone at risk"- I am happy to hear that the ozone layer is recovering; it is welcome news. However, whether the ozone is depleted or not, all skin types are at risk once there is overexposure," Dunwell continued.

"We are all at risk. Caucasian persons living in the tropics, are prone not just to the pigment changes from sun damage, but increased risk of skin cancer. persons with darker skin, there is normally a change in the skin texture, so the skin now becomes leather-like. Persons living by the beach, fishermen, and persons who operate outdoors will get more damage than those who live inland because the intensity of the ultraviolet rays is greater in those areas. We all have to be careful," she said.

According to the Scientific Assessment of Ozone Depletion 2014, in the mid-1970s, it was discovered that some human-produced chemicals could lead to depletion of the ozone layer. The resulting increase in ultraviolet radiation at Earth's surface would likely increase the incidences of skin cancer and eye cataracts, and also adversely affect plants, crops, and ocean plankton. Following the discovery of this environmental issue, researchers sought a better understanding of this threat to the ozone layer. Monitoring stations showed that the abundance of the ozone-depleting substances was steadily increasing in the atmosphere. However, in response to the prospect of increasing ozone depletion, the governments of the world crafted the 1987 United Nations Montreal Protocol as an international means to address this global issue. As a result, the total global accumulation of Ods has slowed and begun to decrease. Global ozone depletion is no longer increasing, and initial signs of recovery of the ozone layer have been identified.

Over two-thirds of deaths due to outdoor air pollution occur in China, India: Study

Date: 18th September, 2015 Source: Northern Californian

According to a new study, outdoor air pollution results in over three million deaths every year. More than two-thirds of these deaths occur in China and India. Both these nations have been conducting very large-scale profit-driven industrial practices. Study authors have estimated that if the government didn't interfere in this matter than the mortality rate from air pollution will possible get double by 2050. They said almost all of the increase will occur in Asia. Researchers have reported that particulate matter is key pollutant that has led to premature mortality. Particulate matter is a mixture of different materials released into the atmosphere, and are considered harmful for human health when exceeds 2.5 micrometers in diameter. The leading practices that have been contributing to the mass pollution differ slightly across the world. The study suggested that in India and China emissions from residential heating and cooking alone result in huge quantities of unhealthy smoke, causing one-third of air pollution-related deaths worldwide. In China more than 70% of electricity is generated from coal.

Asthma is the main cause of hospitalization for children in China and deaths due to lung cancer have risen 465% in the last 3 decades. In a conference call for journalists, study author Jos Lelieveld, Cyprus Institute professor, said, "It's important to reduce emissions from residential energy use. You can't ask people to stop eating and cooking, but you can provide better technologies".Agricultural emissions tend to be the main drivers of air pollution in highly regulated areas, including the United States, Europe, and Japan.

Delhi has world's deadliest air: Capital's pollution is 10 times higher than WHO limits, finds survey

Date: 18th September, 2015 Source: First Post

Washington: A recent air quality monitoring survey — released on Monday by Greenpeace — has found that the deadly PM2.5 levels in the capital are 10 times higher than the safety limit prescribed by the World Health Organisation (WHO), and four times higher than even the Indian safety limit. Delhi's air is the most toxic in the world due to high concentrations of PM2.5 — particulate matter less than 2.5 micrometres in diameter — that is believed to pose the greatest health risk because it penetrates deeply into lungs. The PM2.5 limit prescribed by WHO is 10 microgrammes per cubic metre, and the Indian limit is 40 microgrammes per cubic metre. PM2.5 are miniscule particles in

the air that reduce visibility, cause the air to appear hazy, and affect respiratory tracts, reports the Daily Mail. Air pollution is killing 3.3 million people a year worldwide, according to a new study that includes this surprise: Farming plays a large role in smog and soot deaths in industrial nations. Scientists in Germany, Cyprus, and Saudi Arabia and at Harvard University calculated the most detailed estimates yet of the toll of air pollution, looking at what caused it. The study also projects that if trends don't change, the yearly death toll will double to about 6.6 million a year by 2050. The study, published on Wednesday in the journal Nature, used health statistics and computer models. About three-quarters of the deaths are from strokes and heart attacks, said lead author Jos Lelieveld, at the Max Planck Institute for Chemistry in Germany. The findings are similar to other, less-detailed pollution death estimates, outside experts said. "About six percent of all global deaths each occur prematurely due to exposure to ambient air pollution. This number is higher than most experts would have expected, say, 10 years ago," said Jason West, a University of North Carolina environmental sciences professor who wasn't part of the study but praised it. Air pollution kills more than HIV and malaria combined, Lelieveld said. With nearly 1.4 million deaths a year, China has the most air pollution fatalities, followed by India with 645,000 and Pakistan with 110,000. The United States, with 54,905 deaths in 2010 from soot and smog, ranks seventh highest for air pollution deaths. What's unusual is that the study says that agriculture caused 16,221 of those deaths, second only to 16,929 deaths blamed on power plants.

In the northeastern United States, all of Europe, Russia, Japan, and South Korea, agriculture is the No. 1 cause of the soot and smog deaths, according to the study. Worldwide, agriculture is the No 2 cause with 664,100 deaths, behind the more than one million deaths from in-home heating and cooking done with wood and other biofuels in the developing world. The problem with farms is ammonia from fertilizer and animal waste, Lelieveld said. That ammonia then combines with sulfates from coal-fired power plants and nitrates from car exhaust to form the soot particles that are the big air-pollution killers, he said. In London, for example, the pollution from traffic takes time to be converted into soot, and then it is mixed with ammonia and transported downwind to the next city, he said.

"We were very surprised, but in the end it makes sense," Lelieveld said. He said the scientists had assumed that traffic and power plants would be the biggest cause of deadly soot and smog. Agricultural emissions are becoming increasingly important but are not regulated, said Allen Robinson, an engineering professor at Carnegie Mellon University who wasn't part of the study but praised it. Ammonia air pollution from farms can be reduced "at relatively low costs," Robinson said. In the central United States, the main cause of deaths from soot and smog is power plants; in much of the West, it's traffic emissions. Jason West and other outside scientists did dispute the study's projections that deaths would double by 2050. West and others said it's likely that some places, such as China, will dramatically cut their air pollution by 2050.

Delhi to record highest number of premature deaths in world due to air pollution

Date: 18th September, 2015 Source: Zee News

New Delhi: A new study has warned that in another 10 years, the national capital of Delhi will record the highest number of premature deaths among all mega cities in the world due to air pollution. According to a team of scientists at the Max Planck Institute for Chemistry in Mainz, by 2025, nearly 32,000 people in Delhi will die as a result of air pollution. However, it said that another Indian city – Kolkata - will record the highest number of such deaths by 2050.

It is reported that the number of deaths will spike between 2025 and 2050 in Kolkata, with about 55,000 due to air pollution - some 3,000 more than Delhi - which will see 52,000 deaths and during the same year. Mumbai will also record 33,100 deaths due to inhaling of polluted air during the period. The study claims that all these three Indian cities will top the list due to toxic chemicals and harmful particles like PM2.5 and 03 in the air. Globally, 3.3 million people die prematurely every year from the effects of air pollution, but the could double to 6.6 million by 2050 if emissions aren't halted, the study noted. With nearly 1.4 million deaths a year, China has the most air pollution fatalities, followed by India with 645,000 and Pakistan with 110,000.

As per a Times of India report, Pakistan recorded the third highest number of deaths due to air pollution in 2010 - 1.10 lakh followed by Bangladesh (91923), Nigeria (89022) and Russia (67152). "Our study indicates that residential energy use is the leading source category, practiced by many people both in the urban and rural environment in India. It is an inefficient form of biofuel combustion that causes a lot of smoke and is the foremost source of premature mortality by both indoor and outdoor air pollution in Asia", Johannes Lelieveld, director at the Max Planck Institute for Chemistry was quoted as saying to TOI. Emphasising the need to look at better alternatives for fuel, the study notes that biofuel use for cooking and heating will become the main killer in India.

Exxon Advertised Against Climate Change for Decades After Top Executives Knew Burning Fossil Fuels Would Warm the Planet

Date: 19th September, 2015 Source: Ecowatch

This week, InsideClimate News published some new revelations about one of the world's biggest oil companies: that scientists working for Exxon knew about climate change as early as 1977. Exxon's own scientists conducted an extensive research program on climate change and "The Greenhouse Effect," running complex CO2 monitoring experiments and publishing peer-reviewed papers, because the company was deeply interested in this emerging threat to its core business, oil and ultimately the company's survival. There is now no doubt that Exxon has known about the science and the risks of global warming for decades. The news will perhaps be of great interest to those lawyers who successfully prosecuted the tobacco industry, which hid its knowledge of the science around tobacco's addiction, and the impact of second hand smoke.

Exxon Advertising Fully Contradicted Exxon Scientists. Because, despite having this breadth of knowledge within its walls, and for many years after these climate science programs were run at Exxon, the company has spent years and millings of dollars funding climate deniers and think tanks who attack the scientific consensus, spreading doubt and uncertainty. Greenpeace has collected data on Exxon's campaign of climate denial for decades. Our ExxonSecrets project and database now shows that has spent nearly $31 million since 1998 funding think tanks and campaigns against the climate science consensus and climate policy progress. For decades, Mobil ran a weekly "advertorial" or "op-ad" on the opinion pages of the New York Times and other papers, ads that continued after Mobil merged with Exxon in 1999. The story of how Mobil managed to secure advertising space on the editorial page of the New York Times and why they did so is another story.

We at PolluterWatch have collected an archive of these ads from the 1970's to 2004. In light of the recent revelations about the company's early understanding of the issue, they're worth re-examining. The ads on global warming in particular set out the history of the companies' campaign against both climate action and the science. The Mobil Ads- In the lead up to the Kyoto Protocol negotiations, Mobil, a prominent member of the Global Climate Coalition, was leading the charge on the "it's not global" message calling for developing countries to be included in emissions reduction targets.

Mobil focused on all the arguments against action on climate change that we still hear today. It claimed that developing country emissions were not addressed (the "blame China" argument). It said the climate models can't be trusted. It called for more research. And it questioned the veracity of climate science. This argument later became the mantra of Republicans and industry opponents of international climate action, turning into a "blame China" campaign that stalled international action for years.

The ExxonMobil Ads- On December 2 1999, the first of the newly-merged ExxonMobil company ads appeared in the New York Times, announcing the merger. And just one week later, on December 9, 1999, the merged ExxonMobil picked up the decades-long New York Times ad campaign with an ad titled: "Tomorrow's energy needs," emphasizing of course the plentiful global supply of fossil fuels, ExxonMobil's preferred energy source. ExxonMobil is still running this argument today, using outdated, business as usual IEA scenarios to emphasize its point, and ignoring any of the IEA's "new policy" scenarios. Interestingly, the new revelations by Inside Climate News show that in the 1970s, Exxon was thinking well beyond oil for a spell, doing advanced research in solar power for example. The Chairman and CEO of the merged giant ExxonMobil was Lee Raymond, who had worked for Exxon since the 1960s. Raymond in fact chaired the American Petroleum Institute's climate change committee, and twice chaired the API itself. Raymond was a hardened climate science denier, and his views were strongly reflected in a new turn in the company's ads. Whereas Mobil had called for more research, and put the blame on developing countries, ExxonMobil embraced those arguments, but turned to outright denial. On March 16, 2000, ExxonMobil's ads continued the onslaught against the Kyoto Protocol and climate science with "Do no harm" that argued a similar line to the "coal will solve poverty" pitch we hear from Peabody Energy today:

VW caught cheating on air-pollution tests

Date: 19th September, 2015 Source: Arkansas Online

WASHINGTON -- Volkswagen AG admitted Friday to systematically cheating on U.S. air-pollution tests for years, leaving the automaker vulnerable to billions of dollars in fines and possible criminal prosecution. The company sold diesel Volkswagen and Audi cars with software that turns on full pollution controls only when the car is undergoing official emissions testing. During normal driving, the cars pollute 10 to 40 times the legal limits, the Environmental Protection Agency said, calling the technology a "defeat device." The EPA on Friday ordered Volkswagen to fix the estimated 482,000 cars. "Using a defeat device in cars to evade clean-air standards is illegal and a threat to public health," said Cynthia Giles, the EPA's assistant administrator for the Office of Enforcement and Compliance. "Working closely with the California Air Resources Board, EPA is committed to making sure that all automakers play by the same rules. EPA will

continue to investigate these very serious violations." She added, "We expected better from Volkswagen."

The German automaker said in a statement it is cooperating with the investigation, but declined to comment further. Agency officials said the car company had admitted to the use of the defeat device. The cars, all built in the past seven years, are the VW Jetta, Beetle, Golf and Passat models, as well as the Audi A3. The vehicles contain a device programmed to detect when they are undergoing official emissions testing, the EPA said, adding that the cars only turn on full emissions-control systems during that testing. The controls are turned off during normal driving, the EPA said.

The EPA called on VW to fix the cars' emissions systems but said car owners do not need to take any immediate action. The violations do not present a safety hazard and the cars remain legal to drive and sell, the EPA said. The EPA said VW faces fines of up to $37,500 per vehicle for the violations -- a total of more than $18 billion. No final total was announced. California issued a separate compliance order to VW, and officials announced an investigation by the California Air Resources Board. Despite the seriousness of the violation, the EPA said VW will be given "a reasonable amount of time to develop a plan to complete the repairs," including the repair procedure and manufacture of any needed parts.

It could take up to a year to identify corrective actions, develop a recall plan and to issue recall notices, the EPA said. Environmental groups complimented the EPA and California for enforcement of clean-air laws. "The charges here are truly appalling: that Volkswagen knowingly installed software that produced much higher smog-forming emissions from diesel vehicles in the real world than in pre-sale tests," said Frank O'Donnell, president of Clean Air Watch, a Washington-based advocacy group.

O'Donnell accused VW of "cheating not just car buyers but the breathing public." He said the charges undercut industry rhetoric about "clean diesel" cars. The Volkswagens likely perform better with the emissions controls defeated than they do with them on, said Aaron Bragman, Detroit bureau chief for the Cars.com automotive shopping and research site. Otherwise, he said, there would be no reason to have a setting that turns on the controls for tests and turns them off for regular driving.

"Obviously it's changing the way the engine operates somehow that may not be pleasing to consumers," he said. "It would follow that it would put it into a very different feel in terms of operation of the vehicle." But Bragman said other countries may allow different modes for testing and normal driving. "This is several steps beyond the violations that we've seen from other auto companies," said Tyson Slocum, director of the energy program at Public Citizen, a consumer advocacy group. "They appear to have designed a system with the intention to mislead consumers and the government. If that's proven true, it's remarkable and outrageous. It would merit a heck of a lot more than just a recall and a fine. We would see criminal prosecution." It had been surprising that Volkswagen diesel models were able to get impressive horsepower output and fuel economy performance using less costly pollution-control technology than employed in some other automakers' engines, said Bill Visnic, an independent auto analyst in Weirton, W.Va. The software workaround might have been what enabled the performance without the expected pollution controls, he said. "You can't have anything like this that's intended to game the system," Visnic said. It would be very difficult for Volkswagen to add new pollution-control equipment to the existing engines, so the only way to fix this may be to cut the horsepower and fuel economy performance of the models to lower the pollution output once the software is eliminated, said Visnic, who has been studying engine design for two decades.

Luke Tonachel, director of clean vehicles and fuels project at Natural Resources Defense Council, was puzzled as to why VW would have to cheat. "Other vehicle manufacturers don't appear to be doing the same thing but still get good performance from diesel vehicles so it is hard to say why VW was doing this," Tonachel said. But he was angered by VW's actions. "Tightening government standards are making cars cleaner and it is disturbing to learn that VW is flouting those standards," Tonachel said.

Consumers should not read VW's action as an indictment of diesel cars, said Don Anair, research director for the Clean Vehicles Program at the Union of Concerned Scientists.

"There has been major progress in advancing emissions controls for diesels over the past 10 years," Anair said. "That's a fact. This is a problem with the manufacturer, not the technology." In recent years, the federal government has aggressively pursued automakers for failing to disclose safety violations. On Thursday, General Motors agreed to pay the federal government a $900 million penalty for failing to disclose defects in ignition switches, a deal that disappointed many of the victims' families. In 2013, Toyota recalled more than 10 million vehicles and agreed to pay the United States government a $1.2 billion settlement, admitting that it concealed information from consumers and regulators about problems with gas pedals that caused the cars to accelerate unexpectedly.

World's first smog filtering tower goes on tour

Date: 19th September, 2015 Source: The Guardian

A seven metre tall tower designed by Daan Roosegaarde filters dirty air, releasing bubbles of smog free air. Does it detract from tackling causes of air pollution? The Dutch city of Rotterdam has opened the world's first smog-free tower.

Co-designed by Dutch artist Daan Roosegaarde, the seven-metre high tower sucks in dirty air like a giant vacuum cleaner. Ion technology then filters it, before returning bubbles of smog-free air through the tower's vents. It is able to clean 30,000 cubic metres of air an hour, according to Roosegaarde. Clean air is a precious commodity. A new study has found that more than three million people die prematurely due to air pollution each year. This is projected to double by 2050 if the problem isn't tackled. "The smog-free tower contributes to a debate that shouldn't be confined to politics," says Rotterdam's mayor, Ahmed Aboutaleb. "Air pollution is a matter that affects us all, and it requires a serious discussion. But we do need innovators like Daan Roosegaarde to start the conversation at another level." Roosegaarde has far-reaching ambitions for the tower, which is part of his Smog-Free Project. "It's not only intended to be a local solution that creates clean parks or playgrounds," he explains. "It's also a sensory experience of a clean future, a place where people can experience clean air." He hopes to bring together governments, NGOs, the clean tech industry and ordinary citizens. "We can work together to make whole cities smog-free," he says. "We can wait – or we can participate." The man behind the tower's Hoover-like cleaning filter is Bob Ursem, a nanoparticles expert at the Delft University of Technology. In outdoor tests, the filter has cleaned the air by 60%, measured by the share of nanoparticles removed, and in indoor environments the reduction is even more significant, he claims. "We've installed it in a parking garage here in the Netherlands and it sucks and cleans both the inside and outside air," Ursem says. "Inside the parking garage, the air became 70% cleaner." But it's not Rotterdam where the need for air filters is greatest. According to the World Air Quality Index, most of western Europe enjoys clean air, with exceptions including London, where air quality is classified as moderate. It's a different story in the booming cities of the developing world and the Bric countries. Air quality is much poorer in China and Malaysia, for example, where most cities feature air deemed unhealthy for sensitive groups. The air in several cities, including Delhi, has been classified as very unhealthy, indicating emergency conditions.

The tower's creators recognise this and, after its run in Rotterdam, the tower moves to Beijing, a city suffering from very poor air quality. Earlier this month, Chinese authorities shut hundreds of factories in

Beijing and banned half of the country's 5m cars from the roads in preparation for a gigantic military parade. In the days leading up to the parade, the air quality improved, resulting in pristine blue skies for the parade, only to return to smog when the ban was lifted. According to Ursem, Rotterdam's filter can easily be scaled to help alleviate Beijing's smog. Yet while smog filters may offer some hope to suffering residents of booming cities, as the military parade ban suggests, no one technology or tactic can be as effective as working on the root causes of air pollution. In the tower's case, the filters would be costly too . While neither Roosegaarde nor Ursem would disclose the cost of the tower, the filters they have developed range in price from €1,600 to more than €118,000.

Aboutaleb acknowledges the innovation's limitations: "It may not be the answer to all our problems, but this shouldn't be the main objective," he says. "The objective must lie in a different perspective, a refreshing approach to a global problem."

Esben Alslund-Lanthén, a researcher at the Danish sustainability thinktank Sustainia, says the filter is not a large-scale environmental solution but can be useful as an awareness-building: "It shows how polluted our cities are, especially from energy and transportation". A person who has inhaled the tower's healthy air may find it a shock to return to the more polluted city air outside the clean bubble. "Whether the air filter is scalable or not depends not just on its technical viability, but on whether city governments are good at learning from each other to bring about change," argues Sascha Haselmayer, founder and CEO of Citymart, a firm that connects urban innovation projects with cities.

Some local politicians seem keen to encourage clean air-thoughts among their residents, perhaps hoping that it will make them more amenable to restrictions on fuel and dirty energy. New York City, Ursem reports, has just ordered 12 street-cleaning cars featuring the air filter. There will be a pilot air-filter project in Eindhoven, and Ursem's team is in negotiations for a similar project in Paris.

New research suggests even small amounts of air pollution can make you sick.

Date: 19th September, 2015 Source: Pacific Standard

Airborne particulate matter—from car exhaust, wildfires, coal-burning power plants, and many other sources—is terrible for your health. Studies have proven beyond doubt that inhaling these tiny particles increases the risk of heart attacks, asthma, and lung dysfunction, to name just a few disorders. The only question now is: How much particulate matter can be safely inhaled? The answer appears to be "very little." A massive new study, published this week in the journal Environmental Health Perspectives, suggests even small amounts of particulate matter significantly threaten your well-being. Researchers at New York University–Langone Medical Center matched a health-status database of 566,000 people between the ages of 50 and 71 with the air-pollution levels in their home states (California, Florida, Louisiana, New Jersey, North Carolina, and Pennsylvania, as well as the Detroit and Atlanta metropolitan areas). They found that an increase of 10 micrograms of PM 2.5—particles of less than 2.5 microns in diameter—per cubic meter of air raises the risk of death from heart disease by 10 percent. The risk of death from all causes rises by three percent. Non-smokers, whose lungs aren't already undermined by the effects of cigarettes, suffer the most, experiencing a 27-percent increase in the rate of death from respiratory illness. The tiny bits collect in the parts of the lung where gas exchange occurs, preventing oxygen from entering the bloodstream and carbon dioxide from escaping it. This is a correlational study, which looks at general associations between disease and risk factors, so a caveat is in order. The researchers did not (and,

realistically, could not) prove that air pollution caused or even directly contributed to any individual death. The study only shows that, in places with higher levels of particulate matter, people were more likely to die from these heart or respiratory ailments. Although the authors used statistical tools to rule out other potential causes for the health problems—factors like age, ethnicity, weight, alcohol consumption, etc.—those tools are imperfect.

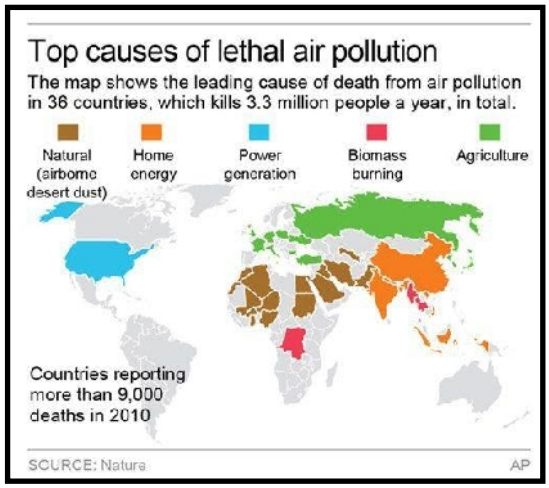
When you read about research that finds correlations, you should always ask two questions. First, is there a plausible mechanism for the relationship? Studies linking obesity to premature death, for example, are inherently more credible than research linking prayer to improved health outcomes, because we understand how obesity affects multiple organ systems. Second, is the study consistent with other research? A correlational study that completely upends conventional wisdom deserves extra scrutiny. This study is on sound footing on both counts.

Doctors have several theories to explain why inhaling pollution would harm your heart and lungs. The tiny bits collect in the parts of the lung where gas exchange occurs, preventing oxygen from entering the bloodstream and carbon dioxide from escaping it. Especially small particulate matter can slip through the body's filters and enter directly into the blood, where it can threaten other organs. The newly released findings also fit squarely within existing research on particulate matter and health. Hundreds of studies have shown that air pollution not only damages the heart and lungs but also increases the risk of premature birth, low birth weight, diabetes, and cancer.

This study is scary. The average PM 2.5 concentration in many U.S. cities is above 10 microgams per cubic meter. New Yorkers, Angelenos, Philadelphians, Chicagoans, and San Diegans are all inhaling too much particulate matter. But there's another way to look at this study: as an opportunity. The Environmental Protection Agency is now collecting data to update national particulate matter standards. If even a small increase in PM 2.5 damages health, any action we take to reduce particulate matter pollution—even modest actions—will improve our health. Every little bit counts.

Study: Air pollution kills 3.3 million worldwide, may double

Date: 20th September, 2015 Source: KRQE



WASHINGTON (AP) — Air pollution is killing 3.3 million people a year worldwide, according to a new study that includes this surprise: Farming plays a large role in smog and soot deaths in industrial nations. Scientists in Germany, Cyprus, Saudi Arabia and Harvard University calculated the most detailed estimates yet of the toll of air pollution, looking at what caused it. The study also projects that if trends don't change, the yearly death total will double to about 6.6 million a year by 2050.

The study, published Wednesday in the journal Nature, used health statistics and computer models. About three quarters of the deaths are from strokes and heart attacks, said lead author Jos Lelieveld at the Max Planck Institute for Chemistry in Germany. The findings are similar to other less detailed pollution death estimates, outside experts said. "About 6 percent of all global deaths each year occur prematurely due to exposure to ambient air pollution. This number is higher than most experts would have expected, say, 10 years ago," said Jason West, a University of North Carolina environmental sciences professor who wasn't part of the study but praised it. Air pollution kills more than HIV and malaria combined, Lelieveld said. With nearly 1.4 million deaths a year, China has the most air pollution fatalities, followed by India with 645,000 and Pakistan with 110,000.

The United States, with 54,905 deaths in 2010 from soot and smog, ranks seventh highest for air pollution deaths. What's unusual is that the study says that agriculture caused 16,221 of those deaths, second only to 16,929 deaths blamed on power plants.
In the U.S. Northeast, all of Europe, Russia, Japan and South Korea, agriculture is the No. 1 cause of the soot and smog deaths, according to the study. Worldwide, agriculture is the No. 2 cause with 664,100 deaths, behind the more than 1 million deaths from in-home heating and cooking done with wood and other biofuels in developing world.

The problem with farms is ammonia from fertilizer and animal waste, Lelieveld said. That ammonia then combines with sulfates from coal-fired power plants and nitrates from car exhaust to form the soot particles that are the big air pollution killers, he said. In London, for example, the pollution from traffic takes time to be converted into soot, and then it is mixed with ammonia and transported downwind to the next city, he said. "We were very surprised, but in the end it makes sense," Lelieveld said. He said the scientists had assumed that traffic and power plants would be the biggest cause of deadly soot and smog. Agricultural emissions are becoming increasingly important but are not regulated, said Allen Robinson, an engineering professor at Carnegie Mellon University, who wasn't part of the study but praised it. Ammonia air pollution from farms can be reduced "at relatively low costs," Robinson said. "Maybe this will help bring more attention to the issue." In the central United States, the main cause of soot and smog premature deaths is power plants; in much of the West, it's traffic emissions.Jason West and other outside scientists did dispute the study's projections that deaths would double by 2050. That's based on no change in air pollution. West and others said it's likely that some places, such as China, will dramatically cut their air pollution by 2050. And Lelieveld said that if the world reduces a different air pollutant — carbon dioxide, the main gas causing global warming — soot and smog levels will be reduced as well, in a "win-win situation in both directions."

Clean air leaders: The U.S. and China put the heat on other nations

Date: 20th September, 2015 Source: Pittsburgh Post-Gazette

No nation will take curbing pollution seriously unless the world's biggest polluters do. That's why it was important for the top negotiators for China and the United States to reach and announce details last Tuesday of their plans for cutting greenhouse gas emissions.

In 2014 China accounted for 24.1 percent of the world's carbon dioxide emissions, according to the World Resources Institute. The United States followed with 14.9 percent. The next major polluters are: the European Union, 10.3 percent; India, 5.7 percent; Russia, 5.4 percent; and Japan, 3 percent. Every industrialized country does its share to foul the air. That's why each must figure out how to get emissions under control if the world is to head off the potentially disastrous effects of climate change. Strong leadership is needed at the top of the pollution chain. Fortunately, the world saw some of that with the historic agreement reached last November between China and the United States to make deep cuts in emissions over the next two decades.

The United States pledged to slash carbon pollution by up to 28 percent before 2025; China said it would bring to an end its emissions growth within the next 15 years. Last week the two countries outlined how they planned to get there, in part to challenge other nations to submit greenhouse gas reduction plans before a United Nations summit in Paris this fall. While Congress has blocked many of the Obama administration's anti-pollution initiatives, U.S. negotiators highlighted various efforts, including tougher regulations by the Environmental Protection Agency on power-plant emissions and various states' and cities' moves to improve air quality.China outlined a massive cap-and-trade proposal that would reduce greenhouse gases nationwide. Seven Chinese provinces are already piloting the system.

These commitments put the onus on significant polluters such as India and Brazil, which have yet to submit their emissions-cutting plans to the United Nations. Both large and small polluters foul the Earth's atmosphere; both have to play a part in cleaning it up.

Climate change becomes a matter of mental health

Date: 20th September, 2015 Source: Portland Press Herald

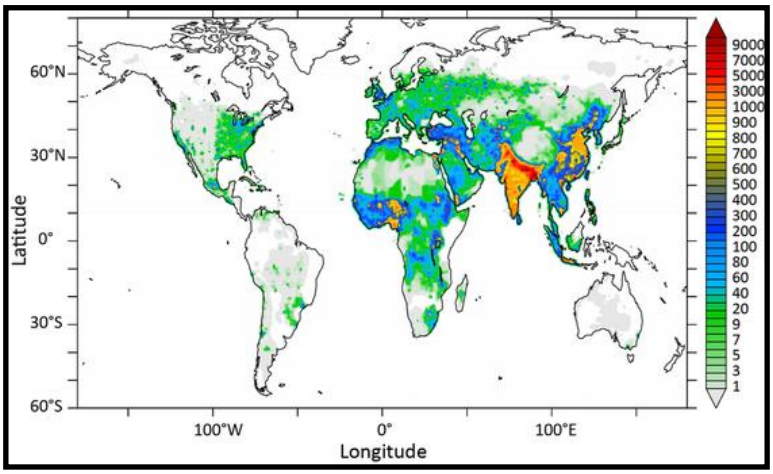
Its effects – present and future – weigh heavy on many in Maine. The remedy for that anxiety, according to some researchers: action. In early August, as a freakish hailstorm ripped through her Deering neighborhood, Jeanne Paterak pulled out her smartphone and shot some video of the hail – which meteorologists later said were pingpong-ball sized – as it pounded her yard and piled up on her patio. She and her two children were enthralled, although she was worried about her friend's new Honda parked in the driveway. After the worst of the storm had played itself out, she took a quick look at the urban "mini-farm" on her family's half-acre plot. There were peaches and pears on the ground and the pumpkins had been treated nearly as roughly as if a crew of disaffected Halloween trick-or-treaters had stomped through the patch. Maybe the bruised and beaten tomatoes would rebound. She didn't visit the garden until late in the next day, only venturing out after her husband came in and reported that it looked awful. Two of the solar hot water tubes on their roof were broken, 85 percent of the tomatoes and 70 percent of the fruit ruined, many of their row crops damaged. As many of us are wont to do when we're feeling sad, mad or bad, Paterak Googled. She was disappointed that news coverage of the hail didn't include any mention of the big picture; it seemed to her that such a sudden and extreme weather phenomenon had to be associated with climate change. Meteorologists had noted that such violent hail was unusual in Portland, where the cooler, stable air coming off the ocean doesn't customarily produce the kind of conditions that create hail. But Rolling Stone had coincidentally published a story that day, titled "The Point of No Return: Climate Change Nightmares Are Already Here." When you're feeling sad, mad or bad, reading about deadly heat waves in Pakistan and India, or flaming rain forests in Washington state, or the epic El Niño on the way is not a pick-me-up. It might provide comforting perspective if these places were, say, on another planet. Meanwhile Paterak noted that in Maine, a violent hailstorm had all but wiped out the apple crop at the University of Maine's research farm in Monmouth as well as extensively damaging an orchard in Manchester. Was this kind of punishing hailstorm the new normal, Paterak wondered? She didn't exactly take to her bed – there was a garden to clean up after all – but she did feel a sense of despair. Was her family, with their efforts to be self-sustaining, their one (energy-efficient) car, their bike riding, their passion for canning and freezing those tomatoes, building toward resiliency or is climate change too much of a Big Bad to fight off with Priuses and homegrown peaches? "The hardest part is juggling the worry with that sense that you've got to just keep doing what you can do," Paterak said a month after the storm.

Study: Air pollution deaths to double in our lifetime

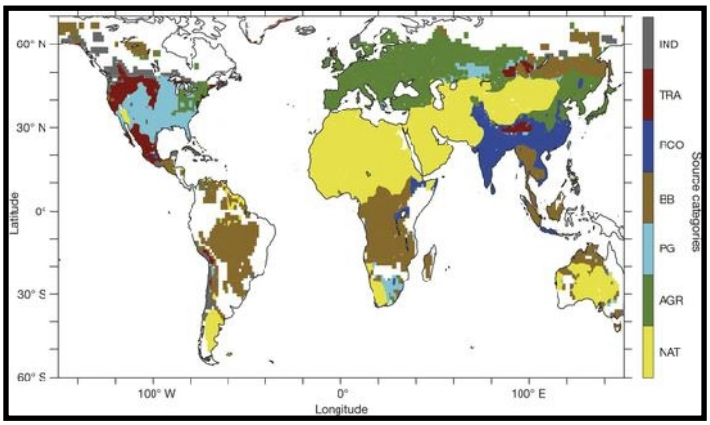
Date:21st September, 2015 Source: The Weather Network

Air pollution kills more than three million people annually -- and a new study says that number is set to double by 2050 if Earth's emissions aren't curbed. Researchers at the Max Planck Institute for Chemistry in Mainz, Germany found that death by air pollution exposure was especially common in Asia. It claims 1.4

million people in China and 650,000 people in India annually. Other global hotspots include Nigeria, which has the highest population of any country in Africa, the Indonesia island of Java, and parts of the Middle East along the Nile, Tigris and Euphrates rivers.



In the European Union, with a population of around half a billion people, air pollution is responsible for 180,000 deaths annually, highest in Germany at 35,000. Pollution studies with a dire message about Asian cities aren't uncommon. A recent study put the daily death rate from air pollution related causes at 4,000 per day in China, or almost 1 in 5 of all deaths. The Max Planck study, however, claims to be a first, in that scientists from Germany, the United States, Cyprus and Saudi Arabia took a look at mortality rates from various emission sources, from industry and agriculture down to transportation and home heating, and came up with the data represented in the map below.



Source categories (colour coded): IND: industry; TRA: land traffic; RCO: residential and commercial energy use (for example, heating, cooking); BB: biomass burning; PG: power generation; AGR: agriculture; and NAT: natural. Source: Nature

In much of Eurasia, including parts of northern China and Japan, air pollution from agricultural activity is the leading cause of premature deaths. For most of southern China and much of India, however, the leading cause is smog from what researchers call small domestic fires, likely for cooking or heating. They make up a third of all domestic premature deaths from air pollution, and the researchers call them the worst air polluters. "Although these are low-key activities, they add up, particularly if the majority of the population uses them," Johannes Lelieveld, the Max Planck Institute's director, says. Looking at Canada, deaths from agricultural air pollution are most common along the Windsor-Quebec City corridor, while on the southern Prairies and British Columbia, industrial pollution seems to be the most harmful, while in the Rockies, pollution from transportation-related activities seems the most common. As for the kind of deaths caused by air pollution, the study found strokes and heart attacks accounted for almost three quarters, with lung cancer and respiratory diseases making up 27 per cent.

Air pollution in Delhi may claim 30,000 lives by 2025

Date: 21st September, 2015 Source: Skymet

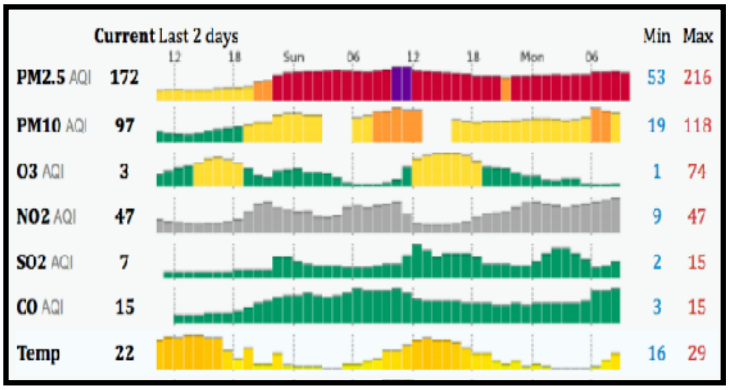
There's more bad news for every environmentalist out there. Air pollution levels in the national capital have been the talk of the town for long now. But a new study has revealed shocking estimates about premature deaths in New Delhi. As per a study conducted by Germany's Max Planck Institute for Chemistry, New Delhi's air will cause as many as 30,000 deaths in the year 2025. Not only this, several cities across the country will see a significant rise in the number of deaths due to air pollution.As the quality of air in the country deteriorates further, by 2050, cities like Delhi, Mumbai, and Kolkata could witness up to 130, 000 deaths. As per the data available right now, Kolkata's air will be the deadliest by

2050 claiming as many as 54, 800 lives.From chronic obstructive pulmonary diseases to acute respiratory illnesses, toxic air in some of India's biggest cities will lead to thousands of premature deaths. Heart diseases, cerebrovascular diseases, and lung cancer will also plague the populace residing in these parts. As per experts, residential energy is the main source of premature mortality in urban as well as rural areas. Despite several reports of degrading PM2.5 particulate matter levels in several major cities across the country, there's enough evidence to doubt the attitude of local authorities and government units towards this grave issue. There's no denying the fact that with an increase in purchasing power, citizens in India are buying more every minute. The sale of automobiles and two-wheelers has also gone up. This has led to an unprecedented rise in air toxicity levels in many cities across the country. Delhi's top government hospital All India Institute of Medical Science also reported an increase of 300% in cases related to respiratory ailments. Several eco-friendly measures have been taken by Delhi government and environment-friendly steps have been planned at the center too. But once again, the story of improper and ineffective implementation of plans and policies, continues to plague the Indian concern for the environment.

Yes, Beijing's marathon was polluted, but it wasn't the scene of seven heart attacks

Date: 21st September, 2015 Source: Quartz

About 30,000 runners competed in Beijing's annual marathon this past weekend, despite heavy and visible air pollution. Participants included professional runners like Kenya winner Mariko Kipchumba as well as tens of thousands of amateurs, some of them in cosplay costumes. The air was bad. Pollution on race day, Sept. 20, peaked just before noon—or four hours and 30 minutes after the race started, about the time that the average amateur runner would complete the marathon. The air quality index for small particulate matter known as PM 2.5 was as high as 216, according to air quality monitors, a level considered "very uhealthy" by the US EPA. Perhaps that explains why a report that six runners and a race official had heart attacks during the race is being quickly picked up by English-language papers (paywall) and foreign websites.



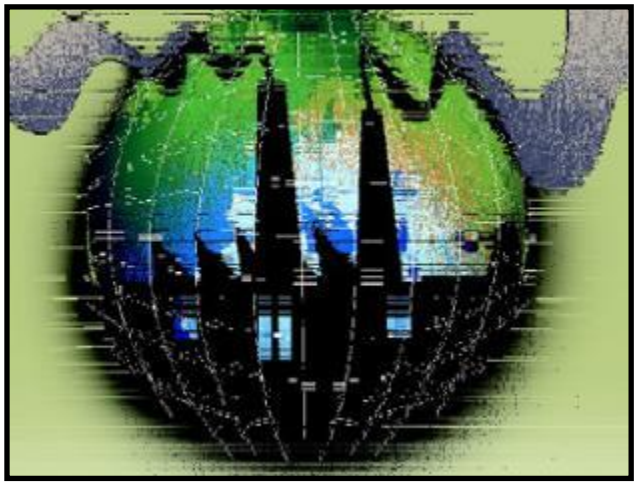
That report, though, appears to be something of an exaggeration, one that may have its roots in a Weibo post by the Legal Evening News (link in Chinese) claiming a 30-year old runner collapsed from a heart attack. Most race coverage in China completely refutes it. The Beijing Times reported that eight runners went to the hospital, just one from a heart attack. One 52-year old runner and one judge had a heart attack, the Beijing

Morning Post reports, while three other runners were taken to the hospital for dehydration. The paper said that four people remain in the hospital Monday morning. Seven heart attacks during a marathon would be an astounding number.

A study published in the New England Journal of Medicine in 2012 looked at a decade (pay wall) of marathon running and 11 million runners, and found that just 59 of them had had heart attacks during a race. In the nearly five decade history of the New York Marathon, where over 50,000 runners compete, only three participants have had heart attacks before or during the race. But bad news about China, and particularly about pollution in China is quick to spread on the internet. That's in part because, as Quartz reported last year, foreigners are "so convinced China is a dystopian hellscape they'll share anything that confirms it." An earlier version of this article incorrectly identified PM 2.5 as "large" particulate matter, and incorrectly identified how it was measured.

Delhi may remain among top three air polluted cities till 2050: Study

Date: 21st September, 2015 Source: Economics Times



NEW DELHI: Late last week, a new research published in science journal 'Nature' said Delhi had the world's second highest number of deaths caused by sources of air pollution and, further projected that in the absence of adequate measures to combat it, the city may continue to be among the top three air polluted cities till 2050. Less than a year after the World Health Organisation report, which called Delhi world's most polluted city, the recent study has come up with alarming projections of deaths due to air pollution. Prof. Dr. Jos Lelieveld, lead author of the study published in 'Nature' told ET in an exclusive interview over email, "There is vast observational evidence that air quality in India, especially during the dry season over the Indo-gangetic plane, is among the worst worldwide. There is also a large body of evidence that links poor air quality to many diseases and premature mortality." Experts as well as campaigners agree that air pollution, particularly the most deadly PM 2.5 pollutant, is far from being reigned in. According to Dr. Gurfan Beig, Project Director of SAFAR, "There is no evidence to show that air quality is improving in NCR. In fact, during this year's monsoons, when PM 2.5 pollution reduces, it was relatively much more than previous years."

How strict California rules on emissions led to lower cancer risk

Date: 21st September, 2015 Source: Los Angeles Times

California has made tremendous progress cleaning its once-notorious air pollution over the last generation, with Los Angeles smog easing in response to the state's ever-stricter emissions standards. On Monday, there was more good news. The Air Resources Board reported that Californians' cancer risk from toxic

air pollution has declined 76% over more than two decades, a trend the agency attributes to the state's array of regulations targeting everything from diesel trucks to dry cleaners. State scientists measured the drop from 1990 to 2012 by tracking airborne concentrations of the seven toxic air contaminants that are most responsible for increasing cancer risks. They include the particulate matter in diesel exhaust, benzene from gasoline, perchloroethylene emitted by dry cleaners and hexavalent chromium from chrome plating operations.

The authors of the study, published in the journal Environmental Science & Technology, said they were able to link declines in toxic compounds to specific policies, including rules targeting exhaust from diesel trucks, gasoline vapors and emissions from dry cleaners. When California required reformulated gasoline in the mid-1990s, for instance, levels of benzene in the air dropped immediately, said Álvaro Alvarado, a toxicologist at the Air Resources Board and an author of the study. Concentrations of diesel particulate matter — the largest contributor to airborne cancer risk in the state — declined more than 68% in California over the 23-year study period, the agency found, largely because of state requirements for cleaner fuels and strict emissions-control rules for diesel trucks adopted in 2008.

"This is real-world proof that the regulations are having the kind of impact that we had hoped for," Alvarado said. The reductions took place even as California's population and economy grew and the number of driving miles increased. California has fought to curb smog for more than 50 years, but the state did not begin targeting toxic air contaminants until the 1980s. The new findings mirror other recent studies that have found big drops in levels of cancer-causing air pollutants and show Californians are reaping the benefits of the state's pollution regulations with stronger lungs and better health.

A study last year by the South Coast Air Quality Management District found a 65% drop in cancer risk from toxic air pollution since 2005 across that agency's four-county jurisdiction. Despite that progress, California still has the nation's worst air pollution and significant obstacles to clean air remain. In one recent development, state environmental officials now estimate the cancer risk from toxic air contaminants is nearly three times what experts had previously thought. Alvarado and other officials say they also remain concerned about unacceptably high pollution levels in many air toxics "hot spots," especially in neighborhoods near some of Southern California's biggest pollution sources: freeways, rail yards, ports and other busy transportation corridors. "Our regulations are still phasing in," Alvarado said. "So while it has gone down a lot, we expect it to continue."

Mapping the World's Air Pollution in Real Time

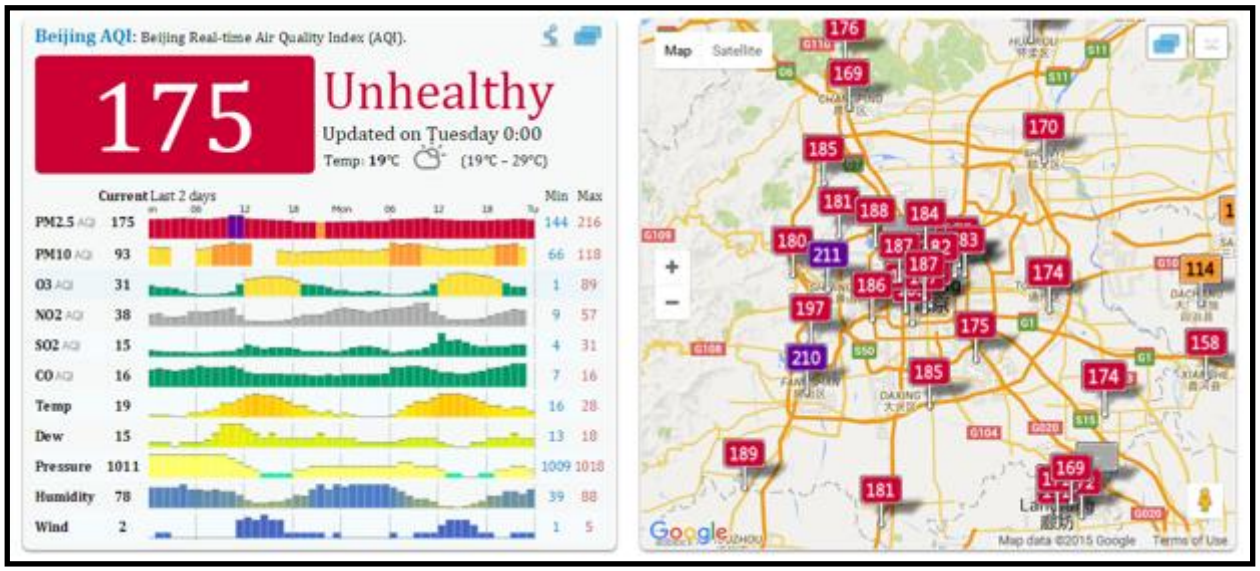
Date: 21st September, 2015 Source: City Lab

A new interactive map draws data from more than 5,900 sources in nearly a thousand cities around the globe. Worldwide, outdoor air pollution causes more than 3 million premature deaths each year. While some cities have already reached hazardous levels of air pollution—such as Delhi, India, with smog practically covering the city daily—others are coming dangerously close. This is according to a new interactive map detailing most of the world's air quality with real-time data.

The map comes from Beijing-based environmental group Air Quality Index China, which worked with environmental protection agencies in more than 70 countries. It continuously collects data from more than 5,900 feeds coming from more than 8,000 air-quality-monitoring stations in nearly a thousand cities. Only feeds from government agencies are used, according to the website ("no DIY or amateur monitoring stations data" here). The map refreshes every 15 minutes.

AQI	Air Pollution Level	Health Implications
0 - 50	Good	Air quality is considered satisfactory, and air pollution poses little or no risk
51 - 100	Moderate	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
101-150	Unhealthy for Sensitive Groups	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
151-200	Unhealthy	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects
201-300	Very Unhealthy	Health warnings of emergency conditions. The entire population is more likely to be affected.
300+	Hazardous	Health alert: everyone may experience more serious health effects

Each city's reading on the map is based on the concentration of fine particulate matter (PM 2.5) and rated on the U.S. EPA's 0-500 Air Quality Index scale, which grades air according to how it affects public health. Studies have long linked smog to a slew of health concerns, from increased risk of heart attack to impaired cognitive development to respiratory problems. A quick glance reveals the stark contrast between China and the United States. In China, most cities hover around the "unhealthy" zone, with some cities in the northern part of the country falling into the "very unhealthy" category. Zoom in on Beijing and you can see that for the past two days, the air quality index has fluctuated between 175 and 216.



Meanwhile in the U.S., the air quality is mostly in the "good" zone, with some southern cities falling into the yellow "moderate" category. According to the map, the city that's recorded the worst air quality at the time of this writing is Buffalo, New York, which had an AQI of 126.

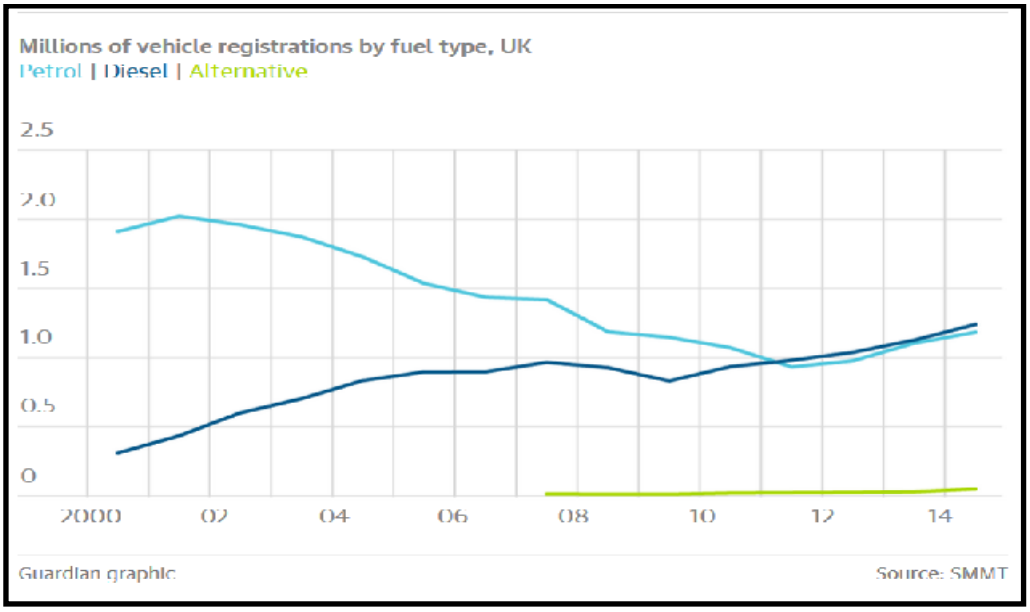
Mapping real-time updates can help officials understand how far pollution has spread from a particular city, and put adequate pollution-reducing policies in place before the air reaches "hazardous" levels. However, the map isn't complete. Right now, the map includes major cities in developing countries, including Delhi, India—which recorded an AQI of 317—and Sao Paulo, Brazil. But it still lacks data for much of Africa, South America, and the Middle East. That's a problem, considering developing countries in these regions are rapidly urbanizing and starting to see dangerously high levels of air pollution. In Nigeria, for example, as much as 94 percent of the population breathes air with pollution levels that exceed what the World Health Organization deems safe, reported Quartz. But AQICN says that it's working to increase its coverage and aims to gather data from 10 to 20 percent more stations every year.

The rise of diesel in Europe: the impact on health and pollution

Date: 22nd September 22, 2015 Source: The Guardian

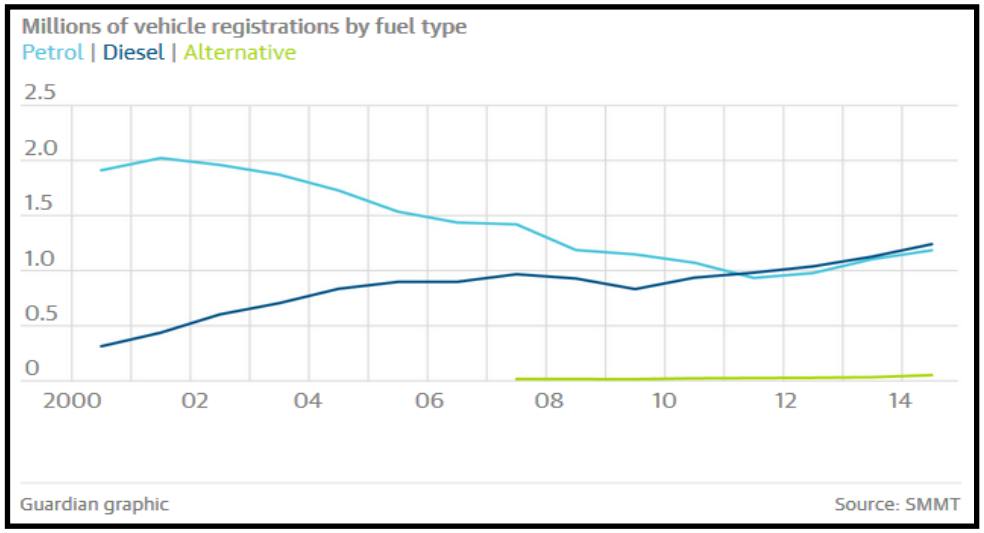
In a bid to reduce CO2 emissions in the 90s, Europe backed a major switch from petrol to diesel cars but the result was a rise in deadly air pollution.Volkswagen's rigging of emissions tests for diesel cars comes after nearly 20 years of the technology being incentivised in Europe in the knowledge that its adoption would reduce global warming emissions but lead to thousands of extra deaths from increased levels of toxic gases. Diesel was a niche market in Europe until the mid-1990s, making up less than 10% of the car fleet. Diesels produce 15% less CO2 than petrol, but emit four times more nitrogen dioxide pollution (NO2) and 22 times more particulates - the tiny particles that penetrate the lungs, brain and heart.

Following the signing of the Kyoto protocol climate change agreement in 1997, most rich countries were legally obliged to reduce CO2 emissions by an average of 8% over 15 years. Japanese and American car makers backed research into hybrid and electric cars, but the European commission was lobbied strongly by big German car makers BMW, Volkswagen and Daimler, to incentivise diesel. A switch to diesel was said by the industry to be a cheap and fast way to reduce the carbon emissions that drive climate change. Petrol, diesel and alternative fuels.



The subsequent EC 1998 Acea agreement with all European car makers was backed by then EU transport commissioner Neil Kinnock and UK environment secretary John Prescott. It committed passenger car-makers to reduce CO2 emissions by 25% over 10 years. “It was practically an order to switch to diesel. The European car fleet was transformed from being almost entirely petrol to predominantly diesel. Britain, along with Germany, France and Italy, offered subsidies and sweeteners to persuade car makers and the public to buy diesel,” said Simon Birkett, director of the Clean Air London group.

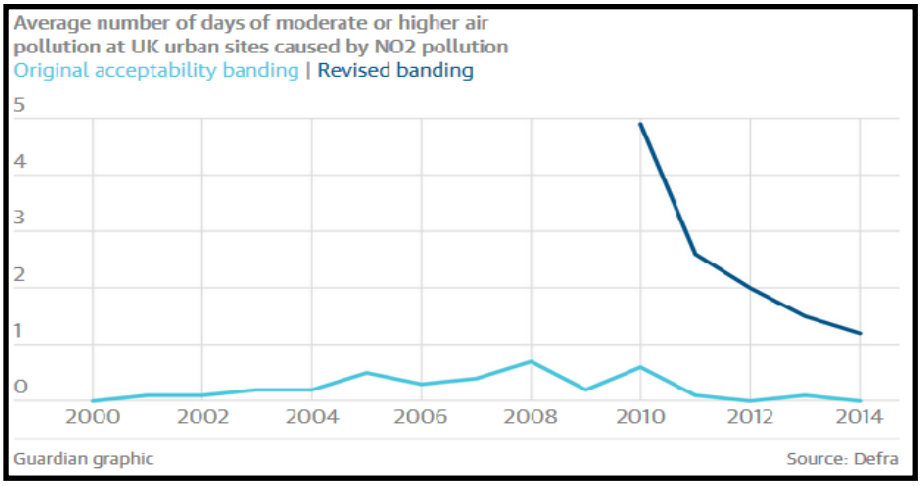
Petrol, diesel and alternative fuels



The European auto industry ramped up diesel engine production. Under EU pressure, governments kept the diesel price below that of petrol. In the UK, the amount motorists paid in vehicle excise duty was linked to cars’ CO2 emissions, effectively incentivising people to buy diesels. “Diesel cars should attract less vehicle tax than their petrol equivalents because of their better CO2 performance,” said then chancellor Gordon Brown in 1998. The results were dramatic, says the Society of motor manufacturers and traders (SMMT). From being a quirky choice, diesel went mainstream in Europe. Its market share in the UK rose from under 10% in 1995 to over 50% in 2012. Britain now has 11.8m diesel cars in use, making up one of the greatest diesel car fleets in the world. But the trade-off between reducing climate emissions and increasing health problems was not widely debated, say civil servants and politicians. In addition, they say, carmakers found it easy to cheat the system. “Diesel was seen as a good thing because it produces less CO2, so we gave people incentives to buy diesel cars,” said Martin Williams, professor of air quality research at King’s College London since 2010, and former head of the government’s air quality science unit. “The [emission] tests were simply not stringent enough. They were devised by a UN committee based in Geneva called the

World Forum for Harmonisation of Vehicle Regulations, which was dominated by people from the car industry. “What’s more, it was easy for some manufacturers to calibrate cars’ computers to spot when the car was being tested and reduce emissions until the test was over,” he told the Sunday Times in July.

Nitrogen dioxide pollution



avid Fisk, chief scientist and policy director in the department of environment and transport in the 1990s, told the Guardian that there had been “concern” in government when it was proposed that diesel be backed over petrol.

> “The motor manufacturers made a démarche to the department of the environment, showing that a major switch to diesels would lead to a substantial drop in CO2 emissions,” Fisk said. He added that the air quality division in the then-Department of the Environment, Transport and the Regions (Detr) saw there was a problem he said – that local air pollution would increase as a result – so a national system of air quality standards was created.

Former Greenpeace UK chief Stephen Tindale, who was working on air pollution in the department of the environment at the time, remembers a battle between environment and air pollution divisions. “Air quality was just not on the political agenda in the late 1990s. In 1997, Labour’s policy was for a 20% cut in CO2 emissions by 2020. Tony Blair wasn’t obsessed with climate but he saw the political and soundbite advantage. The department of health was dozy, with Frank Dobson and then David Blunkett in charge.”

A senior civil servant, now retired, who worked in the department for transport but asked not to be named, said that cost-benefit studies of a switch to diesel were done by government but climate change was “the new kid on the block” and long-term projections of comparative technologies were not perfect.

“We did not sleepwalk into this. To be totally reductionist, you are talking about killing people today rather than saving lives tomorrow. Occasionally, we had to say we were living in a different political world and everyone had to swallow hard,” he said.

But Michael Meacher, environment minister 1997-2003, said he could not recall ever being consulted on the UK’s switch to diesel. “If it had been a question of a trade-off between carbon emissions and health, much as I would have wanted to reduce climate emissions, the medical effects would have trumped it. I would have been keen to see a major reduction in [carbon] emissions, but I would not have wanted that to be at the price of lives.” As new research shows that diesel fumes are worse than expected for health, triggering cancers, heart attacks and the stunting of children’s growth, many politicians have admitted a major environmental mistake.

Air pollution deadly for 3.3 million per year

Date: September 22, 2015 Source: Dispatch Times

The findings match with previous less detailed studies on pollution death estimates. "Testing for the effects of air pollution emissions in different parts of the world was a very challenging task", Lelieveld said, "especially in many developing countries, where air quality monitoring systems are minimal". With close to 1.4 million deaths each year, China has the most fatalities related to air pollution, followed by India and Pakistan. If we talk about India, in another 10 years or so, Indian capital will record the world's largest number of premature deaths due to air pollution among all top cities worldwide. "Our results suggest that if the projected increase in mortality attributable to air pollution is to be avoided, intensive air quality control measures will be needed, particularly in South and East Asia", said Professor Jos Lelieveld, who led the study. Oddly enough, agriculture was responsible for 16,221 of those deaths, second only to deaths related to breathing air pollution caused by power plants, which killed 16,929 people in the same year.

The northeastern U.S. , across all of Europe, Japan, Russian Federation and South Korea, the No. 1 cause of smog and soot deaths is agriculture, according to this new study. According to Allen Robinson, an engineering professor at Carnegie Mellon University, who wasn't part of the study, agricultural emissions are becoming more and more significant here but are not regulated. Lelieveld said that the problem with farms is ammonia from fertilizer and animal waste.

The Max Planck study, however, claims to be a first, in that scientists from Germany, the United States, Cyprus and Saudi Arabia took a look at mortality rates from various emission sources, from industry and agriculture down to transportation and home heating, and came up with the data represented in the map below. "Much of the agricultural emissions that are being inhaled in a city like London are actually originating from outside the city".

From chronic obstructive pulmonary diseases to acute respiratory illnesses, toxic air in some of India's biggest cities will lead to thousands of premature deaths. China and India are generally recognized as countries with major air pollution issues. Lelieveld said it will be a "win-win situation in both directions" if the world reduces carbon dioxide (considered the main gas causing global warming) because soot and smog levels would go down too.

Six deaths occur every minute due to air pollution, study reports

Date: 22nd September, 2015 Source: Pulse Headlines

A study published in the journal Nature found that more than 3.3 million people die per year worldwide due to air pollution, especially in Asia. The study also found that these deaths could be doubled in number by 2050 if air pollution is not mitigated. Researchers of the study from Germany, Cyprus, America and Saudi Arabia used a global atmospheric chemistry model to see if there was a link between mortality and air pollution caused by seven different sources, both in rural and urban environments. Results were not

encouraging, since 3.3 million people die annually due to the toxicity of the air's particles. This is equivalent to six deaths every minute that passes.

According to lead author of the study, Jos Lelievels, air pollution alone causes more deaths that malaria and HIV combined. In some countries, it is actually a leading cause of fatal deaths. The study also found that, although all particles are equally toxic, there are some that have the largest impacts on death. In the case of India and China, the main source of demise is the emissions from residential energy use such as heating and cooking. On the other hand, emissions from traffic and power generation are important in the US and other countries. In Europe, Russia and East Asia, agricultural emissions count for the biggest risk to life. As stated in the research, these emissions cause strokes and heart attacks that result in death in 75% of the cases. Cancer and respiratory illness accounts for the other 25%. The study also showed the countries that have the most air pollution related deaths. China is first on the list with an annual rate of over 1.4 million. India comes next, with over 654,000 deaths. Pakistan is at third with over 110,000 air pollution-related deaths per year. These findings come in handy primarily ahead of a meeting from the United Nations' members to fight climate change next December in Paris. If the countries agree on a new and efficient action plan, 1 million people can be saved from early death every year, according to what scientists have said.

VW scandal caused nearly 1m tonnes of extra pollution, analysis shows

Date: 23rd September, 2015 Source: The Guardian

Volkswagen's rigging of emissions tests for 11m cars means they may be responsible for nearly 1m tonnes of air pollution every year, roughly the same as the UK's combined emissions for all power stations, vehicles, industry and agriculture, a Guardian analysis suggests.The potential scale of the scandal puts further pressure on Volkswagen's board and its chief executive, Martin Winterkorn. The company's executive committee plans to meet on Wednesday to discuss the affair and to agree the agenda of a full board meeting scheduled for Friday, amid reports that Winterkorn could be replaced. The carmaker has recalled 482,000 VW and Audi brand cars in the US after the Environmental Protection Agency (EPA) found models with Type EA 189 engines had been fitted with a device designed to reduce emissions of nitrogen oxides (NOx) under testing conditions. A Guardian analysis found those US vehicles would have spewed between 10,392 and 41,571 tonnes of toxic gas into the air each year, if they had covered the average annual US mileage. If they had complied with EPA standards, they would have emitted just 1,039 tonnes of NOx each year in total. The company admitted the device may have been fitted to 11m of its vehicles worldwide. If that proves correct, VW's defective vehicles could be responsible for between 237,161 and 948,691 tonnes of NOx emissions each year, 10 to 40 times the pollution standard for new models in the US. Western Europe's biggest power station, Drax in the UK, emits 39,000 tonnes of NOx each year. Germany's Tagesspiegel newspaper said

on Tuesday that VW's board would replace Winterkorn, who has led the company since early 2007, with Matthias Mueller, who runs the company's Porsche sports car division. Volkswagen rejected Tagesspiegel's report and Winterkorn continued to ask for the public's trust on Tuesday, saying the scandal was caused by "the bad mistakes of a few". But Wednesday's meeting will prove crucial to how VW responds.

The company's shares fell 10% as the German stock market opened on Wednesday although recouped some early losses. A third - some €25bn - of the company's stock market value had already been lost since Friday when the emissions scandal first emerged. New York and other state attorney generals are forming a group to investigate the scandal, New York attorney general Eric Schneiderman said, adding to a series of investigations in the US, Europe and Asia that threaten to sap Volkswagen's resources and impose large penalties. In the US, just 3% of passenger cars are diesel compared with almost half in the EU. Prof Martin Williams of King's College London said the US's low percentage of diesel cars meant higher diesel emissions in some cars would have a "limited effect" on air quality there. "[In the US it would be] nowhere near the effect it would have in this country and in the rest of Europe for that matter," he said. In the UK, Williams added, emissions from diesel cars cause roughly 5,800 premature deaths each year. "If you were to make the cars emit at the legal limit you could reduce those deaths by at least a factor of two and maybe more. Maybe a factor of five."

The Clean Air in London campaign called for a royal commission to investigate carmakers' activities in the UK. "Diesel is without doubt the biggest public health catastrophe in UK history. Even the black plague didn't affect everyone in the population," said its founder, Simon Birkett. Not all NOx emissions – which include nitrogen dioxide (NO2) and nitrogen oxide (NO) – are dangerous. But an increasing proportion of the toxic NO2 gas has been detected in EU diesel emissions. A study in the British Medical Journal in May found that short-term exposure to NO2 increased the number of premature deaths from heart and lung disease by 0.88% and 1.09%.For years, UK air pollution measurements have failed to show improvements in air quality, even as standards have tightened.

"Since 2003 scientists have been saying things are not right. It's not just the VW story, this is part of something much bigger," said Dr Gary Fuller, also of King's College. "It has a serious public health impact." Last week, a report from NGO Transport & Environment found that Europe's testing regime was allowing nine out of every 10 new diesel vehicles to breach EU limits. Testing regimes in the EU are known to fail to pick up "real world" emissions because cars are not driven in the same way in the laboratory as on the road. Some studies suggest the discrepancy may be up to seven times the legal limit.

Williams said being able to mask their NOx emissions would also enable carmakers to pass carbon emissions tests more easily as there was a trade-off between NOx and CO2 in diesel engines. Catherine Bearder MEP, a lead negotiator on the EU's new air quality laws, said: "Manufacturers in the US have been caught out, but we know that pollution limits are also being breached in Europe ... Unless we take action, thousands of lives will continue to be tragically cut short by air pollution."

In a sign that the emissions scandal will not remain restricted to the US, a Venice court will next month hear a case against VW and Fiat for misleading test advertising. The Italian consumer rights group Altroconsumo is due to press its case for a class action suit against VW and Fiat on 2 October, after laboratory tests showed that fuel consumption and CO2 emissions from the VW Golf 1.6 and Fiat Panda 1.2 were up to 50% higher than claimed. Altroconsumo wants the German car firm to pay damages of €502 (£365) to the owner of a VW Golf in a case that raises the possibility of widescale compensation payouts by the car industry. Monique Goyens, the director of the European consumer rights umbrella group BEUC, which includes Altroconsumo, called for an investigation by the European commission into the use of software programmes to "game" European emissions tests. "The VW scandal has compounded our concern that underhand tactics are also being used in fuel consumption and CO2 testing programmes in Europe," she said. "One of the problems in the EU, unlike in the US, is the absence of a market surveillance system

which would require independent in-use conformity testing. The EU needs to implement such a system to restore trust amongst consumers."

India, US reaffirm their commitment on climate change

Date: 23rd September, 2015 Source: The Financial Express

US Secretary of State John Kerry and External Affairs Minister Sushma Swaraj co-chaired the first India-US Strategic and Commercial Dialogue that ended with an important takeaway of a joint statement on enhancing cooperation on climate change.US Secretary of State John Kerry and External Affairs Minister Sushma Swaraj co-chaired the first India-US Strategic and Commercial Dialogue that ended with an important takeaway of a joint statement on enhancing cooperation on climate change. On United Nations Framework Convention on Climate Change (UNFCCC), the United States and India reaffirmed their commitment to work together towards achieving a successful outcome at the UNFCCC in Paris this December. On Montreal Protocol, the United States and India welcomed the continuing work of their bilateral task force on hydrofluorocarbons (HFCs), including meetings this year in San Antonio and New Delhi, and reaffirmed their commitment to work together to achieve a successful outcome on HFCs in Dubai in November later this year. Following a commitment by President Barack Obama and Prime Minister Narendra Modi on fulbright-India Climate Fellowship, the United States and India started implementing this new fellowship program designed to build long-term capacity to address climate change-related issues in both countries. Both sides also welcomed significant progress in implementing President Obama and Prime Minister Modi's commitment to improving resilience in the face of climate change in both countries.

Here`s when global warming first appeared

Date: 23rd September, 2015 Source: Zee News

The indications of climate change are all around us today but now researchers have revealed for the first time when and where the first clear signs of global warming appeared in the temperature record and where those signals are likely to be clearly seen in extreme rainfall events in the near future. The new research gives an insight into the global impacts that have already been felt, even at this very early stage, and where those impacts are likely to intensify in the coming years. Lead author Andrew King from the ARC Centre of Excellence for Climate System Science said that they examined average and extreme temperatures because they were always projected to be the measure that is most sensitive to global warming.

King added that the research shows that one could already see clear signs of global warming in the tropics by the 1960s but in parts of Australia, South East Asia and Africa it was visible as early as the 1940s. The reason the first changes in average temperature and temperature extremes appeared in the tropics was because those regions generally experienced a much narrower range of temperatures. This meant smaller shifts in the temperature record due to global warming were more easily seen. The first signal to appear in the tropics was the change in average temperatures. Later extreme temperature events showed a global warming signal. Closer to the poles the emergence of climate change in the temperature record appeared later but by the period 1980-2000 the temperature record in most regions of the world were showing clear global warming signals. The study is published in Environmental Research Letters.

China to Announce Cap-and-Trade Program to Limit Emissions

Date: 24th September, 2015 Source: NY Times

WASHINGTON — President Xi Jinping of China will make a landmark commitment on Friday to start a national program in 2017 that will limit and put a price on greenhouse gas emissions, Obama administration officials said Thursday. The move to create a so-called cap-and-trade system would be a substantial step by the world's largest polluter to reduce emissions from major industries, including steel, cement, paper and electric power. The announcement, to come during a White House summit meeting with President Obama, is part of an ambitious effort by China and the United States to use their leverage internationally to tackle climate change and to pressure other nations to do the same.

Joining forces on the issue even as they are bitterly divided on others, Mr. Obama and Mr. Xi will spotlight the shared determination of the leaders of the world's two largest economies to forge a climate change accord in Paris in December that commits every country to curbing its emissions.

Mr. Xi's pledge underscores China's intention to act quickly and upends what has long been a potent argument among Republicans against acting on climate change: that the United States' most powerful economic competitor has not done so. But it is not clear whether China will be able to enact and enforce a program that substantially limits emissions.

China's economy depends heavily on cheap coal-fired electricity, and the country has a history of balking at outside reviews of its industries. China has also been plagued by major corruption cases, particularly among coal companies. But the agreement, which American officials said had been in the works since April, is China's first commitment to a specific plan to carry out what have so far been general ambitions.

Domestic and external pressures have driven the Chinese government to take firmer action to curb emissions from fossil fuels, especially coal. Growing public anger about the noxious air that often envelops Beijing and many other Chinese cities has prompted the government to introduce restrictions on coal and other sources of smog, with the side benefit of reducing carbon dioxide pollution. The authorities also see economic benefits in reducing fossil fuel use. The cap-and-trade initiative builds on a deal that Mr. Obama and Mr. Xi reached last year in Beijing, where both set steep emissions-reduction targets as a precursor to the global climate accord. Mr. Obama, who has made climate change a signature issue of his presidency, announced the centerpiece of his plan this year. With his announcement on Friday, Mr. Xi will outline how he will halt the growth of China's emissions by 2030.

"It increases our probability of succeeding, and it increases the likelihood that we will have a more robust agreement" in Paris, one senior administration official said, speaking on the condition of anonymity because officials were not authorized to preview the agreement. Lu Kang, the spokesman for the Chinese delegation during Mr. Xi's state visit, declined to confirm the climate initiative. He said only that the two presidents could "make further progress" in demonstrating that they were committed to dealing with global warming.
The climate deal will be a substantial, if rare, bright spot in a wide-ranging summit meeting that is expected to be dominated by potential sources of friction between Mr. Obama and Mr. Xi. The two leaders began meeting on Thursday night with a two-and-a-half-hour working dinner at Blair House, across from the White House. The president plans to raise a number of contentious topics on Friday, White House aides said, including cyberattacks on American companies and government agencies, China's increasingly aggressive reclamation of islands and atolls in disputed areas of the South China Sea, and Mr. Xi's clampdown on dissidents and lawyers in China. Under a cap-and-trade system, a concept created by American economists, governments place a cap on the amount of carbon pollution that may be emitted

annually. Companies can then buy and sell permits to pollute. Western economists have long backed the idea as a market-driven way to push industry to cleaner forms of energy, by making polluting energy more expensive.
Mr. Xi will pledge to put in place a "green dispatch" program intended to create a price incentive for generating power from low-carbon sources, officials said. He will agree to help provide financing to poorer countries to help them pay for projects that reduce harmful emissions. And China, one of the world's largest financiers of infrastructure projects, will agree to "strictly limit" the amount of public financing that goes toward high-carbon projects, another official said, in line with a 2013 commitment by the United States Treasury Department to cease public financing for new coal-fired power plants.

In his first term, Mr. Obama tried to push a similar cap-and-trade program through Congress. But the measure died in the Senate, in part because lawmakers from both parties feared that a serious climate change policy could threaten economic competition with China. Now, however, China appears poised to enact the same climate change policy that Mr. Obama failed to move through Congress. China has been developing and carrying out smaller cap-and-trade programs for at least three years. In 2012, it started pilot programs in seven provinces, intended to serve as tests for a national program.

Last week, Chinese officials met in Los Angeles with top environmental officials from California, which has enacted an aggressive cap-and-trade program. People who attended the talks said they were meant to pave the way for a possible linkage of the Chinese and California cap-and-trade systems. The Chinese announcement comes less than two months after Mr. Obama unveiled his signature climate change policy, a set of Environmental Protection Agency regulations that would force power plants to curb carbon emissions. The rules could shut down hundreds of heavily polluting coal-fired plants. They have drawn fire from Republicans and coal-state lawmakers, but international negotiators say Mr. Obama's regulations have helped break a long deadlock between the United States and China on climate change.

Expect India to play constructive role in climate talks: White House

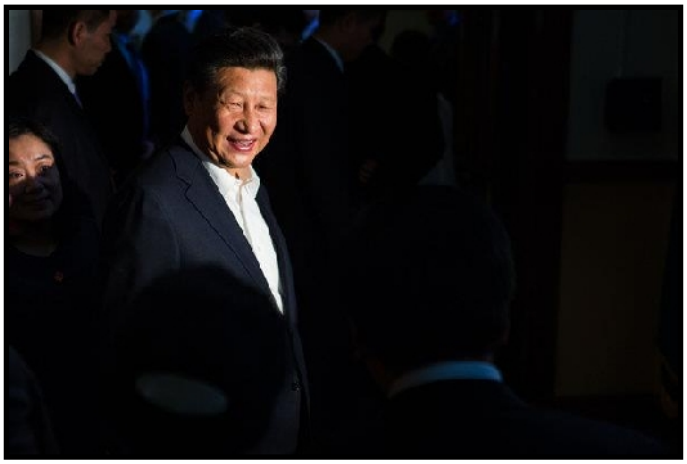
Date: 24th September, 2015 Source: Zee News

Ahead of the Modi-Obama talks in New York next week, the White House has said that it expects India to play a constructive role in the climate talks in Paris later this year. It also reiterated its support for India's bid for a permanent membership of the UN Security Council. "As the world's largest democracy, and as a country whose economic influence is only growing, we would welcome additional opportunities for India to take on additional responsibilities when it comes to contributing to the shared interests of the international community," White House Press Secretary Josh Earnest, told reporters yesterday at his daily news conference.

"We'll look for a variety of ways to do that. Certainly, one way to do that would be for India to play a constructive role in the climate talks in Paris," Earnest said in response to a question. "That as a growing economy, India could make an important statement about the future of our planet, by making a serious commitment in the context of those negotiations," he said. Earnest said US President Barack Obama and Prime Minister Narendra Modi have had the opportunity to talk about in the past. "I would anticipate that they will talk about again in advance of the Paris Climate Talks," he said, indicating that a formal

announcement for a Obama-Modi meeting in New York on the sidelines of the UN General Assembly could be made today.

In response to a question, Earnest said there is no change in America's endorsement for India as a member of the UN Security Council. "My understanding is that the President has previously stated that the United States would be supportive of including India in the United Nations Security Council, in the context of reforming the governance structure of the United Nations," he said. "That was something that the President announced on his trip to India -- his first trip to India back in 2010. And that continues to be the position of the United States, and I think it reflects the increasingly important role that we're seeing India play around the world," Earnest said. Modi, he said, shares Obama's goal of a deeper strategic and economic ties between India and the US. "When the President travelled to India earlier this year, there was much discussion of the important economic ties between our two countries," he said. "So there are any number of reasons why the President would work closely with his counterpart, Prime Minister Modi, who I know understands these kinds of dynamics, and shares the President's goal of trying to deepen these ties with an eye toward expanding economic opportunity for the citizens in both the United States and India," Earnest said.



Indonesia suspends 4 plantation and forestry firms linked to the region's haze

Date: 24th September, 2015 Source: Mashable

The Indonesian government has ordered four companies it linked to the region's haze problem to suspend operations as it prepares legal action against them. Bambang Hendroyono, secretary general at the environment ministry, told Reuters that the companies are linked to causing the massive forest fires that have blanketed parts of Southeast Asia in smog. One of the companies is palm oil plantation owner PT Langgam Inti Hibrindo, owned by Indonesian stock exchange-listed PT Provident Agro, which owns a group of plantations in Sumatra and Kalimantan (also known as Borneo). PT Provident Agro told Mashable that it hasn't "received any official letter regarding the suspension of LIH's operation."

Together with two other plantations, the company has had its permits frozen, and another forestry company had its licence revoked, said the minister. The suspensions come shortly after the arrest of seven executives from companies accused of being behind the recent forest fires. Frans Katihokang, a director at Langgam Inti Hibrindo, was among the seven arrested, said local reports.

Most of the burning is carried out across paper and palm plantations in Sumatra and Kalimantan, where farmers still employ the illegal slash-and-burn method for clearing vegetation. The smog from the burning has floated to neighbouring countries like Singapore and Malaysia, where schools were closed and people instructed to stay home in recent weeks as the air pollution reached unhealthy levels, according to environment departments.

But nowhere has been harder hit than cities just downwind from the burning sites. In Pangkalan Raya in central Kalimantan, the Pollution Standards Index (PSI) reading hit an alarming 1,400 on Tuesday. Anything over 300 is considered "hazardous," and schools in Malaysia were shut when the PSI went over 150. The Indonesian government continues to struggle to put out the raging forest fires, which thousands of troops in Sumatra and Kalimantan have been fighting for weeks.

Climate change shrinking bees' tongues, scientists say

Date: 24th September, 2015 Source: The Star

Two species have adapted to feeding on shorter-tubed flowers since warmer summers have made deep-tube blooms less available, researchers believe.Poor bees can't catch a break. Pesticides, pathogens and habitat loss have all decimated pollinator populations, with some North American bumblebee species declining up to 96 per cent in just a few decades. Now, scientists say that climate change is causing some bees' tongues to shrink. A U.S.-Canadian research team found that deep-tubed flowers are blooming less often on the slopes of three Rocky Mountain ridges in Colorado, changes linked to increasingly warmer summers. As a result, two long-tongued species of alpine bumblebees that co-evolved to pollinate these plants have seen a 24-per-cent reduction in tongue length over the past 40 years. The researchers believe the bumblebees have rapidly adapted to feeding on shorter-tubed flowers, transforming them from long-tongued specialist pollinators to short-tongued generalists over the course of a few dozen generations — potentially disrupting their alpine environment. "The silver lining is that bees are adapting. That's a good thing — they're responding to these changes in selective pressure," says Nicole Miller-Struttmann, an evolutionary ecologist at SUNY College at Old Westbury and a co-author on the paper, which was published Friday in the journal Science.

"The not-so-silver lining is the effect that this might have long term on the plants."
The long-tubed flowering species the researchers examined live for many years, so the bees' shift to shorter-tubed flowers hasn't yet had an impact. But if the bees are visiting these species less often and spreading less of their pollen, the plants could decline, triggering further stresses on every other organism that relies on them. "It's sort of this cascading effect. At what point do things start falling apart? It will be really hard to predict what a seemingly small change like this will have on the larger community," says Sheila Colla, a York University conservation biologist who specializes in North American bumblebees. Colla, who was not involved in the research, called the news "depressing, as most of the stuff that comes my way is." For the study, the researchers turned to a collection of alpine bumblebees gathered in the Rockies between 1966 and 1980 and stored at entomology museums. To measure their tongue lengths, Miller-Struttmann and her colleagues slowly rehydrated the specimens in a moist environment: To fold the tongues out to full length, they needed to make them flexible again. To compare the older bees with modern ones, the researchers spent successive field seasons on the same mountain peaks netting insects and measuring flower density. One species of bumblebee, Bombus balteatus, saw their mean tongue length drop to six millimetres from eight millimetres in one mountain-range population. Another species, Bombus sylvicola, saw a drop to just under four millimetres from just over five millimetres. Miller-Struttmann adds that while it's good news the bees are adapting, it's impossible to say how much more stress they can handle.

"Is that evolution fast enough in the long term? We don't know yet." Singapore shuts schools,

Date: 25th September, 2015 Source: The Jakarta Post

Singapore shut schools Friday and began distributing free anti-pollution masks to the elderly and other vulnerable people as a thick smoky haze cast covered the island-nation with pollution reaching its worst

level this year. The haze — a pall of grayness that resembles wintry fog and virtually obliterates the skyline while even seeping inside homes — is an annual problem for the region, resulting from forests being burned in neighboring Indonesia to clear the land for farming and plantations. Repeated efforts to bring the offending companies to book have not helped. Meanwhile, people in Singapore, Malaysia and Indonesia

suffer from the smoke, a serious health hazard, especially for the elderly, children and those with breathing problems. The three-hour Pollutant Standards Index (PSI), which measures air pollution in the country, hit 341 on Friday morning, the highest level this year, before dipping below 300, the hazardous mark. The government ordered all primary and secondary schools to be shut. Also, free face masks were being distributed at community centers across the island to the vulnerable from 10 a.m. to 10 p.m.. Volunteers were also expected to go house to house to give out the masks to those who were unable to come to community centers. The haze is also causing tensions between Singapore and Indonesia, apparently after Indonesian Vice President Jusuf Kalla commented recently that neighboring countries "already enjoy 11 months of clean fresh air from Indonesia." He suggested that it is not a big deal if they suffer from the haze for one month, when forests are usually burned.

Singapore Foreign Minister K. Shanmugam, in a Facebook post, responded by saying his government "takes the matter seriously" and Singapore is "ready to assist Indonesia in combatting the fires." "Yet, at the same time, we are hearing some shocking statements made, at senior levels, from Indonesia, with a complete disregard for our people, and their own -- PSI levels in parts of Indonesia are at almost 2,000 PSI." "How is it possible for senior people in government to issue such statements, without any regard for their people, or ours, and without any embarrassment, or sense of responsibility?" he wrote. The haze has also hit hard festivities in Singapore whose multi-ethnic population celebrated the Muslim festival of Eid al-Adha on Thursday and will mark the Chinese mooncake festival on Sunday, traditionally held by farmers to celebrate their autumn harvest. "The haze is very bad, there are less people in the mosque this year. Coming to the mosque to pray used to be very nice because we would mingle around after," said Mustafa Muhamad, 61, who had come to the Hajjah Fatimah mosque to pray.

On Tuesday, Indonesia's environment and forestry ministry said the licenses of four Indonesian plantation companies were suspended or revoked for clearing land illegally and sparking forest fires. Some 27 companies are being investigated in connection with the forest fires, Indonesian authorities said, while 140 individuals are being questioned. A Singapore-listed company is among those under investigation. (bbn)

Deadly diesel pollution has been hiding in plain sight

Date: 25th September, 2015 Source: WIRED

The impact of long-chain hydrocarbons found in emissions from diesel engines, largely unobserved and unreported, has been detailed in a new study from the University of York study. According to the research, "longer chain hydrocarbons released from diesel vehicles are not considered explicitly as part of air quality strategies and there are few direct measurements of their gaseous abundance in the atmosphere". However, the research team devised a

methodology for measuring levels of the hydrocarbons, which are precursors to the formation of ozone and particulate matter, both of which are regarded as pollutants of particular concern. The impact of long-chain hydrocarbons has been largely ignored by both car manufacturers and official air quality measurements, but that could be about to change.

The lead author of the study, Dr Jacqueline Hamilton, told the BBC that "there's actually a lot of this unburned material from diesel that we haven't seen before. That might be having a bigger impact on ozone and particle formation than petrol cars are, and historically no one has looked at these emissions at all." Particulate matter is known to have a potentially devastating impact on the health of those exposed to it. The study observed that right now in the UK, exposure to particulate matter is estimated to reduce life expectancy on average by around seven to eight months, with a public cost estimated at up to £20 billion per year.

The study, carried out in London, found that almost 50 percent of ozone production in winter was due to long-chain hydrocarbons from diesel, which also contributed to 25 percent of summer ozone formation.

"I think it is having a large impact on air quality in our cities," said Dr Hamilton. "The number of deaths associated with particle pollution are much higher than those from nitrogen dioxide, this is a route to increase particle pollution so it could have a major impact on human health." Media attention has turned to diesel pollution following the revelation that Volkswagen falsely reporting its cars' diesel emissions in the USA. It's long been known that diesel contributes heavily to air pollution, but following the signing of the Kyoto protocol climate change agreement in 1997, Europe supported and subsidised the sale of diesel cars due to their lower CO2 emissions.

Professor Paul Monks of the University of Leicester, who chairs the UK government's air quality expert group, told the BBC that the new research "raises yet another question about diesel vehicles. They are implicated heavily in NO2, they are implicated in toxic particulate matter, and this points to another deleterious environmental impact from diesels," he said. Nitrogen dioxide (NO2) pollution from diesel contributes to the formation of photochemical smog such as that seen across Europe earlier this year.

Reports some BMW cars exceed pollution limits

Date:25th September, 2015 Source: 3 News

Some diesel cars of German carmaker BMW produce dangerous gases that exceed EU anti-pollution limits by up to 11 times, German weekly Auto Bild reports. The claim came as Germany's powerful car industry was reeling over revelations that auto giant Volkswagen had installed software in up to 11 million cars that could cheat pollution tests. "Volkswagen is not the only carmaker whose cars produce high levels of nitrogen oxide," said the magazine, accusing certain vehicles of the BMW group of the same. It quoted road tests carried out by the International Council on Clean Transportation (ICCT) which found that BMW's X3 xDrive equipped with 20d diesel motors produce gas emissions that are 11 times higher than European limits. "All these data show that the problem is not specific to VW," Peter Mock from ICCT was quoted as saying. The ICCT had been at the origin of the stunning revelations of cheating by Volkswagen, which went public last Friday when the United States announced a probe. BMW later denied suggestions that it might have cheated in pollution tests on its diesel cars. "The BMW group does not manipulate or rig any emissions tests. We observe the legal requirements in each country and adhere to all local testing requirements," the company said in a statement in response to the Auto Bild report. "We are not familiar with the test mentioned by Auto Bild concerning the emissions of a BMW X3 during a road test. No specific details of the test have yet been provided and therefore we cannot explain these results. "We will contact the ICCT and ask for clarification of the test they carried out."

Sweden to Become One of World's First Fossil Fuel-Free Nation

Date: 25th September, 2015 Source: Eco watch

Sweden is setting out to prove that the world doesn't need fossil fuels. In a recent announcement, the Swedish government said it will invest 4.5 billion kronor, or US$546 million, in their 2016 budget "to meet the challenges of climate change, increase the share of renewable energy and stimulate development of innovative environmental technology."

"Sweden will become one of the first fossil-free welfare states in the world," Prime Minister Stefan Löfven told the press. "When European regulations do not go far enough Sweden will lead the way." As broken down by Bloomberg, here's how Sweden plans to completely abandon fossil fuels (no deadline has been set):

- 390 million kronor per year between 2017 and 2019 in photovoltaics, with a plan to spend 1.4 billion kronor in total
- 50 million kronor annually on electricity storage research
- 10 million kronor on smart grids
- 1 billion kronor to renovate residential buildings and make them more energy efficient
- Subsidies and investment in green transportation such as electric cars and buses
- Increase funding of climate-related projects in developing countries, raising its budget to 500 million kronor

Science Alert also pointed out that most of the budget increase will be financed through tax increases on petrol and diesel fuel. According to Science Alert, "The move comes after Sweden suffered extreme heatwaves last summer, and one of the worst bushfires in the country's history. The government has committed to taking action to protect its citizens from the effects of climate change in the future." If Sweden's clean energy plans sound a bit like a pipe dream, the country already receives about 78 percent of its electricity from nuclear power and hydroelectric power, which do not generate carbon emissions. (Although it appears that the Scandanavian country is favorable towards nuclear energy, it has no plans to replace its aging plants. By the looks of its current budget, Sweden is throwing most of its eggs into the solar basket.) Additionally, it's not so far-fetched for a country to run entirely on renewable energy sources. Earlier this year, Costa Rica announced that for roughly three months, 100 percent of the country's electricity needs came from renewables. Hawaii is also poised to become the first U.S. state to adopt such a standard. Perhaps in an effort to "lead by example," as the Ecologist wrote, Sweden's clean energy announcement comes a few months before the all important international climate talks in Paris (or COP21) this December. "By setting ambitious goals, Sweden will take a leading role in the international negotiations on a new climate agreement," the Swedish government said. "Only by doing so do we take our moral responsibility for future generations, while taking advantage of the job and innovation opportunities that the green transition brings."

First signs of Climate Change appeared in the 1940s, study suggests

Date: 25th September, 2015 Source: Pulse Headline

Australia – A group of researchers published a new study on the journal Environmental Research Letters where insights on the effects of climate change were given, and found that clear signs of global warming first appeared much earlier than we thought. After analyzing geo-atmospheric data for the last century, they found that signs of global warming were observed in the tropics in the 1960s, but Africa,

Southeast Asia and Australia have been experiencing these signs as early as the 1940s. First, they say, average temperatures changed in the tropics. Always known as the most sensitive point to global warming, changes in climate temperature were recorded later in areas closer to the poles, but by 1980 to 2000, temperature records in most parts of the world were already showing the effects of global warming. This suggests that global warming appeared in the 1940s in some regions of Australia, Asia and Africa. The results of the study correspond closely to data used by the Intergovernmental Panel on Climate Change in its most recent report where temperature increases are outlined as being caused by global warming. What the Future Holds- Climate change effects have been felt for quite some time, but heavy distortions in rainfall events are yet to come according to Ed Hawkins, one of the study's authors. Climate models have recorded a general increase in the amount of extreme rainfall around the world, but figures are not dramatically beyond expected variations so the increase in precipitation has not been tagged as a sign of global warming. The first of the heavy rainfall events associated with global warming is expected to take place in northern Europe, Russia and Canada during winters over the next three decades, according to Hawkins.

Fashionable anti-pollution masks make their debut in the UK

Date: 26th September, 2015 Source: Independent

Common in Asia, anti-pollution masks have never taken off here - Rachael Pells dons a new fashion-forward model to see if style and safety mix Keys? Check. Mobile phone? Check. High-fashion, anti-pollution facewear? Strapped on and ready for the morning commute. On the grubby streets of east London the air is thick with pollution but my designer mask – billed as the world's first luxury anti-pollution facewear – means I can breathe easy. It is filtering out dirt, dust and harmful particles and, according to its designer, giving me an on-trend fashion edge.

Commuters in smog-filled Asian cities such as Beijing have worn surgical-style face masks for years. With air pollution an increasing concern in Britain's big cities, it is a sad possibility that urbanites will one day don protective masks as readily as a hat or scarf.

Described as a "bold blend of science and style", the £160 Freka mask is ergonomically designed to fit the wearer's face and uses an infusion of Japanese Hiroki wood to calm the senses while a filter blocks out harmful pollutants. Freka spokeswoman Bhoomika Partap says there is no reason safety gear cannot look good. "Brits generally prefer not to wear something on their face because it's not very comfortable or fashionable," she says. "We wanted to create something of the highest ergonomic quality that made a statement."

It certainly achieves the latter. On the street, passers-by stare or swerve to avoid me. Maybe they think I'm ill or hiding something unsightly. Or about to hold up a bank. On the tube, a woman laughs and takes my photo. But I'm the one who should be laughing; I'm protected from the PM 2.5 particles that fill London's air – less than a hair's width but linked to around 29,000 deaths a year in the UK.

"In Asia air pollution is a lot more visible, so in the UK it's a little more difficult to get people to notice there's anything wrong with our air quality," says Frank Borsboom, a Dutch engineer who helped design the mask. Dr Benjamin Barratt from the Environmental Research Group at King's College London said there is "some evidence that a mask can reduce the levels of stress to the heart and lungs caused by breathing elevated levels of air pollution". He added: "To be effective, a mask must be very well fitting otherwise the gases and tiny particles that make up air pollution will just flow around the mask when you breathe in." Above all, Dr Barratt said, efforts to improve air quality should take precedence over "sticking plaster solutions" such as masks.

To be honest, wearing a piece of silicon on my face is not enjoyable. My breathing is shallow and my peripheral vision is impaired; walking up steps is a nightmare. But is it fashionable? Well, the designers may have been aiming for a catwalk look but a colleague suggested I resembled a giant pigeon.

As Indonesia Prospers, Air Pollution Takes Toll

Date: 26th September, 2015 Source: The New York Times

JAKARTA, Indonesia — The young woman sat on a bench at a bus terminal here one recent morning, listening to her iPod beneath a bright blue sky. But despite the sunshine and a light breeze, the woman, Fety Dwiyanti, wore a face mask. She did not have the flu or a cold, though, she was just worried about what was getting into her lungs. "It's because of the air pollution and dust," she said. "Every time I go outside, I put it on." Jakarta, a sprawling city of 10 million, has long had a problem with air pollution. To address it, it phased out the use of leaded gasoline 10 years ago, among other measures. But as the economy has grown at a rapid clip over the last decade, the number of vehicles in the capital has soared, with more people able to afford them. And air quality has gotten worse.

That has led to a strange development: a rise in the number of "blue sky days" — when the air is clear enough to allow views of the lush mountains of nearby West Java — along with higher pollution levels. "When we see the sky is blue, it's just one indicator that air quality is good, and not really an accurate one," said Dasrul Chaniago, director of pollution control and environmental damage at the environment and forestry ministry. The ministry estimates that at least 70 percent of Jakarta air pollution is from vehicles.The main peril to public health is from fine particle pollution — measuring 2.5 micrometers in diameter or smaller and found in, among other things, auto emissions — that can sneak into people's nasal passages and lungs. Such pollution particles are significantly smaller than mold spores, pollens or typical atmospheric dust.

"Car emissions are better," said Agnes J. Safford, who heads GreenWorks Asia, a Jakarta-based environmental consultancy. "But you're getting more fine particles because there are more cars. So it looks clearer, but it's not better." Jakarta has never been viewed as one of Asia's most livable cities. Imagine Los Angeles on a bad day, but with more smog and bumper-to-bumper traffic.

While pollution here does not compare to the dire levels in cities like Beijing and New Delhi, it is serious enough for the State Department to have put Jakarta on a priority list of American Embassies to be fitted with air quality monitors this year. The American Embassies in Beijing and New Delhi already have the monitors; results posted online garner intense interest. More Jakarta residents are suffering the physical

effects of dirtier air, experts say. A study by the University of Indonesia Faculty of Public Health found that 58 percent of all illnesses among people living in the city were related to air pollution as of 2011, up from 35 percent a decade earlier. And the problem is thought to have gotten worse since the study was done. The conditions include asthma, bronchitis, lung cancer and cardiovascular disease, said Dr. Budi Haryanto, chairman of the university's Department of Environmental Health, which carried out the study. Dr. Budi said that nationwide, air pollution causes 2.8 million lost work days a year, along with 1.3 million absences at schools, 9,000 hospitalizations and at least 6,500 premature deaths. "And we can say there's an increase in disease in all Indonesian cities. There's an increase in pollutants everywhere."

Jakarta accounts for around 40 percent of all auto sales in Indonesia; more than 480,000 new cars hit the capital's streets in 2014 in addition to 1.4 million new motorcycles, according to the Association of Indonesian Automotive Manufacturers. "Indonesia lags more than five years behind its neighbors, including Thailand and China, in fuel quality standards," said Michael Dunne, who runs an automotive consultancy firm based in Hong Kong and has worked extensively in Indonesia.

"Junk fuel in, junk exhaust out, no matter how good the engine might be," he said. Still, there are signs that the government is tackling the problem. For instance, it is mandating that the auto sector improve emission standards on new vehicles to meet European levels starting in 2017. In Jakarta, the Meteorology, Climatology and Geophysics Council collects data from eight monitoring stations across the city to measure air quality minute by minute. The agency also deploys vans with air monitoring equipment to take measurements in specific locations.

Experts say it will take long-term projects to improve Jakarta's air quality, like the continuing construction of a mass transit system that officials hope will reduce the number of drivers on the streets and highways. Another project involves the city government buying land to create more green spaces. In the meantime, Jakartans who wear face masks are an increasingly common sight. Fina Chrisnantari, 30, an assistant in an office management company, says she will continue to wear a mask to and from work. She has been wearing one for about a year. "I'm not sure how much it helps," she said as she waited for a bus in downtown Jakarta. "A few days after being out, you can still feel it in your lungs."

The Emergency Climate Movement

Date: 26th September, 2015 Source: Eco watch

We are living in a state of planetary emergency. To have a chance of averting the collapse of civilization and the destruction of the natural world, we must mobilize our society on the scale of World War II to achieve net zero greenhouse gas emissions [1] at wartime speed. The fact that we have already heated the world to such dangerous levels and show little sign of stopping, is evidence of widespread institutional failure. We cannot expect anyone else to save us. We must organize to save ourselves. The Mainstream Environmental Movement: Avoiding Climate Truth The aforementioned truth—while daunting and overwhelming— has the potential to be utterly transformative, for individuals and for society as a whole. Yet it has been too often soft-pedaled by environmental organizations and communicators who advocate incrementalism over boldness, vagueness over specificity and personal behavior change over systemic change. These strategies, in an attempt to be palatable and politically "realistic," are abdicating the climate movement's greatest strategic asset: the truth. Embracing the truth was at the heart of Gandhi's Satyagraha campaign, the Civil Rights Movement,

the Velvet Revolution and the vast majority of triumphant social movements through history. The Emergency Climate Movement: Embracing Climate Truth In recent months, a new, increasingly powerful segment of the climate movement has been taking shape. A coalition of those who openly recognize the existential threat of the climate crisis and advocate for a solution that is scientifically realistic and morally tenable: emergency mobilization. The Climate Mobilization (TCM), a one-year old group that I founded and direct, has been a central part of this hopeful shift away from carbon gradualism—slowly reducing emissions while effectively maintaining business as usual. Philip Sutton, a member of TCM's advisory board, puts this shift in perspective in his excellent paper, Striking Targets: "Over those last 27 years, while all the research, activism and negotiation has been going on, the climate has actually become dangerous. So, the key goal now must be to provide, at the 11th hour, real protection for the vulnerable people, species and ecosystems of the world. The principal struggle must shift, from the clash between no action and some action, to the crucial struggle between those who want to constrain reform to levels that are not too disruptive and those who want action that will provide highly effective and timely protection."

In other words, isolated actions such as the Obama Administration's Clean Power Plan, putting a price on carbon or even policies aiming for net zero emissions by 2050, are no longer sufficient. Perhaps if we had implemented these measures 30 years ago, they would have been adequate to maintain a safe climate. But that time has passed. Only emergency action—a mobilization of our entire economy and society—will protect us now. We must stop emissions in years, not decades. It is time to align our demands and language with the truth. In June, Reverend Lennox Yearwood, Jr. and Tom Weis, leaders in the climate movement and members of TCM's advisory board, echoed TCM's call for zero emissions by 2025 by writing in "America's Zero Emissions Imperative":

"Some will no doubt call this bold national goal unrealistic, but they would underestimate the innovative genius and social conscience of the American people. America has a long and proud history of overcoming seemingly insurmountable odds (consider World War II, Apollo program and Abolitionist movement). What is unrealistic is thinking we can put off for decades action that is desperately needed now to ensure our survival as a species."

Tom Weis followed up on that article by writing an open letter to President Obama, calling on him to set reducing U.S. emissions to net zero by 2025—through an "all hands on deck societal mobilization at wartime speed"—as the U.S.'s commitment in the upcoming UN climate talks in Paris. This letter is the single strongest display of public support for emergency climate mobilization that has ever been made. Signers include Lester Brown, Terry Tempest Williams, Mark Ruffalo, Ed Begley, Jr., David Suzuki, Winona LaDuke, Tim DeChristopher, Yeb Sano, Josh Fox, IPCC Coordinating Lead Author Ove Hoegh-Guldberg, the former chair of the Australian Coal Association, the founder of the Woods Hole Research Center, the founder of the Global Catholic Climate Movement, the founder of the New Evangelical Partnership for the Common Good, the former secretary of the California Environmental Protection Agency and the four co-founders of The Climate Mobilization.

India's environment minister says reducing poverty is climate

Date: 27th September, 2015 Source: NYSE Post

During the four-minute exchange, Florida Sen. While the challenges our world faces are daunting, we see abundant opportunities for all to act imaginatively and courageously in our individual callings. There is an unusual degree of policy to Pope Francis' first visit to the U.S. The country will attempt to reduce its carbon intensity by increasing the efficiency of its thermal power plants, the report quoted an unnamed official as saying. "I don't see going beyond 10 any time soon". "This is an issue where, we're talking about my state, it's thousands of manufacturing jobs".Just last week leading Republican presidential candidate Donald Trump said that China is "doing nothing about" climate change. Christie went on to say that "massive

government intervention" to deal with climate change is unnecessary, and that New Jersey had already reached its clean air goals for 2020.
Experts estimate it will cost at least $150 billion for India to sort out its electricity woes and meet the renewable energy target - funds India does not have in its own coffers. Among other aspects, the bloc's environment ministers agreed to push for a 2020 peaking of global greenhouse gas emissions, followed by a 50 percent reduction by 2050 compared to 1990, with a move to near zero by the end of the century. There is tremendous opportunity in creating a clean energy economy. We witness in too many instances the Earth's natural beauty, a sign of God's wonderful creativity, being defiled by pollutants and waste. "We can't just ask them to do it". His speech lends fresh social support to the climate issue, alongside Obama administration plans to curb emissions and ballooning commercial renewable energy sectors. A market driven by an enforced cap on emissions, however, would not produce the same risk of failed reductions. The only way we will win this fight is by making the climate movement more diverse and inclusive - that starts with organizing urban communities around pollution and climate change. Our emissions are already having devastating effects around the world. He gives the example of the shares of Volkswagen AG falling by almost 30% this week after the US Environment Protection Agency found the auto maker was using sophisticated software to cheat emissions tests.

The commitments make up three of seven climate leadership commitments devised by non-government organisation and environmental reporting platform CDP (formerly the Carbon Disclosure Project) and the We Mean Business Coalition. In the presidential candidate's "Vision for modernizing North American energy infrastructure", Clinton said she plans to negotiate with Canada and Mexico to secure a North American Climate Compact, claiming that the transition to a green economy must be done as part of a continent-wide strategy, given that the US trades as much energy with Canada and Mexico as it does with the rest of the world combined. The conference needs to achieve a new worldwide agreement on climate, applicable to all countries, with the aim of keeping global warming below 2 degree Celsius. The report suggested there were still various barriers that have to be overcome if the significant economic benefits of climate action were to be realised and outlines the role global co-operation can play in accelerating action in reducing greenhouse gas emissions.

His words chimed with those of John Cridland, director general of the CBI and widely regarded as the most senior voice in British business, who on Monday said the government was sending a "a worrying signal about the United Kingdom as a place for low-carbon investment".

Week ahead: EPA set to release ozone rule

Date: 28th September, 2015 Source: The Hill

The Environmental Protection Agency is set to release a contentious new rule limiting surface-level ozone pollution. The agency has proposed tightening the current standard on ozone from 75 parts per billion to 65 or 70 parts per billion. Regulators say they need to raise the standards to help the environment and improve public health. But the proposal has drawn scorn and bitter opposition from Republicans and business groups, who say the rule will be prohibitively expensive and lead to billions of dollars in compliance costs. The EPA released its proposed rule last year, immediately kicking off a lobbying spree and public campaign by the National Association of Manufacturers and other business groups. The groups, and their Republican allies, have taken to calling the ozone proposal the "most expensive regulation ever." But regulators say they have the right to set federal limits on ozone, also called smog. They say strict standards are important to protecting the public and cutting down on public health problems like asthma. The Obama administration has been reviewing the rule since August, and agreed in court to put out the new rules by Oct. 1.

On Capitol Hill, the Senate Environment and Public Works Committee is taking the administration to

task. On Tuesday, the committee will hold a hearing on the "economy-wide implications of President Obama's air agenda," and a subcommittee will meet to discuss the Endangered Species Act. Two governors and the director of the U.S. Fish and Wildlife Service are slated to testify. A committee subpanel will hold a hearing Wednesday on the role of the Army Corps of Engineers in crafting new water regulations. A Senate Transportation Committee panel will hold a hearing on pipeline safety on Tuesday. In the House, a Transportation subcommittee will discuss Great Lakes restoration projects on Wednesday. Away from the Capitol, The Hill is hosting an event on the proposed methane regulations from the Obama administration on Tuesday. Click here for more information the event: http://bit.ly/1LxjDs6

Fossil fuel extraction on public lands is the next climate fight

Date:29th September, 2015 Source: High Country News

Earlier this month, in New York City, 350.org — the organization most associated with the campaign against Keystone XL — nearly filled the 2,090-seat opera house at the Brooklyn Academy of Music for headliners Bill McKibben and Naomi Klein to talk about climate change. That many people listening to a couple of nonfiction writers discuss an environmental problem is an impressive feat. The audience cheered loudly throughout and you could feel the political power in the room.

At one point, McKibben put on the screen above the stage a list of major sources of fossil fuels that must stay unreleased if we are to keep below 2 degrees Celsius of warming and avert the most catastrophic effects of climate change. Almost all of the examples, such as a massive coal deposit in Australia, were abroad. But there was one in the U.S.: federally owned deposits of oil, gas, and coal offshore and on public land. You could say that was a hint about what will succeed the fight over Keystone as the next major grassroots anti–climate change effort: calling for a presidential ban on extracting fossil fuels offshore and on federal land. "The public lands stuff is emerging as a big focus for all of the groups," says Karthik Ganapathy, a spokesperson for 350.org. Now that Hillary Clinton has announced her opposition to Keystone, the pipeline proposal that seemed like it would never go away now looks like it finally will. The pressure on President Obama to reject it has filtered upward from the climate activists to Obama's own former secretary of state and his party's likely nominee to succeed him. Obama is expected to announce his decision on the pipeline in a matter of weeks or months, and it's widely believed that he'll say no. And so that raises a question: What is next? So much energy has gone into stopping this pipeline and so much activist capacity and awareness has been built up to fight it. Stopping the pipeline is only one small part of the larger agenda to keep fossil fuels in the ground. Climate scientists say that 80 percent of the world's fossil fuels that are already held in reserve by fossil fuel companies cannot be burned if we are to stay below 2C. The Canadian tar sands that Keystone XL would have connected to U.S. pipelines are only one small part of that. In fact, with the Keystone saga having dragged on longer than anyone expected, environmental groups have already begun their pivot toward focusing on public lands. They have formed the Keep It in the Ground coalition, which includes many of the same groups — 350.org, Friends of the Earth, Sierra Club — that led the national fight against Keystone. It also includes groups working to protect individual areas such as the Arctic Ocean and Wyoming's Powder River Basin. About half of unexploited fossil fuels in the U.S. are on federal lands or in federally controlled offshore waters, and 91 percent of those have not (yet) been leased, according to a report commissioned by Friends of the Earth and the Center for Biological Diversity. (The remainder are on private land, so the president does not have direct control over whether they're drilled or mined.) If all the currently unleased federal fossil fuels were exploited and burned, they would produce 319 to 450 billion tons of carbon dioxide equivalent, which at the high end would constitute "more than a quarter of the total global emissions that can be released if the world is to limit global warming below 2°C." The report concludes, "The potential

emissions from unleased federal fossil fuels are incompatible with any U.S. share of global carbon limits that would keep emissions below scientifically advisable levels." Already, over the last 10 years, burning fossil fuels from federal leasing has produced nearly 4 percent of global greenhouse gas emissions. On Sept. 15, the Keep it in the Ground coalition sent a letter to President Obama calling on him to take executive action to stop all leasing of fossil fuels from federal lands and waters. The member groups also plan to send the letter out as a petition, hoping to get 1 million signatures. They write: With the stroke of a pen, you could take the bold action needed to stop new federal leasing of fossil fuels, and to keep those remaining fossil fuels — our publicly owned fossil fuels — safely in the ground.

The science is clear that, to maintain a good chance of avoiding catastrophic levels of warming, the world must keep the vast majority of its remaining fossil fuels in the ground. Federal fossil fuels — those that you control — are the natural place to begin. Each new federal fossil fuel lease opens new deposits for development that should be deemed unburnable.

But thus far Obama has been a disappointment to climate hawks on the issue. As their letter to Obama notes, "Your administration alone has leased nearly 15 million acres of public land and 21 million acres of ocean for fossil fuel industrialization."

In addition to the fact that these leases need not be sold at all, environmental and public interest advocates are outraged that they are being sold at such low prices. The prices do not even reflect current market prices for the fossil fuels or the social cost of the conventional pollution spewed through their extraction, transportation, and combustion, much less the federal government's own calculations of the social cost of carbon emissions' contribution to climate change. They are also often being sold in non-transparent, non-competitive bidding processes. All this adds up to billions of dollars in annual corporate welfare for dirty energy companies. In March, the Obama administration finally took its first baby steps toward addressing this perverse state of affairs. Interior Secretary Sally Jewell said that her department, which manages federal lands, will consider how to reform its fossil fuel leasing programs to better serve the public interest and align with the administration's climate change goals. But it seems like Jewell is only talking about possibly charging a little bit more for leases. After all, combatting climate change isn't Obama's only goal when it comes to energy policy: He is also committed to ramping up domestic production of all forms of energy. That's why he has not only kept selling off leases for coal mining and oil and gas drilling on federal land, he has even opened up new, highly sensitive areas to drilling, such as the Arctic Ocean.

OCTOBER 2015

Obama's Updated Smog Standard: A Missed Opportunity

Date: 01st October, 2015 Source: Ecowatch

Today, the Obama Administration will unveil an update to the National Ambient Air Quality Standards (NAAQS) for smog pollution—or ground level ozone—and set the level at 70 parts per billion (ppb). The standard was last updated in 2008 when the Bush Administration rejected the recommendations of expert scientists and medical health professionals, who warned that the now current 75 ppb was insufficient to protect public health and would leave too many Americans in harm's way.

According to the American Lung Association, inhaling smog pollution is like getting a sunburn on your lungs and often results in immediate breathing trouble. Long-term exposure to smog pollution is linked to chronic respiratory diseases like asthma, reproductive and developmental disorders and even premature death. The Obama Administration has fallen short of setting a smog standard that fully protects the health of our families, making this decision a missed opportunity to clean up our air and protect the most vulnerable Americans. Lowering the smog standard from 75 to 70 ppb is a modest step in the right direction, but it doesn't go far enough to protect the millions of Americans living in communities with dangerously high levels of smog pollution.

Over the past seven years, medical scientists have been clear that any standard above 60 parts per billion (ppb) puts our communities at risk and is especially dangerous to children, seniors and people with respiratory illnesses. Insufficient clean air protections have disproportionately severe impacts on low income communities and communities of color, who are more likely to live closer to sources of pollution and roadways, have lower access to medical resources and health insurance and frequently have higher rates of asthma, emergency room visits and premature deaths linked to air pollution. Moving forward, Sierra Club will continue fighting for stronger smog pollution protections and will use every tool in our belt to hold polluters accountable for the toxic emissions they dump on our communities, while continuing to push for stronger clean air protections on the local and federal levels.

Clean-air advocates upset with EPA ozone decision

Date: 01st October, 2015 Source: Public Integrity

The Environmental Protection Agency announced Thursday that the country's anti-smog standard does not sufficiently protect Americans' lungs and will be tightened, a move that irked groups on both sides of the debate. The decision comes after years of wrangling over the national limit for ozone, the lung-damaging gas in smog. The EPA said it decided to lower the legal ceiling on the amount of ozone permitted in the air from 75 parts per billion to 70, citing "extensive scientific evidence about ozone's effects on public health and welfare."

After the EPA proposed a threshold in the range of 65 to 70 parts per billion last year, clean-air and health groups had urged the agency to rein in ozone more significantly. Earthjustice, an environmental law firm

involved in a 2013 lawsuit that forced the agency to act, was among them. “This weak-kneed action leaves children, seniors, and asthmatics without the protection doctors say they need from this dangerous pollutant,” David Baron, managing attorney at Earthjustice, said in a statement Thursday. “It will allow thousands of deaths, hospitalizations, asthma attacks, and missed school and work days that would be prevented by the much stronger standard supported by medical experts.”

The National Association of Manufacturers, which lobbied hard to leave the limit unchanged, called the decision to tighten the standard “a punch in the gut” because of the cost and economic ripple effects its members fear from tighter pollution controls. “After an unprecedented level of outreach by manufacturers and other stakeholders, the worst-case scenario was avoided,” Jay Timmons, the trade group’s president and CEO, said in a statement. “However, make no mistake: The new ozone standard will inflict pain on companies that build things in America — and destroy job opportunities for American workers.” The EPA’s independent scientific advisory committee of researchers and doctors has said since 2006 that the standard is too lenient. But when the EPA last lowered the limit, in 2008, officials did not set it within the 60-to-70 parts per billion range its panel recommended. President Barack Obama told the EPA to hold off in 2011, when the agency was on the verge of trying again.

This time, the EPA faced a court-ordered deadline to make a decision. The American Lung Association and three environmental groups sued in 2013 when the agency had yet to take up the matter as required. The EPA isn’t permitted to consider cost when it sets the ozone standard, only the effect on public health. Figuring out the most cost-effective way to control smog is supposed to come after the threshold is set. But you wouldn’t know that by listening to the ozone debates.

Opponents of anti-smog efforts have long argued that stricter rules would wreck the economy, as described in a Center for Public Integrity investigation into the 44-year history of ozone regulation. When an area is out of compliance with the standard, state officials must come up with a plan to control the pollutants that form ground-level ozone, which is subject to EPA approval. Industry groups fear these ozone-reducing efforts will make daily business more expensive and expansions difficult or impossible. An economic consulting group hired by the National Association of Manufacturers said in February that the rule would cost the U.S. economy $140 billion a year, with higher compliance costs rippling outward in lost jobs, higher electricity rates and other problems. Clean-air advocates and the EPA said the dire predictions of economic disaster have never come true, and they doubt this time would be an exception. In September, an economic consulting group hired by Earthjustice contended that the manufacturers’ ozone-rule analysis “grossly inflated the cost” — in part due to what it called a $70 billion math error — while ignoring the economic value of better health.

The cost of failing to control ozone is measured in medical bills, lost work days and shortened lives, according to the EPA. Health groups urging the standard be tightened, including the American Academy of Pediatrics and the American Medical Association, pointed to studies that find respiratory problems such as asthma attacks at ozone levels below the 75 parts-per-billion threshold set in 2008. Evidence is also mounting that ozone has problematic effects on the heart, they say.

Ozone-causing pollutants come from a variety of sources, including factories, vehicles, power plants and refineries. But not all are man-made or locally produced. That’s a particular issue for areas in the West dealing with ozone-worsening wildfires and pollution wafting in from Asia. A new NASA-led study found that only a quarter of the ozone in California and Nevada in the summer of 2008, a period rife with wildfires, was both local and man-made.

Industry groups have pointed to such “background” ozone when arguing against tightening the standard. Health advocates note that states can ask for an exemption if they are able to demonstrate that their air-quality violations were triggered by causes such as wildfires; the EPA has said it will coordinate with states to work through these issues. Efforts to influence the EPA’s decision on the ozone standard ramped up to a

fever pitch in recent weeks. At least 21 groups, some for and some against a stricter standard, met with the White House's Office of Management and Budget in September to try to sway officials at that agency, which has the power to change proposed rules.

Both the lung and manufacturers associations released poll results to suggest that Americans are on their side. The two groups also launched dueling ad campaigns, though not exactly on the same playing field: The lung association's static ads appeared on websites in the Washington area for a cost the group characterized as "low six figures," while the manufacturers' multimillion-dollar effort put ads on television in Washington, D.C., and eight states. One of the manufacturers' ads focuses on ozone-forming pollutants that travel from China to the western United States. Tighter ozone rules won't hurt China, the announcer says, "but they could cost our country more than a trillion dollars" — that's the group's estimate when tallying up the effect through 2040 — "and kill more than a million jobs per year."

India Announces Plan to Lower Rate of Greenhouse Gas Emissions

Date:01st October, 2015 Source: The New York Times

NEW DELHI — Under growing pressure to join in an international accord to battle climate change, India on Thursday announced its long-term plan to reduce its rate of planet-warming greenhouse gas pollution and to aggressively ramp up its production of solar power, hydropower and wind energy. India, the world's third-largest carbon polluter, was the last major country to issue its plan before a major summit meeting in Paris in December aimed at forging a sweeping new accord that would for the first time commit every country on earth to enacting new policies to cut fossil fuel emissions.

At the heart of the Paris deal will be the plans put forth by each government detailing how it will help its economy make a transition to low-carbon energy sources. For years, India has been viewed as an intransigent outlier in global climate-change talks. Indian leaders have long argued that their priority was lifting a vast population out of poverty, and that this could not be done swiftly without the rapid expansion of coal-fired power, the largest contributor to greenhouse gas pollution.

They also maintain that rich countries like the United States bear moral responsibility for global warming and should not deny poor countries the chance to build their economies. Under the plan, India does not commit to an absolute reduction in carbon emissions levels, unlike other major polluting economies, including those of the United States, China, the European Union and Brazil. India's emissions would continue to rise, but at a slower pace than business as usual. Still, some environmental advocates praised the plan's commitment to renewable energy and said that, if enacted, it could put India on track to reduced carbon emissions in the long run.

"This is a really significant step for India," said Anjali Jaiswal, director of the India program for the Natural Resources Defense Council, an advocacy group in New York. "It puts renewable energy at the center of the plan and positions India for further reductions in emissions going forward. It is a shift from what we've seen." Other analysts were critical, saying that by resisting an absolute decrease in carbon emissions, policy makers in New Delhi were swimming against a global current.

"This is a very conservative approach," said Durwood Zaelke, president of the Institute for Governance & Sustainable Development, a research center with offices in Washington and Geneva. At the core of India's proposal is a commitment to reduce the intensity of its fossil fuel emissions 33 percent to 35 percent from

2005 levels by 2030, while producing 40 percent of its electricity from non-fossil-fuel sources such as wind, solar power, hydropower and nuclear energy by the same year.

Under the terms of the plan, India's economy would grow roughly sevenfold by 2030, compared with 2005 levels, while its carbon emissions would triple. Yet if India took no action, emissions would also grow sevenfold. Significantly, the pledge to reduce the pollution rate is not conditional on financial contributions from wealthier countries, a move that climate policy activists praised as a major step forward from India's earlier positions.

However, in rapidly expanding the use of renewable and other zero-carbon forms of technology, the Indians do demand the "transfer of technology" from other countries, as well as aid from the Green Climate Fund, an entity established by the United Nations to solicit donations from wealthy countries to help poor countries adapt their economies to lower-carbon technologies. Earlier in the week, Prime Minister Narendra Modi of India and President Obama discussed their climate change plans at a bilateral meeting in New York. Behind the scenes, people familiar with their talks say, the two leaders may be moving toward making a joint announcement involving the exchange of United States-developed low-carbon technology.
Before meeting with Mr. Obama, Mr. Modi toured companies in Silicon Valley. Mr. Modi is expected to make a formal announcement of the plan in New Delhi on Friday, in an event timed to coincide with the celebration of the birthday of Mohandas K. Gandhi, India's founding father. But the Indian government posted its 38-page plan to a public United Nations portal on Thursday evening. It includes poetic references to yoga and directly cites Gandhi. "Much before the climate change debate began, Mahatma Gandhi, regarded as the father of our nation, had said that we should act as 'trustees' and use natural resources wisely as it is our moral responsibility to ensure that we bequeath to the future generations a healthy planet," it reads.

In 2011, before he took office, Mr. Modi published a book that presented the moral case for action on climate change. He has positioned himself as a progressive on the issue. Yet he has also made plain that his top priority for his nation is economic growth, leading millions of people out of poverty — even if that means increasing the use of cheap, coal-fired electricity. The pledges released on Thursday represent a sort of compromise: both strikingly ambitious on renewable energy and adamant in a refusal to actually diminish emissions. In an interview this week, India's environment minister, Prakash Javadekar, illustrated that tension. "Poverty reduction is our top priority. Providing power in the next 2,000 days is our priority.
We want faster development. My people have a right to grow," he said. But he added: "Climate change is also a priority. We have the world's largest renewable energy sector. We want to clean our air, our water, our energy, our environment. It's not because someone else is saying so. We want that."
Even though all the major economies have submitted climate change plans, experts say the plans' collective impact will not be enough to stave off the worst impacts of climate change. An analysis released Monday by researchers at the group Climate Interactive shows that the collective pledges would reduce the warming of the planet at century's end to about 6.3 degrees, if the national commitments were fully honored, from an expected 8.1 degrees Fahrenheit, if emissions continued on their present course. That is a long way from meeting their own shared target, set in 2010, of limiting global warming to about 3.6 degrees Fahrenheit. That level of warming, while potentially producing dire effects on agriculture, sea level and the natural world, might at least be tolerable, some experts say.

EPA releases a stricter, health-based smog standard

Date: 01st October, 2015 Source: High Country News

Failure to meet the new requirements can trigger serious economic consequences for some communities. When atmospheric scientist Dan Jaffe talks to his students about the tighter smog standard released today by the Environmental Protection Agency, he calls it the "make work for atmospheric scientists standard." Many

areas in the Intermountain West measure smog levels that exceed the new health-based standard of 70 parts per billion, even rural areas without any big local pollution sources. States will need to recruit atmospheric scientists to figure out whether conditions beyond states' control were to blame. In the West, a variety of sources can contribute to elevated ozone levels — forest fires, pollution from abroad or ozone that storms push down from the stratosphere, six to 30 miles above Earth's surface. Up until now, Western states, besides California, haven't had to pay much attention to teasing out the sources of ozone. They generally met the standard. But that will change dramatically under the new health-based standard, according to scientists and regulators. "The lower the standard gets, these so-called exceptional events aren't going to be exceptional any more," says Andrew Langford, an atmospheric scientist with the National Oceanic and Atmospheric Administration. "Stratospheric contribution and Asian pollution contribution are not very significant in the northeast and southeast, but they're really big in the West, particularly the Intermountain West." The source of the pollution matters because under EPA rules, the agency can excuse high ozone days if they were caused by a wildfire, dirty air from Asia or Mexico or a storm that delivered stratospheric ozone into a community. However, if the smog came from a U.S. anthropogenic source, even another state like California, intermountain states will not be off the hook.

This is important to states and communities because failure to meet the standard can trigger serious economic consequences. For instance, in communities that exceed EPA air quality standards, new industrial facilities must install pollution controls, which can be expensive and deter companies from building their factories or even hospitals in those communities.

Some of the places likely to find the new standard challenging are in rural Utah. Monitors in Zion and Great Basin National Parks have detected high enough ozone levels that nearby rural communities and the small city of St. George may end up exceeding the new standard, according to Bryce Bird, air quality director at the Utah Department of Environmental Quality. Utah could try to make the case that the elevated ozone levels in these counties were the result of causes beyond the state's control — such as wildfires, stratospheric ozone or dirty air in Asia. But each time, the states would have to deliver detailed reports to the EPA making that case. "Air pollution research costs lots of money. It's something that's not funded by the EPA, and states would have to bear those costs," Bird complains.

Bird says Utah and other Western states have communicated their concerns to the EPA. "I don't mind spending resources to improve air quality but to expend resources to have air quality stay the same I don't think is the best use of our funds," Bird adds. Scientists agreed that at least under current EPA rules and procedures, states are in for a lot of hassle.

"What is problematic for them is the amount of work it takes," agreed Jaffe, a University of Washington atmospheric scientist. That's why the new standard is good news for his students. "It absolutely is going to require the states to hire more people to understand what's going on. It takes a pretty substantial scientific case to prove."
It's too early to say which areas will be designated as not meeting the standard, which is known as nonattainment. The EPA plans to make those decisions in 2017, based on the average of the 4th highest 8-hour ozone level in each of the previous three years.EPA maps show large areas in Colorado, Nevada, Utah, Arizona and New Mexico as well as California currently measure ozone higher than the new standard. However, the EPA estimates that because of anticipated improvements in air quality from regulations and proposed regulations, only 14 counties outside of California, including Larimer and Jefferson Counties in Colorado, would be out of attainment in 2025.

Atmospheric scientists say that EPA's projections seem optimistic and must reflect states in the Intermountain West getting excused for high ozone levels because they were caused by stratospheric ozone or other circumstances beyond states' control. Otherwise, there is probably no amount of pollution reduction that would bring many high-elevation Western counties below the new ozone standard.

For example, Langford studied ozone in Clark County, Nevada over 43 days in the spring and early summer of 2013. That's the time of year when the impact of dirty air from Asia and stratospheric ozone intrusion tends to be highest. Remarkably, ozone levels exceeded the new standard on 14 days. He found that stratospheric ozone played a significant role and pollution from Asia played a smaller role. "Models suggest that this applies across much of the Intermountain West," Langford adds.

Jaffe has studied the impact of stratospheric ozone over the last ten years at his air monitoring station on Oregon's Mt. Bachelor at 9,000 feet. The air there should be pristine but instead it exceeds even the 2008 standard of 75 parts per billion. "It's going to throw large parts of the West out of compliance at least on the face of it; this is going to be a very hard standard to meet, a very hard standard for sites at high elevations," Jaffe said about the new 70 parts per billion standard.

EPA plans to work with states and simplify the process for proving that exceptional events contributed to high ozone levels. The agency does not expect this to hinder states' abilities to meet the new standard. "The Clean Air Act and EPA policies provide a number of tools to help states in the limited number of areas where background ozone may contribute to high ozone concentrations on a few days," said Enesta Jones, an EPA spokeswoman. "These tools may help areas avoid a nonattainment designation, or minimize attainment control requirements where appreciable levels of background ozone influence air quality."

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146 Countries Covering Almost 87% of Global Emissions Submit Climate Plans Ahead of Paris

Date: 02nd October, 2015 Source: Ecowatch

A total of 146 countries, representing almost 87 percent of global greenhouse gas emissions, have submitted their intended national climate action plans to the United Nations. This means that so far more than 75 percent of all member countries to the United Nations Framework Convention on Climate Change (UNFCCC) have responded. This includes all developed countries under the convention and 104 developing countries or almost 70 percent of UNFCCC developing member states.

More than 80 percent of the plans include quantifiable objectives and also more than 80 percent include intended actions to adapt to climate change. Christiana Figueres, executive secretary of the UNFCCC said: "Over the past few months, the number of countries submitting their climate action plans to the Paris agreement has grown from a steady stream into a sweeping flood. This unprecedented breadth and depth of response reflects the increasing recognition that there is an unparalleled opportunity to achieve resilient, low-emission, sustainable development at national level. "

"The Intended Nationally Determined Contributions (INDCs) can be seen as an impressive portfolio of potential investment opportunities that are good for each individual country and good for the planet," she said. The UNFCCC secretariat, as requested by parties to the convention, will provide a synthesis report of all these plans on Nov. 1. More countries will continue to submit their plans ahead of the Paris UN climate change conference from Nov. 30 to Dec. 11. The European Union is also counted as a separate "party" to the UNFCCC in addition to all its members, which means that a total of 147 parties to the convention have submitted plans. National Level Planning Across Diverse National Circumstances

The Paris agreement is to be a turning point that puts the world on track to the low-emission, climate resilient and sustainable future that is the only way to keep global average temperatures from rising beyond 2 degrees Celsius, the internationally-agreed defense line against the worst impacts of climate change.

India submits its climate action plan, asks rich nations to cooperate in achieving its goal

Date:02nd October, 2015 Source: The Economic Times

BERLIN: India said on Thursday that it would increase the share of clean energy in its total energy mix by as much as 40%, by the target year of 2030. While submitting its 38-page 'climate action plan' to a UN body in Bonn, Germany, India added that it would fight climate change by taking the energy efficiency route and by substantially reducing its 'emission intensity', which is measured by the amount of carbon emissions per unit of GDP. "India's goal is to reduce overall emission intensity and improve energy efficiency of its economy over time and at the same time protecting the vulnerable sectors of economy and segments of our society."

The 'Climate Action Plan' of individual countries is called the 'Intended Nationally Determined Contribution' (INDC), in climate-change negotiation parlance. India met the 'informal' deadline of October 1, for submission of its INDC. India did clarify that its INDC does not bind it to any sector-specific mitigation, obligation or action, including in the agriculture sector. India explained that it would reduce the emissions intensity of its GDP by 33% -35% by 2030, from 2005 levels. It sought cooperation from the developed world to achieve about 40% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030. Non-fossil fuel-based energy includes solar, wind, bio-mass and nuclear. It said this target would be achieved with the help of transfer of technology and low-cost international finance, including from the Green Climate Fund.

"The successful implementation of INDC is contingent upon an ambitious global agreement including additional means of implementation to be provided by developed country parties, technology transfer and capacity building." India in its plan emphasised that it would propagate "a healthy and sustainable way of living based on traditions and values of conservation and moderation." It also promised that the country would increase the carbon sink by creating an additional capacity of 2.5 to 3 billion tonnes of CO2, equivalent through additional forest and tree cover by 2030.

All 196 member countries of the United Nations Framework Convention of the Climate Change (UNFCCC) were expected to submit their climate action plan by Oct. 1, specifying how they will check global warming and fight climate change under a post-2020 agreement. So far, only 148 countries have submitted their INDCs to the UNFCCC. As the deadline was an informal one, many countries are expected to submit their INDCs over the next couple of weeks. These INDCs, comprising mitigation (emission cut promises) and adaptation measures, will form the basis of climate negotiations in Paris during the 'conference of parties' (COP21) in November-December.

In its detailed 'climate action plan', India explained how it would achieve these targets so that it can protect the environment without compromising its developmental goals which are important for it to eradicate poverty and ensure energy access to all its citizens. To achieve the above contributions (promises), India is determined to continue with its ongoing interventions, enhance the existing policies as detailed in previous sections and launch new initiatives," India's INDC said.

Accordingly, it listed the following priority areas in its INDC:

1) Introducing new, more efficient and cleaner technologies in thermal power generation.
2) Promoting renewable energy generation and increasing the share of alternative fuels in overall fuel mix.
3)Reducing emissions from transportation sector.
4) Promoting energy efficiency in the economy, notably in industry, transportation, buildings and appliances.
5)Reducing emissions from waste.
6)Developing climate resilient infrastructure.
7) Full implementation of Green India Mission and other programmes of afforestation.
8) Planning and implementation of actions to enhance climate resilience and reduce vulnerability to climate change.

India's INDC explained that it has revisited the National Missions under the National Action Plan on Climate Change in the light of new scientific information and technological advances and identified new missions or programs on wind energy, health, waste to energy and coastal areas. It said it is also redesigning the National Water Mission and National Mission on Sustainable Agriculture. All the countries are expected to come out with a global climate deal after the COP21 in December, deciding what the 196 nations will do after 2020 -- in their respective individual capacities -- to save the world from the disastrous consequences of climate change.

Paris climate deal should be comprehensive, equitable: India

Date:02nd October 02, 2015 Source: The Asian Age

Paris summit on climate change will be held later this yearUnited Nations: Calling for a comprehensive and equitable climate change agreement at Paris summit later this year, India on Friday said developing countries can do more if they are enabled in their efforts with the provision of finance, technology transfer and capacity building support from developed countries. "As we prepare to meet in two months time in Paris, the world expects us to deliver an ambitious and credible agreement on climate change. We have a duty for common action but in doing so we must keep in mind the larger historical contribution of some and the differentiated responsibility of others," she said in her address to the annual debate of the UN General Assembly. She said the agreement in Paris needs to be comprehensive and equitable, while delivering concrete action. "Developing countries can do more if they are enabled in their efforts with the provision of finance, technology transfer and capacity building support from developed countries," she said as she assured the international community that India will play its due role in reaching a meaningful, equitable and effective agreement in Paris.

On the adoption of the new Sustainable Development Agenda, Sushma Swaraj said the successful implementation of the goals will require political resolve and an inclination to share - both technology and financial resources - while simultaneously improving delivery mechanisms. She added that ever since Prime Minister Narendra Modi took office a year and a half ago, the government has committed itself to a "transformative change - one that can reinvigorate the nation and redeem its spirit." She said this renewal has enabled India to play its rightful role in international affairs while also becoming the fastest growing major economy in the world. Mrs Swaraj underscored that the driving force of this comprehensive renewal has been premised on the motto of 'Sabka saath, sabka vikas', an emphasis on the welfare of all

people. India has also initiated an "energetic outreach" to all its partners in the international community. "Our efforts have focused, first and foremost, on our immediate neighbourhood and the results have been truly transformational. We have reached out to our extended neighbourhood as well, renewing ancient linkages and constructing modern economic partnerships, including, most recently, a Summit with 14 Pacific Island nations," she said. She pointed out that the Act East policy has replaced the earlier Look East one, with more vigorous and proactive engagement with an economically vibrant region.

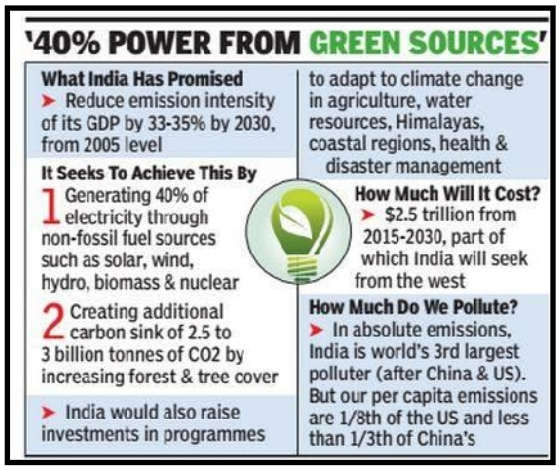
"This complements our Link West engagement. We remain committed to the Middle East Peace Process, which is the key to prevent further radicalisation of the region. We have also qualitatively upgraded our relations with all the major powers," she said. She said as a nuclear weapon state, India is aware of its responsibility and its support for global, non-discriminatory and verifiable nuclear disarmament has not diminished. She said that the Act East policy has replaced the earlier Look East one, with more vigorous and proactive engagement with an economically vibrant region. "This complements our Link West engagement. We remain committed to the Middle East Peace Process which is the key to prevent further radicalisation of the region.

We have also qualitatively upgraded our relations with all the major powers," she said. She said as a nuclear weapon state, India is aware of its responsibility and its support for global, non-discriminatory and verifiable nuclear disarmament has not diminished. Highlighting the various ambitious programmes initiated by the government that compliment the sustainable development goals, Mrs Swaraj said as a woman and an elected Member of Parliament, it has been her firm conviction that there is a shortcut to real social change - empowering the girl child. "Our Government's policy of Beti Bachao, Beti Padhao (Educate the Girl Child to empower her) was conceived with this vision. Similarly, with the transformative power of technology and the resources available to the international community, we now have the ability to glimpse a future, which provides basic human dignity for all of the world's people. Whether we can reach that goal depends on how we act," she said.

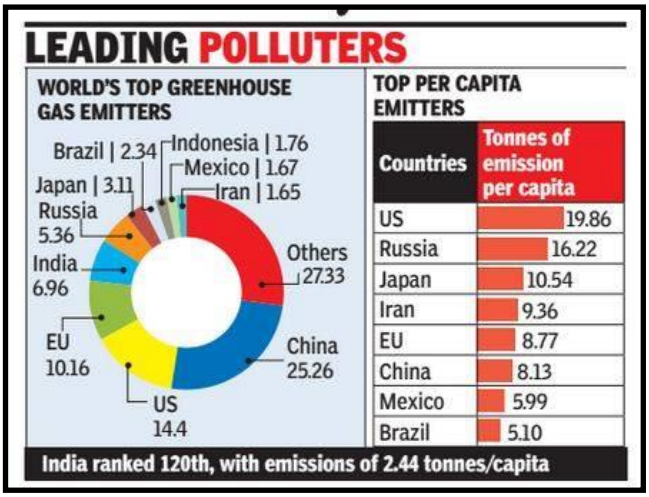
India commits to 35% cut in emission rate by 2030

Date: 03rd October, 2015 Source: The Economic Times

BERLIN: India on Thursday announced its much awaited post-2020 'climate action plan' promising to reduce emission intensity by 33-35% by 2030 over the 2005 levels, boost clean energy in electricity generation to 40% while adding carbon sinks — tree and forest cover to remove carbon dioxide from the atmosphere — amounting to 2.5-3 billion tonnes of CO2. In keeping with its position that India's development needs cannot be delayed, there is no commitment to a 'peaking year' as to when emissions will be capped and there are no sector specific targets. Instead, India has outlined a plan to reduce emission intensity which is the ratio of greenhouse gases to GDP or emission per unit GDP. Hours after submitting the climate action plan to the UNFCCC within its October 1 deadline, environment and climate change minister Prakash Javadekar said in New Delhi, "India's INDC is fair and ambitious, considering the fact that India is keen to attempt to work towards a low carbon emission pathway while simultaneously endeavoring to meet all the developmental challenges that the country faces today." Climate action to cost nation $2.5 trillion Javadekar said India had also decided to anchor a global solar alliance, INSPA (International agency for solar policy and application), of all countries located between the tropics of Cancer and Capricorn. "The recent decisions of the government represent a quantum jump in aspirations and demonstrate unparalleled vision," he added.



India has argued that it cannot be compared to China, despite roughly similar population sizes, as its per capita emissions are much lower. According to the World Resources Institute, India's per capita emissions are 2.44 metric tonnes to China's 8.13 metric tonnes. Though India is the third largest emitter — fourth, if one counts EU as a single entity — it accounts for less than 7% of greenhouse gases (GHGs). While US and China have agreed to converge at 12 tonnes of CO2 per capita by 2030, India is still far lower that these emission levels. India told a UN body at Bonn in Germany that it intends to combat climate change by adopting the energy efficiency route and move on a low carbon growth path. But, India said it would seek the assistance of developed nations — with a historical responsibility for global warming — to help with technology and finance to meet an estimated $2.5 trillion needed to support climate change actions from now to 2030.

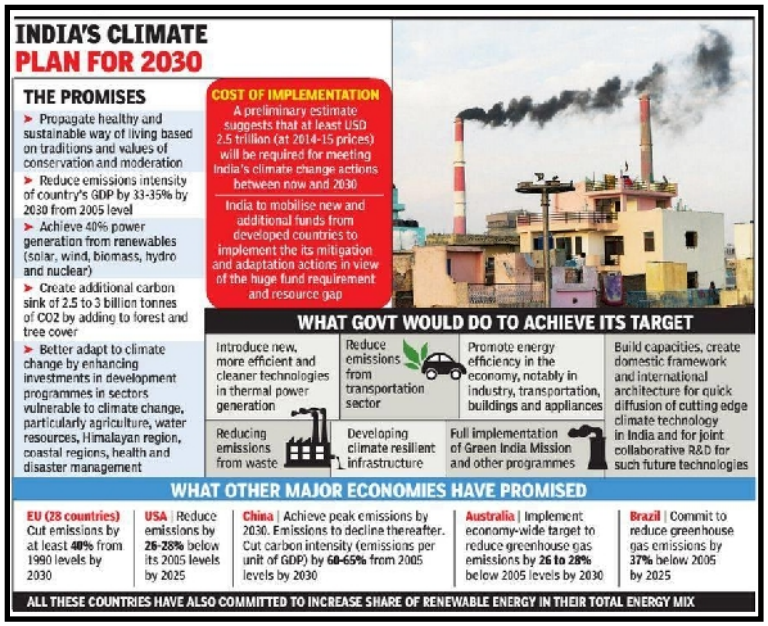


The Indian government has stoutly argued that it is for developed nations and blocks such as the European Union to cut per capita emissions and "vacate" carbon space for a developing nation like India, as steep emission cuts at the current juncture will come at the cost of the poor and underprivileged who have a right to social and economic infrastructure. India said it will increase the share of clean energy in its total energy mix by about 40% by the year 2030 and take several other mitigation and adaptation measures. India stressed that its post-2020 action plan does not bind it to any sector specific mitigation obligation or action, including in important sectors like agriculture. The climate action plan of an individual country is called the 'Intended Nationally Determined Contribution' (INDC) in climate change negotiation parlance. Besides India, 147 other countries have so far submitted their respective INDCs to the United Nations Framework Convention of the Climate Change (UNFCCC).

The move to declare INDCs is intended to insulate India from pressure from developed countries. But while doing so, India made it clear it needs carbon space for economic development and will not be able to specify a peaking year. Reducing carbon dependence ties in with the government's decisions to ramp up targets in renewables and stipulate a clean energy component in the supplies of state discoms. The INDC said, "India's goal is to reduce overall emission intensity and improve energy efficiency of its economy over time and at the same time protecting the vulnerable sectors of economy and segments of our society. "The successful implementation of INDC is contingent upon an ambitious global agreement including additional means of implementation to be provided by developed country parties, technology transfer and capacity building". India also emphasised "a healthy and sustainable way of living based on traditions and values of conservation and moderation". The country at the same time sought to remind rich nations of their high carbon lifestyle by quoting Mahatma Gandhi to say, "Earth has enough resources to meet people's needs, but will never have enough to satisfy people's greed".

At present, the country is moving to achieve its earlier target of reducing its emission intensity by 20 to 25% by the year 2020 as compared to its 2005 level. It said this target would be achieved with the help of transfer of technology and low cost international finance including from Green Climate Fund (GCF).

All 196 member countries of the United Nations Framework Convention on Climate Change (UNFCCC) were expected to submit their climate action plan by October 1, specifying how they will act in their individual capacity to check global warming and fight the menace of climate change under a post-2020 agreement. These INDCs, comprising mitigation (emission cut promises) and adaptation measures, will form the basis of climate negotiations in Paris during the 'conference of parties' (COP21) in November-December. "The INDC document is prepared with a view to taking forward the Prime Minister Narendra Modi's vision of a 'sustainable lifestyle' and 'climate justice' to protect the poor and vulnerable from adverse impacts of climate change," Javadekar said.



Climate change can alter the planet's shape

Date: 03rd October, 2015 Source: The Economic Times

ORONTO: As melting glaciers erode the land, global warming could alter the shape of the planet, a new study says. "Antarctica is warming up, and as it moves to temperatures above 0-degrees celsius, the glaciers are all going to start moving faster," said study lead author Michele Koppes, assistant professor at University of British Columbia. "We are already seeing that the ice sheets are starting to move faster and should become more erosive, digging deeper valleys and shedding more sediment into the oceans," Koppes noted. The repercussions of this erosion add to the already complex effects of climate change in the polar regions. Faster moving glaciers deposit more sediment in downstream basins and on the continental shelves, potentially impacting fisheries, dams and access to clean freshwater in mountain communities, the study noted. When the researchers compared glaciers in Patagonia and in the Antarctic Peninsula over a period of five years, they found that glaciers in warmer Patagonia moved even faster and caused more erosion than those in Antarctica, as warmer temperatures and melting ice helped lubricate the bed of the glaciers. "We found that glaciers erode 100 to 1,000 times faster in Patagonia than they do in Antarctica," Koppes said. The findings appeared in the journal Nature.

Analysis tallies death toll from Volkswagen diesels' air pollution

Date: 03rd October, 2015 Source: Trib Live

WASHINGTON — Volkswagen's pollution control chicanery has not just been victimless tinkering, killing between five and 20 people in the United States annually in recent years, according to an Associated Press statistical and computer analysis.

The software that the company admitted using to get around government emissions limits allowed VWs to spew enough pollution to cause somewhere between 16 and 94 deaths over seven years, with the annual count increasing more recently as more of the diesels were on the road. The total cost has been well over $100 million. That's just in the United States. It's likely far deadlier and costlier in Europe, where more VW diesels were sold, engineers said. Scientists and experts said the death toll in Europe could be as high as hundreds each year, though they caution that it is hard to take American health and air quality computer models and translate them to a more densely populated Europe. “Statistically, we can't point out who died because of this policy, but some people have died or likely died as a result of this,” said Carnegie Mellon University environmental engineer professor Peter Adams. He calculates the cost of air pollution with a sophisticated computer model that he and the AP used in its analysis.

Computer software allowed VW diesel cars to spew between 10 to 40 times more nitrogen oxides (NOx) than allowed by regulation, making this “clearly a concern for air quality and public health,” said Janet McCabe, acting air quality chief for the federal Environmental Protection Agency. Nitrogen oxides mostly form smog — that murky, dirty air that makes it hard to see and for some people to breathe — but amplify a deadlier, larger problem: tiny particles of soot. Numerous medical studies show those tiny particles cause about 50,000 deaths a year in the United States, mostly from heart problems.

Nitrogen oxides can travel hundreds of miles, so pollution spewed in Pittsburgh can be felt on the East Coast, Adams said. Experts calculate how much pollution costs society by looking at the value of lost lives. In this case, Adams and other said the lost lives — valued at $8.6 million apiece — overwhelm other costs such as lost work days or hospital costs. The overall annual cost of the extra pollutants from the VW diesels

ranged from $40 million to $170 million, environmental engineering professors calculated. "Even the small increase in NOx from VW diesel emissions is likely to have worsened pollution along the roadways where they have traveled, and affected the lives of hundreds of thousands of people," said Dan Greenbaum, president of the Health Effects Institute in Boston.

"To say millions of people of people are breathing poor air as the result of that is not off the mark," said Greenbaum, who runs the institute that is funded by both the EPA and the auto industry to serve as an independent arbiter of the science.

Representatives of VW did not respond to AP request for comment. These calculations should be put in context of air that is getting dramatically cleaner in the United States, experts said. Also, the deaths from extra pollution are dwarfed by the 35,000 people in the U.S. a year who die in auto accidents and are closer to the annual U.S. death toll of spider or snake bites. The AP calculated how much pollution was spewed year by year, starting with that broad 10 times to 40 times emissions level estimate from the EPA, then factoring in mileage and car number totals from EPA, the car company and Kelley Blue Book. The results show an upper and lower limit of extra nitrogen oxides pollution allowed by VW's subterfuge. The AP took those figures to scientists who previously created a sophisticated computer program that looks at air movement and numerous epidemiological studies on the health effects of pollutants. The result was a rough estimate on deaths and costs to society based on a certain amount of pollution triggering each death. The EPA has its own open source computer model that calculates death and social costs of emissions, roughly finding it takes nearly 1,300 tons of nitrogen oxides to cause one death. Using that calculation and AP's emission totals, the total death figures over the past seven years range from 12 to 69, slightly lower than the AP calculations.

The AP ran its calculations and results by more than a dozen experts in emissions, risk and public health. They all confirmed the calculations and results seemed right. One scientist had even done a statistical analysis on his own and came independently to the same conclusion. The experts were mostly university professors or from research institutes. They were not environmental advocates or representatives of auto companies. But engineers caution that these figures come with many caveats and are ballpark estimates. They rely on many assumptions and a range of potential emissions per car. Air pollution impacts on people are usually calculated on a local level because that's where it is felt, and it changes from place to place. But these calculations were broadened to a national level, which adds more uncertainty. The computer simulation that made the death calculations use conservative medical studies as their baseline. Other epidemiological studies would more than double the deaths and health costs, said Adams and model co-creator Jinhyok Heo of Cornell University.

Chris Frey, an engineering professor at North Carolina State University, has been testing the VW diesels in real world conditions, driving more than 100 miles with monitors in the car tailpipes. He found pollution 10 times higher than the federal standard, and noticed that the worst pollution came as he got onto highways and in stop-and-go traffic. Those less desirable areas are where poorer people live, Greenbaum and other experts said.

Since 2008, VW sold more than 10 million VW diesel cars in Europe, compared with less than half a million in the United States. In Europe, the population is more densely packed in urban areas, making them more vulnerable to added air pollution, several experts said.

"Assuming most of the cars are in Europe, it's pretty simple to estimate that it could go as high as hundreds," said Robert Rohde, a physicist and lead scientist at the Berkeley Earth team that has estimated death tolls of air pollution in the past.

India's first step towards climate solution is good, but it has miles to go on a complex road

Date: 06th October, 2015 Source: The Economic Times

India's submission to the United Nations Framework for Climate Change could make anyone smile, which is quite an achievement for a report on reducing the calamitous effects of greenhouse gas emissions. Submitted on October 2, it begins with the flowery touch of a winning school essay: "Human beings here [in India] have regarded fauna and flora as part of their family," and "represent a culture that calls the planet Mother Earth". It quotes from the Yajur Veda, references yoga, calls Mahatma Gandhi the earliest climate change philosopher, and claims the "harmonious co-existence of man and nature" as part of Indian heritage. All this in the first paragraph.

After more proud embellishers, the 38-page document gets to its mandate: India's Intended Nationally Determined Contribution (INDCs), or its national pledge ahead of global climate talks in Paris in late December. At least 196 countries including the US, EU, Brazil and China have submitted country-specific targets to reduce emissions by 2030, based on which the UN will reach a deal on tackling global warming. India is the world's third largest greenhouse gas emitter after the US and China, and its green commitment is encouraging. Its promise to source 40 per cent of its electricity from non-fossil sources by 2030 includes 175 GW of renewables, the largest target in the world today.

India also pledged to cut 30-35 per cent of its carbon intensity (the ratio of carbon dioxide emissions to the size of the economy) by the same year. It will increase forest cover, and invest in development of vulnerable sectors like agriculture, water resources and disaster management. International climate change watchers have praised India's INDC for being superior to many other countries, even though it only contributed to 4 per cent of historical emissions. They are not legally binding, but the sustainability language and low carbon targets show a major leap in India's recent willingness to act against climate change. The domestic strategies to meet the targets, however, tell a more complex story. Even as India talks of low-emissions plans, it continues high-emission growth, and is unlikely to stop soon. Whether or not technological solutions and renewables achieve total emission cuts in the long run, without a core shift in approach, India will be chasing a moving goal. Growth will have come, but at serious social and ecological costs. A Matter of Energy - Energy and its use lie at the heart of the climate dilemma. India's growth ambitions — provide electricity to more than 50 per cent Indians (45 per cent rural) who have no access, build roads, infrastructure, improve GDP — require energy-intensive processes like steel and automobile production, highway expansion, and resource mining.

"India's message in all global climate talks since 1992 was, 'it's our turn to grow now'," explains Arjuna Srinidhi, climate fellow in the Centre for Science and Environment. For decades, India maintained that the fairest approach to climate solutions would be to allow developing countries to consume as much energy as the rich ones did during their own industrial revolutions.

There has been a thaw in this hardline position. Former climate negotiator Mukul Sanwal attributes it to geopolitics: India's higher global standing as an emerging economy and market, its stronger geopolitical friendship with the US, and its desire to be a permanent member of the UN Security Council. India's new climate policy is also influenced by its high vulnerability to global warming. A 2007 Intergovernmental Panel on Climate Change scientific report found that India would face some of the worst impacts of climate change due to a long coastline, monsoon dependent economy, and the 363 million poor who are ill-equipped to adapt.

In 2008, Prime Minister Manmohan Singh created the country's first National Action Plan for Climate Change. The Solar Mission, Wind Mission and Mission for En- hanced Efficiency were part of this effort. In 2014, Prime Minister Narendra Modi added climate change as a portfolio to the ministry of environment and forests. He is partial to solar and wind energy, as he was as Gujarat's chief minister. The global problem of climate change is forcing a national conversation, but its core is still energy security. China has openly declared that as it develops, it will peak emissions by 2030, and then adopt carbon cuts. India has not bound itself to a cap or date on emissions, but domestic policies suggest it is on a similar trajectory. "Climate change is the cumulative effect of national decisions on industry, environment, forests etc. And climate action is actually about a shift in the approach to national decision making," says Navroz Dubash, coordinator of the climate initiative in the Centre for Policy Research (CPR). "It's about a new way of looking at development." For India, this developmental shift is the primary climate challenge. Many of India's domestic policies are dissonant to its international climate goals.

It continues to expand emission-heavy coal-based power. About 70 per cent of India's electricity comes from coal. Government-run Coal India aims to double production to 1 billion tonnes a year by 2019, largely through polluting opencast mines. Coal and oil are taxed, but fossil fuels still get more than $40 billion in subsidy every year. Because over 80 per cent of coal is imported, power minister Piyush Goyal often says India cannot afford to cut down coal mining.

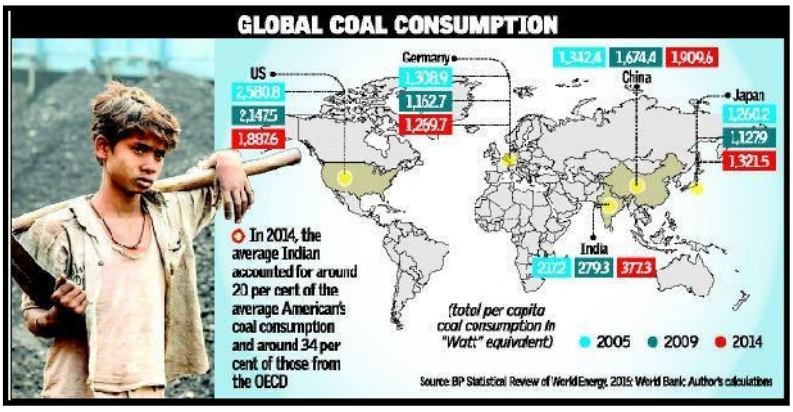
India plans to achieve the emissions drop then through renewable energy and energy efficiency. "The de- pendence on coal imports is the driver for India's strong interest in renewable energy," says Sanjay Vashist, director of Climate Action Network South Asia. "Our energy bill is high and I'm glad renewables are being seen as the most economical choice of the future."

Producing 175 GW of solar and wind by 2022 is a commendable but ambitious goal. Given the instability of solar and wind power in the grid, their high cost, the large imports of silicon (the raw material for solar installations), inadequate battery storage technology, land acquisition concerns, and effect of wind turbines on birds, there is a long way to go.

India's shift to non-fossil sources is contingent on international help: technology transfer and low- cost finance, including from the Green Climate Fund. A former climate negotiator is pessimistic. "Developed countries pledged $100 billion in 2010 to the green fund," he says. "But there is no money there." Even if it did have money, he says the vulnerable, least developed countries would get it, not India.

Unbundling the coal-climate equation

Date: 07th October, 2015 Source: The Hindu



There is still enough room for India to grow its coal consumption while continuing to accelerate its thrust on the expansion of renewable energy. Ahead of the Paris climate summit, India announced on October 2 its Intended Nationally Determined Contributions (INDCs) for climate change mitigation and adaptation. India intends to reduce its carbon emissions intensity by 33-35 per cent

by 2030, from its 2005 levels. While this commitment has drawn fulsome praise from many, the green ayatollahs have predictably ignored its herculean clean energy ambitions and focussed on Indian dependence on coal. It is time to lay bare the 'coal hypocrisy' of these privileged 'western greens'.

India's total energy consumption is a fraction of that of China, the U.S., the European Union and the OECD. Its position at the climate change negotiations has continued to reflect the centrality of access to energy for human development. And India's normative position is supported by data, such as the positive correlation between energy access and the Human Development Index (HDI).

Lifeline energy- While a number of estimates exist on how much energy is needed to meet development objectives (we call it 'lifeline energy'), an interesting benchmark is that of the 2000-Watt (W) society, based on a Swiss research group's findings. The research states that 2000-W per capita is a basic level of energy which accounts for housing, mobility, food, consumption (manufactured goods) and infrastructure. In a forthcoming paper for the European Council on Foreign Relations, we argue that if the 'space' allocated to India for coal consumption towards fulfilling lifeline energy needs is even nominally equitable, India does not have to compromise on its development and growth aspirations.

On an average, U.S. citizens consume nearly the full extent of this lifeline energy benchmark using coal, the 'dirty fuel'. India consumes only 19 per cent of the benchmark through coal. In fact, citizens of OECD countries get a much larger proportion of their energy needs relative to the 2000-W benchmark from coal than non-OECD countries.

It is important to note that in 2014, the average Indian accounted for around 20 per cent of the average American's coal consumption and around 34 per cent of those from the OECD. What has caused concern in the developed world is that while they have reduced per capita coal consumption relative to pre-financial crisis levels, India has increased consumption over the same period. In our analysis, we point out that just as reduced coal consumption of developed countries following the crisis does not necessarily reflect a greater degree of 'responsibility' towards the climate, the increase in consumption by India does not reflect 'irresponsibility'. This is better explained by two key trends, visible after the crisis. One, while developed countries have been cutting down energy consumption as a whole, developing countries have been increasing consumption, albeit at a gradually declining pace. Two, while developed countries have been cutting coal consumption faster than primary energy consumption, developing countries have increased coal consumption faster than primary energy consumption. Clearly then, industrial consumption (manufacturing and jobs) is very much part of the lifeline consumption matrix for developing countries.

Growth-development link- Many financial institutions such as the U.S. Exim Bank have stopped funding coal-based power generation projects. The World Bank also seems to be following in this direction even though coal consumption has been increasing in developing countries and coal-based energy remains the most practical option of scale. This tendency isolates economic growth from lifeline energy and skirts the central goal of development within growth.

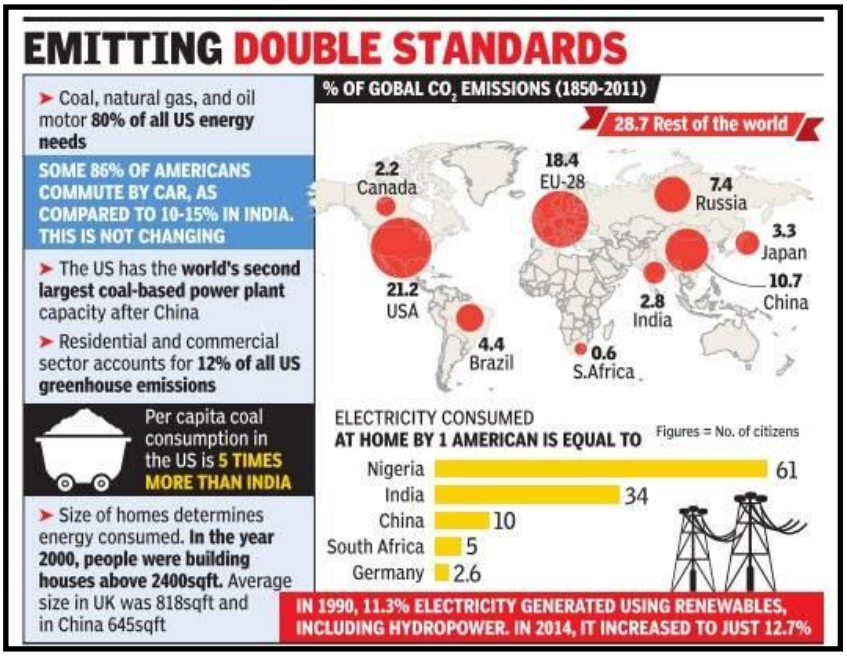
India is neither in the same basket of per capita coal consumption as developed countries nor comparable to China. In fact, we have shown that India will meet a larger proportion of the 2000-W benchmark through 'clean' fuels than developed countries. Therefore, there is enough room for India to grow its coal consumption while continuing to accelerate its renewable energy thrust. And this is precisely what the Indian INDCs reflect.

India has set a target of renewable energy capacity of 175 gigawatts by 2022; and has promised to achieve 63 GW of nuclear energy if "supply of fuels is ensured". It will be among a handful of countries to source a large proportion of its lifeline energy needs from non-conventional sources, across the developing and developed worlds.

It is worth emphasising that unlike developed countries that have already peaked their energy consumption, India must first strive to provide the 2000-W per capita lifeline energy to all, even as it seeks to clean this energy mix. India will continue to consume coal to grow its industrial base, improve HDI and develop its economy. This in turn will allow it the financial capacity to invest heavily in non-conventional sources. The Indian INDCs reflect this enduring paradox; India will need to grow its coal capacity if it is to successfully go green. Developed countries such as those within the EU want to reduce their emissions to two tonnes per capita by 2050; which will in turn reflect the total carbon 'space' available per capita if the world is to limit global warming to manageable levels. While the road to Paris is paved with such good intentions, it is essential that each person on this planet begins to move towards an equitable carbon profile. This has two clear implications.First, large developing countries such as India must invest in renewable energy benchmarks that match developed countries. Second, developed countries must pare down per capita coal consumptions to levels which would match India's lifeline consumption through coal in the future. Simply put, every time a new coal plant comes up in India, one should be shut down in the OECD. If coal use can be substituted by clean sources, then millions of tonnes of coal capacity in EU and the U.S. are low hanging fruits. India uses coal to satisfy less than a fifth of its potential lifeline energy needs, while OECD countries use this 'nasty' fuel to satisfy two-thirds of theirs. It is time to meet in the middle. No, we are not suggesting historic responsibility; only the one we jointly shoulder for tomorrow.

Centre for Science and Environment study reveals US doublespeak on emission cuts

Date: 08tOctober 08, 2015 Source: The Economic Times



NEW DELHI: America has for long sought to shift the greater onus of battling climate change on the developing world. But a new study seeks to remind the richest nation on the planet to first practice what it preaches. Indian thinktank Centre for Science and Environment (CSE) has tried to bring the focus back on the consumption-fuelled lifestyle of the developed world, specifically the US, in a comprehensive study that substantiates the government's call for `climate justice'.

The CSE analysed US' 'climate action plan' and studied World Bank and Human Development Index (HDI) data to show how lifestyle in rich nations is turning out to be disastrous for world climate. The thinktank also reveals how US -the biggest historical polluter -has tried to mislead the world on emissions just by shifting the base year from 1990 to 2005. The study, titled 'Capitan America (US climate goals: a reckoning)', lays bare how the world's most powerful economy is doing very little to combat climate change. Referring to the American 'climate action plan' the CSE said the "US INDC is neither ambitious nor equitable" and it puts the world at "deadly risk" given the impacts of changing climate. The thinktank compared the data of US, EU, India and China and said, "The US is not doing anything extra for climate change; most of the changes are happening naturally and automatically because of economic reasons and market forces.

"Worse, improvements are being squandered away because of increased growth and consumption." "Our analysis shows that the key economic sectors of the US economy -energy , transport, industry etc -are operating and would continue to operate till 2030 in a business-as-usual way , even as the rest of the world

gears up to fight climate change," said CSE director general Sunita Narain. The Intended Nationally Determined Contributions (INDC) of the US promises to reduce emissions by 26-28% below 2005 levels by 2025. This is equivalent to emissions cut by a mere 13-15 per cent by 2025 below 1990 levels. This means that in 2025, its per capita emissions are going to be 13.5 tonnes. In comparison, the EU has committed to reduce 40 per cent below 1990 levels by 2030. This means in 2025 the per capita emissions of the EU will be 7.0 tonnes - about half of that of US. India's per capita emissions in 2025 would be 3.0-3.5 tonnes -one-fourth of the US.

Referring to those figures and findings of the study, Chandra Bhushan, CSE's deputy director general said, "The US has not put in place policies to shift its economy towards low carbon. The result is the US will produce and consume 20 per cent more fossil fuels in 2030 than what it does today . Renewable energy will only contribute about 15 per cent of primary energy in 2030 -up from 11 per cent currently ." Industry is the only sector in the US where emissions and energy consumption has declined. But consumption of industrial goods has skyrocketed. The US is not making these goods. Instead, imported goods now account for 60 per cent of all goods purchased. Narain said, "This means industrial emissions have not gone down, but merely been outsourced."

UN official praises "huge progress" in fight against climate change

Date: 08th October, 2015 Source: FG News

The world has made huge progress in its fight against climate change in the past five or six years, UN climate talks chief said on Wednesday.Speaking at a panel discussion on climate change in Lima, Christiana Figueres, Executive Secretary of the UN Framework Convention on Climate Change Management, praised the work that has been done, but noted it was not enough. "Five or six years ago, we were heading for an increase of four or five degrees in the global temperature, which would have been catastrophic," she said. "Now, due to policies already enacted or to be enacted, the risk is down to a three degree increase. This is still dangerous but better than where we were before."
Ahead of the United Nations Conference on Climate Change (COP 21) to be held in Paris in December, 146 countries have presented climate change plans set to start in 2020.

These plans were made possible because countries have realized that they should not act on climate change in order to save the planet, but because it is in their own interest to do so, she said. However, Figueres said this timeline was still not enough to limit global warming to two degrees within the desired timeframe. Therefore, she called on countries to start their 2020 climate change plans early. "There is an urgency in climate change that is absent in all other development issues. We cannot wait until 2020, policies must be fast forwarded and scaled up. We must see how quickly we can close the gap," she said. Martin Wolf, chief economics commentator for the Financial Times and moderator of the panel, challenged her stance, asking whether this could be done on the 100 billion U.S. dollars a year pledged to combat climate change. Admitting that trillions of dollars would be needed, Figueres said that a number of costs, including human, technological and infrastructure costs, needed to be factored in.

While this might seem daunting to certain governments, she said "countries can see what others are doing, take the right measures, and adopt technologies to fight climate change." "There is peer pressure among emerging countries. When China commits billions to help developing countries fight climate change, it helps change minds," Figueres said.

Why Isn't Big Ag's Huge Contribution to Climate Change on the Agenda at COP21?

Date:08th October, 2015 Source: Ecowatch

Tackling carbon emissions from agriculture from farming isn't even on the table at the UN climate talks in December. It ought to be and it's big agribusiness that's at the heart of the problem. In 2006 a report from the UN's Food and Agricultural Organization (FAO) threw the climate change effects of farming into the spotlight. It claimed that the meat and dairy industries are responsible for more greenhouse gases than the whole transport sector.

The majority of ensuing studies have only considered emissions released directly through farming. Yet when supporting industries such as transport, packaging and retail are included, agriculture is responsible for around half of total human-made emissions, not to mention other ecological degradation such as water scarcity and biodiversity loss. Farming itself is also a victim of climate change, as shifting temperatures adversely affect farming conditions and crop yields, particularly in the global south. Despite the severity of the situation and although food security is stated as a core objective of the UN climate negotiations, agriculture is still off the agenda at COP21 in Paris this December. The climate talks could be a prime moment to tackle the climate impact of agriculture, but doing so requires addressing the real issues at stake and powers at play.

Beyond the Burp- Industrial agriculture is at the heart of social and ecological costs of farming and integral to this are monocultures. These vast areas of production of one type of crop entail systematic deforestation and require machinery, fertilizers and pesticides which are highly reliant on fossil fuels. As more and more crops are cultivated for agrofuels, the interrelationship between big agriculture and energy firms is increasing and fields are viewed more like oil wells than as places of food production. These harmful effects are intensified with meat and dairy production, which requires huge amounts of grain feed and bring belching cattle into the equation, which accounts for a huge chunk of direct emissions. This problem has deepened over the last fifty years with the increasing "meatification" of diets. The situation is only likely to worsen, with food production expected to double by 2050 according to the FAO, as the global population expands and meat consumption per capita rises and more people move into the middle classes.

However, this kind of prediction assumes that agriculture has simply adapted to suit demand and ignores the fact that both states and agribusiness have been key drivers of increases in meat production and industrial farming. For example, the swing towards meat and dairy consumption in the twentieth century is directly related to the search for a market for the vast grain surpluses produced by U.S. farmers. Expanding measures to open up markets to free trade and private investment, such as the G8's recent New Alliance for Food Security and Nutrition, also illustrate how corporations, facilitated by the state, are responsible for the intensification of industrial agriculture.

Addressing Agriculture- The scarcity of regulations and policies to address this endemic crisis means that proposed solutions tend to ignore these structural causes and instead encourage business as usual. For

example, a typical response is to make resources more efficient, such as producing more carbon-efficient fertilizer. But studies show that efficiencies gained are often countered by increases in resource use—it's the farming equivalent of having an extra piece just because the cake is low-calorie. Other measures have included encouraging consumers to go vegan or vegetarian. But these solutions fail to challenge the logic of industrial agriculture, which operates in a paradigm of economic growth at all costs.

To tackle this urgent problem, systemic intervention is needed that can challenge the powerful players in the meat and dairy industries. To do this, transformative and dynamic food movements and networks, those that support food sovereignty and agroecology, are key. Researchers, including the Intergovernmental Panel on Climate Change, are confident that traditional or smallholder production can help to mitigate greenhouse gas emissions while increasing food security. For example, a recent report from Global Justice Now found that the Soils, Food and Healthy Communities Project, a participatory agriculture and nutrition program in northern Malawi, has succeeded in improving child health, crop diversity and food security through sustainable agriculture techniques. And mitigation practices from indigenous communities also have adaptation effects according to a group of scientists and small-scale farmers that met last year at the Lima climate talks.

Solidarity with southern movements and groups is also important because huge amounts of the food that is consumed in the global north originates in the global south and the neoliberal roots of the agricultural problem are common to both regions. But while the potential of agroecology to reduce emissions is widely acknowledged, the priorities and preferences of the corporate sector still dominate decision-making forums. Civil society organizations and indigenous groups will be present at COP21, but their voices are likely to remain systematically ignored in the negotiations in favor of business lobbyists.

The Heat is on Myths and Reality of Climate Change

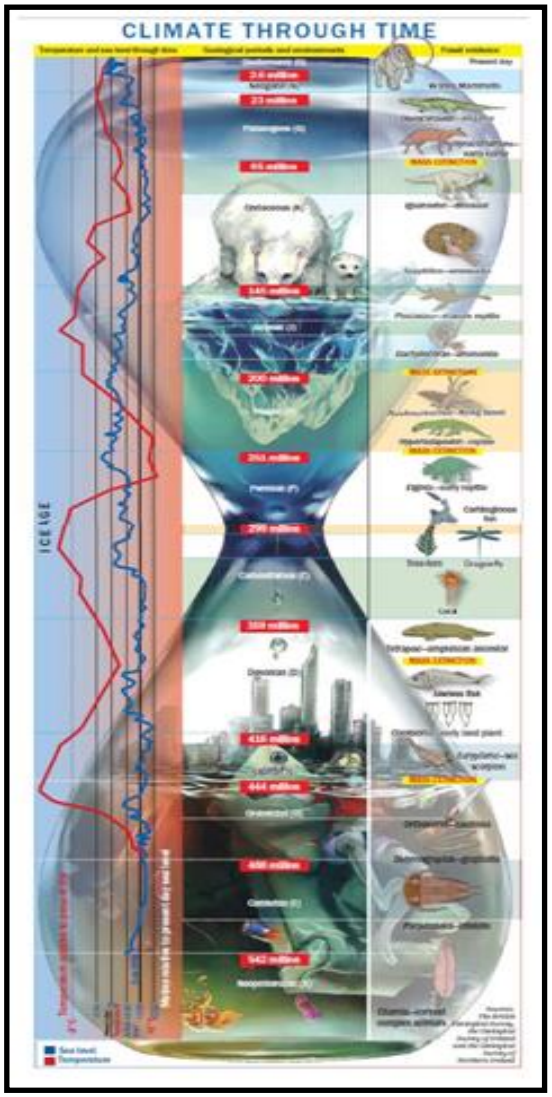
Date: 10th October, 2015 Source: Indian Express

The world lives in fear of a massive climate change, which may cause the destruction of the human race and other species. As India promises emission cuts and global leaders get ready to meet to tackle the challenge, things are not all what they seem. Apricots do not grow in the foothills of the Himalayas. It is too cold. Surprisingly, now they do. Daniel Grossman, author of Deep Water: As Polar Ice Melts, Scientists Debate How High Our Oceans Will Rise, visited two towns in northern India to assess the impact of melting glaciers on two Himalayan towns—Kumik and Stongde—one of which has been devastated by melting glaciers and another thrived because of it, in the Zanskar Valley. One day, Buddhist monks at a monastery in the valley planted an apricot tree. The valley is known as a "cold desert", because only half an inch of rain falls in a year. To everyone's surprise, the tree flowered. Things were getting warmer.

But below, the landscape of Stongde is corrugated with irrigation canals. The villagers had harnessed water from the melting glacier and it became one of Zanskar's wealthiest farm towns. In 2010, Surabi Menon, a scientist working at Lawrence Berkeley National Laboratory, USA, discovered that soot in the air of India is devastating snow and ice cover on the Himalayan glaciers. There are two sides to every story, as Kumik and Stongde show. This is what lies at the heart of the climate change debate.

Last week, India announced a cut in gas emissions from one unit of GDP by 2030—one-third lesser than what was in 2005 in an action plan submitted to the United Nations Framework Convention on Climate Change. The action plan will be an important part of the agenda for the annual climate change conference

from November 30 to December 11 in Paris, which will be attended by Prime Minister Narendra Modi. “Few countries in the world are as vulnerable to the effects of climate change as India is with its vast population that is dependent on its agrarian economy, its expansive coastal areas and the Himalayan region and islands,” said Environment Minister Prakash Javadekar.



As with the rest of the developing and developed world, economic reform and industrialisation have indeed been a big cause of global warming. And the Himalayan glaciers, called the third polar ice cap because of their quantity of ice mass, give life to rivers in China and the subcontinent. “Voluntary pledges (to tackle climate change) submitted by all major countries ahead of Paris talks indicate that the world is not on a path to the 2oC target (above pre-industrial levels set by the Intergovernmental Panel on Climate Change). This would be disastrous for poor people across the world. It is important this reality is discussed and resolved in the Paris conference,” says Sunita Narain, director general, Centre for Science and Environment.
Menon’s data figures black carbon in India went up by 46 per cent between 1990 and 2000, and again by 51 per cent more from 2000 to 2010. Black carbon is caused by incomplete combustion from industries which drove the economies of India and China since 2000—shipping, vehicle emissions, coal burning and village stoves. When it falls on any white surface—like snow—it speeds up melting. Dirty snow absorbs sunlight better than clean snow and thus warms faster.
The world is facing an ecological disaster of mammoth proportions, predict scientists. The Arctic’s summer ice is melting. The West Antarctic ice sheet is also melting. The El Niño effect becomes a permanent climate factor. At least half of the Amazon rainforest faces the threat of vanishing. Species are becoming extinct; 11 of 18 penguin species are declining and considered an extinction risk. Populations are being displaced. Is it all man-made? Or is nature repeating itself?

Before pre-history, it took the human species approximately 2.5 million years to evolve—which means we humans have survived two Ice Ages. It was only by the end of the 19th century that geologists discovered there were more than one Ice Age. In each Ice Age, global temperatures were colder by 4°C and the warmest was about 1°C more than today. It occurred between the two most recent Ice Ages, around 1,200 centuries ago. Over the next 10,000 centuries or so, temperatures gradually decreased and a new Ice Age began. It is during this period that humans started to travel out of Africa to land across the earth. Since then global temperatures haven’t seen a shift of 1°C. Regional climactic shifts have happened in the Medieval Warm Period, Little Ice Age etc, but today is the hottest global climate so far. However, 400,000 years ago, it was a bit warmer than now. Then, for the last million years it has been 4 to 8°C colder. Each transition from warm to glacial and back happened over thousands of years, which helped species to adjust and evolve. These figures say the weather hasn’t changed much since civilisation began. The theories about whether the human race is set upon a path of destruction by devastating the earth and its life-forms with greed and irresponsible living is a debate that has been going on ever since the Swedish scientist Svante Arrhenius claimed in 1896 that fossil fuel combustion will result in global warming.

Hazed in: Pollution hits Singapore fitness industry

Date: 11th October, 2015 Source: CNBC

Pollution from the burning of Indonesia's rain forests appears to be claiming another casualty: physical fitness in Singapore. Poor air quality is keeping people indoors, denting demand for outdoor exercise in the usually balmy city-state. "We're an outdoor fitness company, with up to eight sessions a day outside," Lisa Clayton, a director of OzFit/UFit Bootcamps, said Wednesday. "We have had to cancel pretty much most of them over the last two weeks." She said her company usually catered to as many as 100 people a day training outside, but has instead hosted bootcamps at indoor locations, such as condominium function rooms, for about 60 people a day. What's colloquially called the haze, but is actually air pollution, is an annual event in Singapore as Indonesians deliberately set forest fires to clear land, but this year, it's lasted longer than usual because El Nino weather conditions mean there's less rain. The Pollutant Standards Index, a global gauge of air quality, ranged between 97 and 111 in Singapore early on Monday, after several days of less-gritty levels under 100, according to the National Environment Agency (NEA).

A level between 100 and 200 indicates unhealthy air quality, while levels above 300 are considered hazardous. The gauge climbed over 300 in late September but hasn't yet topped the 400-plus mark hit in 2013. Indonesia finally accepted Singapore's offer of personnel and equipment to help fight the forest fires on Wednesday after weeks of waffling over the decision.

Homebound residents aren't just bad for Singapore's fitness companies. The local economy is already hurting, with some analysts believing it slipped into a recession in the third quarter, and the haze is likely to take a further bite out of consumption."The protracted period of hazy conditions will certainly weigh on the retail industry, who will likely see their slim margins (on already high operating costs) being eroded further with households opting to stay home and tourists deferring their plans to visit the region," Weiwen Ng, an economist at ANZ, said in an email last week. He noted that previous years' hazy seasons had resulted in sharp drops in retail sales, even though the city-state's malls tend to be packed on days when the air quality worsens. Many Singaporeans don't have air-conditioners in their homes. "While they might seek safety in the air-conditioned malls, I doubt they will spend," Ng said. Consumers certainly aren't spending at outdoor-focused businesses. "I have lost 90 percent of my business," said Isabella Malique, the owner of the SUP School, which rents standup paddleboards at the beach on Sentosa island, a resort just off the coast of Singapore. "I don't even have enquiries," she said, adding that she was concerned it would take a long time to regain lost interest once the haze finally clears. She has another worry: the end of the haze is likely to be followed closely by the start of Singapore's rainy season, which may leave her business with little income for nearly six months. Those customers aren't necessarily searching out gyms to keep up their fitness level. Pure Group, which operates both gyms and yoga studios, said that member check-ins hadn't changed much over the past month or so. "As much as we would like to think that many members are avoiding the outdoors and increasing their visits to the gym, this is not entirely the case," Hannah Yang, the marketing manager at Pure, said via email last week. "Many have taken ill due to the haze and have been putting yoga and gym aside for the time being."

Effects of the haze can range from respiratory symptoms, such as coughing and asthma attacks, to fatigue and headaches. Sports teams are also struggling to practice. "We've not been able to fully relocate training indoors," Thomas Gascou, the captain of the German Dragons, a dragon boat team, said Thursday. Dragon boating is an Asian paddling sport, with teams of 10 or 20 paddlers competing in long boats. The haze has forced the German Dragons to cancel most of its water-training sessions over the past few weeks, Gascou said, noting that one session held when the air quality was "borderline" resulted in several people feeling light-headed and sick.

He moved some of the general fitness training to one of the government's community gyms but noted that while outdoor "land" sessions generally see as many as 60 people, that dropped to around 20 indoors. All the effort to continue training may be for naught: There's a strong chance that the haze will force the next race, the Singapore River Regatta, scheduled for October 31, to be canceled or postponed. It wouldn't be the first competition to get the axe; the first day of the international FINA Swimming World Cup on October 3 and the Race Against Cancer, a 15km and 10km running race set for last month, were both cancelled.

Paris Talks: India criticizes climate draft, expects more

Date: 11th October, 2015 Source: Skymet

The Paris Climate Change Conference talks are just round the corner and India has made vocal its concerns about the same. India's Environment Secretary Ashok Lavasa called the agreement 'lopsided' during a discussion on India's climate action plan 2030 at the Centre for Policy Research. India has asserted that as developed nations are 'historically responsible' for global warming, they must deliver on the Green Climate Fund (GCF) as promised earlier. Environment Minister Prakash Javadekar stated that the GCF is only talked about and never materialized.

The Green Climate Fund was set up in 2010, under the framework of the United Nations Framework Convention on Climate Change (UNFCCC). Back then, developed countries had promised USD 100 billion each year by 2020 to help developing nations cope with climate change. This geo-political debacle has raised concerns ahead of the Paris climate talks, scheduled to take place from November 30 to December 11, in Paris later this year. What India seeks is a 'just' deal for developing nations. The current proposition places highly regressive growth restrictions on developing countries.

Environmentalists and climate scientists have their hopes tied to the Paris talks. Several ground-breaking studies have indicated that global warming cannot be ignored any longer. But India's concern regarding the one-sided nature of the agreement are also valid. Developed nations must come up with a more neutral proposition which does not hamper the growth plans of any developing country.

Air Pollution Major Cause of Eye Infection: Doctors

Date: 11th October, 2015 Source: NDTV

NEW DELHI: Air pollution in cities is emerging as the major reason behind the rise in eye allergies and conjunctivitis in people of all ages, doctors say. They say that the problem was serious, because if conjunctivitis and allergies are not treated in time they can lead to cornea problems affecting vision. "Almost all age groups are being affected by air pollution. Majority of patients are young children, middle aged and senior citizens. Air pollution affects them badly and results in eye irritation and sometimes in redness, and watery eyes," said Kamal B. Kapur, an opthalmologist at city-based Sharp Sight Centre.

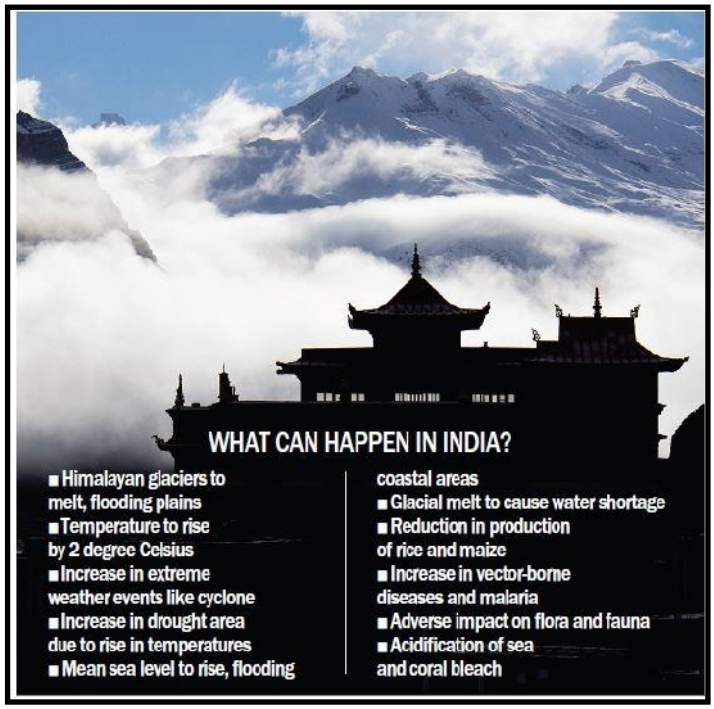
Mr Kapur said the major reasons behind allergic conjunctivitis were substances like pollen or mold spores or chemical substances in the air. According to doctors, the high levels of pollutants like nitric oxide, nitrogen dioxide and sulphur dioxide in the air make the tear film of the eyes more acidic.

Tears are a mixture of water, fatty oil, proteins, and bacteria fighting substances that maintain the lubrication of eyes. Talking about the ways to prevent eye allergies, eye care expert Samir Sud said: "One should not rub eyes directly even if fine particulates enter, rather wash eyes with water. After that they should apply a cool compress to help reduce inflammation."

"Whenever there is direct contact with the allergen, an allergic reaction happens in the eye. Mostly this happens when there is dryness in the air. Once the infection is detected, chances are that the person will get it again and again," said Mr Sud. According to a recent study, over 30,000 people in Delhi were detected with cornea infection last year caused by the deteriorating air quality and increasing particulates. "In more troublesome cases, you will need to see an eye doctor who might recommend oral antihistamines or anti-inflammatory eye drops or in severe cases, steroid eye drops may be prescribed to get relief," Mr Sud added.

India Rejects UN Climate Agreement Because "it can not meet its target"

Date: 11th October, 2015 Source: Seating Chair



Harjeet Singh, ActionAid International's worldwide local weather coverage supervisor, referred to as India's INDC to be "extraordinarily complete". This was a running theme of its announcement, which also insisted that "though India is not part of the problem, it wants to be part of the solution". In advance of the COP21 United Nations climate talks to be held in Paris from 30 November to 11 December, every country was asked to submit proposals on cutting use of fossil fuels in order to reduce their emissions of greenhouses gases and so tackle global warming. In the negotiations, India is perhaps the most important developing country as it has led the effort by poorer countries to force wealthier nations to increase financial assistance in exchange for cooperation on climate change. And India's contributions are a critical piece of the coming negotiations. The challenge will be bringing them all together, and success will depend on China setting "an ambitious cap or else the price of carbon will be too low", says Schwartz.

Fight over the Paris agreement on climate change has started with India firing the first salvo, terming the draft of the proposed deal released on Monday as lopsided and in favour of rich nations. The current proposition places highly regressive growth restrictions on developing countries. In 2013, India accounted for 15 percent of the global increase in carbon dioxide emissions. China will promote "green power dispatch", giving priority to renewable power generation and fossil fuel power generation of higher efficiency and lower emission levels. The CAT also found the Indian Government's description of its INDC to be lacking detail. This number includes not only the renewable targets, but also an expansion in nuclear power and small-scale hydrological power.

Third, additional carbon sinks of 2.5 to 3 billion tonnes of carbon dioxide equivalent will be created by 2030. Increased market information and transparency around the environmental impact and performance of the world's most successful firms has allowed financiers and market participants to adjust and incorporate environmental concerns into their investments more accurately than ever before. "India was always perceived to be in a negative framework... naysayer. now India is looked upon as a leading voice of developing world", the Minister said.

Certainly India, and the wider South Asia region, is hurting from the effects of climate change. Moreover, climate change is compelling investors to experiment with new and innovative financial approaches, report authors write. The Guardian reported on June 2 that a possible new deal on climate change will be discussed on the summit. That's in addition to more than €1 billion for a green-corridor project in India, Prime Minister Narendra Modi said at a joint briefing with German Chancellor Angela Merkel in New Delhi. Not like different main polluting economies, India didn't decide to an absolute discount in carbon emissions ranges. In 2014, India obtained 59% of its electricity from coal, while the U.S. only produced 39% of its electricity from coal in the same year, although the United States produces more coal than India. While India has modestly raised the costs of using coal through a tax, it is unlikely that this, on its own, breaks up India's attachment to the dirty fuel. It is in responding to this mega-trend that India's climate policy could have been more forward looking. The Indians have simply argued that such goals are out of the bounds of what is realistic given their still-low development trajectory. Non-state actors such as municipalities, businesses, and local governments also must be engaged. India has consistently been demanding that the Paris agreement must be equitable so that it can deliver justice. The domestic political context should not be overlooked. That death toll could rise to 50,000 people by 2050 without significant policy changes. "That's why we are questioning developed countries and asking them to come out immediately with their pre-2020 actions".

Shaping a deal on climate change

Date:11th October, 2015 Source: The Hindu Business Line

Finally, it's about accommodating the big-ticket players, with every likelihood of the Paris declaration being watered down. It has now become clear that the significant emitters of greenhouse gases (GHGs) have crystallised their positions on the efforts they would be willing to make to combat global warming and climate change starting from 2020. Enhancement of their efforts appears unlikely in the short time available from now to the Paris climate summit in December. According to the NGO, Climate Action Tracker, pledges received by the climate secretariat till mid-September, 2015, from 60 member countries (not including India) that accounted for 65 per cent of global emissions in 2010, fell well below the levels necessary to limit global temperature rise to 2 degrees Celsius in this century. The list includes heavyweights such as China, the US, the EU, Russia, Canada and Australia. Their pledges are, for the most part, considered "medium" or "inadequate". India's big effort- India's Intended Nationally Determined Contribution (INDC), submitted to the secretariat on October 1, has enhanced the already accepted target of a 20-25 per cent reduction in the energy intensity of the country's GDP growth to 33-35 per cent by 2030, compared to its 2005 level. In addition, share of renewables in total installed energy generation capacity would rise to 40 per cent by 2030 and additional forest and tree cover would be raised to absorb 2.5 to 3.0 billion tonnes more of carbon dioxide equivalent of GHGs. This would result in India's energy intensity of growth going down to 41.5 per cent of what it was in 2005 by the middle of this century.

Considering India's growth needs and its population, its INDC reflects a massive effort in combating global warming and cannot be declared to be just "medium" or at the lower end of the ambition scale. India has

emerged as a strong deal-maker. Looking to the reluctance of developed countries, in general, to step up their efforts to reduce emissions and in contributing generously to the Green Climate Fund, world leaders have started expressing their reservations over the outcome of the Paris summit.

The feeling is gaining ground that, for the present, it is better to have an acceptable deal and make upward corrections by way of intensified efforts through periodic reviews of country pledges with the first review taking place in 2025. There's also the question of what the US wants the compact to be. The working group's position. It may be recalled that in Durban (2011), there was much debate on the nature of the new compact; finally there was agreement that it could be a " legal instrument" or "an agreed outcome with legal force". Whether all the provisions of the deal will have legal force or only some of them was the subject of much debate at the recent meeting of the ad hoc working group on long-term action under the Durban Platform held in Bonn (August 31-September 4). The consensus was that, to start with, INDCs could be divided into three parts: one with a legally binding force, another without and a third which could be fitted into one of the two later. Differences surfaced over identification of the issues for such compartmentalisation. For instance, some of the bigger emitters like the US baulked at the suggestion of keeping pledges of emission cuts or contributions to the Green Climate Fund in the part having legal force. Developing countries, particularly the poorer ones, insisted on such inclusion as their efforts towards mitigation and adaptation depended largely on financial assistance and technology transfer flowing from the developed countries.

Reacting to the situation, the British Prime Minister almost backtracked on the Durban decision and expressed his preference for a "light touch and non-legislative approach" that struck a sympathetic chord in other leaders of the developed world.

A legally binding deal with a "light touch" or preferably a fully non-legal one is what the US needs for a weighty reason. Joining any treaty that may have significant implications for the US economy needs the approval of the US Senate. Most of the Republican senators are either climate sceptics or non-believers that global warming is predominantly manmade. Therefore any proposal to become a party to a treaty that may have more than a mild impact on the US economy is unlikely to meet with success.

A simple, not too legalistic agreement in Paris, may enable President Obama to bypass the Senate and ratify the agreement by exercising his executive powers. If questioned, he can convince the Senate of the deal being just a simple addendum to the UN Framework Convention on Climate Change of which the US is already a party or that its provisions are covered by existing US laws and hence need no fresh clearance. Further, US reservations on a legally binding deal rests on its apprehension that the deal may end up prescribing limits on a country's emissions just as the Kyoto Protocol did earlier and this may mean immediate curbs on US fossil fuel production.

The US approach to fighting coal and oil addiction is not to attack the supply side of the problem but its demand side. Obama believes that increasing the availability of renewable energy at prices comparable to that of conventional energy is a better way of promoting the former than taking the politically inadvisable step of curbing coal and oil production drastically. A strong climate treaty that may imply such cutbacks would be unwelcome to him and to the jobless US electorate in the run-up to the presidential elections in 2016. Global uncertainty- An added impediment to a strong deal being struck in Paris is the present uncertain global economic and political situation. The slowing down of the Chinese economy has had more than a ripple effect all over the globe except India; falling oil prices and sanctions have robbed many an oil producing country including Russia and Canada of foreign earnings; Brazil is in an economic recession; the EU, just having got over the convulsions of GREXIT, is faced with the migrant problem; and the situation in West Asia is surcharged with big power rivalry. These issues of the immediate present may crowd out the issue of the future, climate change, from the degree of attention it would receive otherwise.

Paris climate summit: UN negotiations 'need redesign'

Date: 12th October, 2015 Source: BBC News

The UN climate negotiations are heading for failure and need a major redesign if they are to succeed, scientists say. The pledges that individual countries are offering ahead of the Paris climate summit in December are too entrenched in self interest instead of being focussed on a common goal. The researchers say the science of cooperation is being ignored. Instead, they say the negotiations should focus on a common commitment on the global price of carbon. This means countries would agree on a uniform charge for carbon pollution, a scheme that would encourage polluters to reduce their emissions.

The comments from researchers at the University of Cambridge, UK, University of Maryland, US, and University of Cologne, in Germany, are published in the journal Nature. 'I will, if you will' Ahead of December's United Nations climate meeting, individual countries have submitted their plans for cutting greenhouse gas emissions. These are called Intended Nationally Determined Contributions - or INDCs. However, the researchers say that this approach will not work. Prof David MacKay, from the University of Cambridge, who was former chief scientific advisor to Britain's Department of Energy and Climate Change (DECC), said: "The science of cooperation predicts that if all you are doing is naming individual contributions - offers that aren't coupled to each other - then you'll end up with a relatively poor outcome.

"We have the history of the Kyoto agreement as an example of this. Initially, the approach was to find a common commitment, but eventually it descended into a patchwork of individual commitments... and that led to very weak commitments and several countries leaving the process."

The Paris negotiations, he warned, were heading in the same direction. Instead, the researchers say, a reciprocal approach could transform the meeting. "If you make a treaty that is based on reciprocity, so 'I will, if you will' and 'I won't, if you won't', then you can end up in a very different position," explained Prof MacKay. "If people make a common commitment that they will match what others do, then it becomes in your self interest to advocate a high level of action because it will apply not only to you but also to others." The scientists believe that setting a common price for carbon, which could be implemented through carbon tax or emissions trading schemes, could work. Prof MacKay said: "This is a price that could be negotiated and agreed, and would apply to all countries." The researchers admit that with the Paris climate conference just weeks away and the fact that global carbon pricing is not already on the table, their idea is unlikely to have much influence. However, they say the science of cooperation should be taken into account for future negotiations. Commenting on the paper, Bob Ward from the Grantham Research Institute on Climate Change and the Environment, said: "This is a thoughtful contribution but rather too pessimistic about the United Nations climate change negotiations. "The authors are right that a global price on carbon is necessary, although it would be, on its own, insufficient to generate the pace and scale of action required."

Price carbon -- I will if you will

Date: 12th October, 2015 Source: Nature

To forge a strong climate accord in Paris, nations must agree on a common goal in everyone's self-interest, say David J. C. MacKay and colleagues. Negotiations at the United Nations climate summit in Paris this December will adopt a 'pledge and review' approach to cutting global carbon emissions. Countries will promise to reduce their emissions by amounts that will be revised later. The narrative is that this will "enable an upward spiral of ambition over time"1. History and the science of cooperation predict that quite the opposite will happen.

Climate change is a serious challenge because the atmosphere gives a free ride to countries that emit. If some nations sit back and rely on others' efforts, the incentives for anyone to act are weakened. Review of the first phase of the Kyoto Protocol at the 2012 UN climate meeting in Doha, for instance, resulted in Japan, Russia, Canada and New Zealand leaving the agreement, frustrating those who kept their promises. Success requires a common commitment, not a patchwork of individual ones. Negotiations need to be designed to realign self-interests and promote cooperation. A common commitment can assure participants that others will match their efforts and not free-ride. A strategy of "I will if you will" stabilizes higher levels of cooperation. It is the most robust pattern of cooperation seen in laboratory and field studies of situations open to free-riding2.

A global carbon price — so far excluded from consideration in international negotiations — would be the ideal basis for a common commitment in our view. A price is easy to agree and handle, relatively fair, less vulnerable to gaming than global cap-and-trade systems, and consistent with climate policies already in place, such as fossil-fuel taxes and emissions cap-and-trade. Only a common commitment can lead to a strong treaty. Forty years of empirical and theoretical literature on cooperation confirms that individual commitments do not deliver strong collective action. Cooperators find that defectors take advantage of them. Ambition declines when others are revealed to be free-riding3. Dishes often stack up in the sinks of shared apartments. But in the Alps, villagers have successfully managed shared land for hundreds of years, with a common commitment governing grasslands4.

Common commitment- Imagine that you and nine other self-interested players (representing countries) take part in a game. Each player has $10, some or all of which they may simultaneously pledge to a common pot. A referee makes sure that they honour their pledges. Every dollar (for carbon dioxide abatement) placed in the pot will be doubled (by climate benefits) and distributed evenly to all players. So putting a dollar in the pot will return 20 cents to each player.

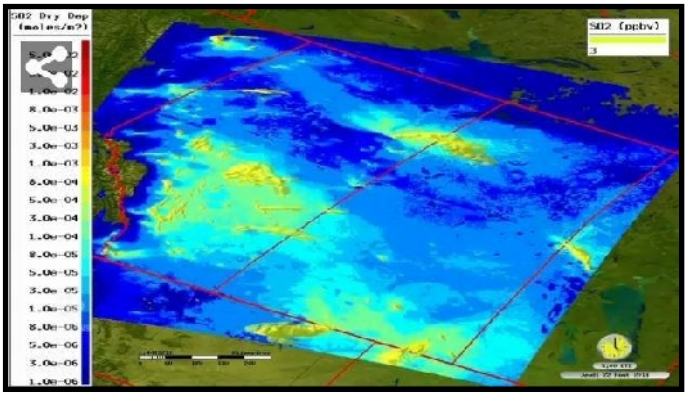
Consider two variants of the game. First, in the 'individual commitment' version, pledges are made independently. This is the classic public-goods game, in which the rational selfish strategy is to contribute nothing, because this makes a player better off no matter what the others do. The result is the famous tragedy of the commons. Cooperation does not occur, even though everyone would gain from it.

Second, in the 'common commitment' version, players condition their contributions on others' pledges: a referee ensures that all contribute the amount of the lowest pledge. After enforcing this common commitment, the money is doubled and distributed evenly, exactly as before. Pledging $0 will mean simply keeping your $10, whereas pledging $10 could result in ending up with anything between $10 and $20, depending on what others pledge. So, because you cannot lose and could gain by pledging $10, that is what

you would do, even if you are completely selfish. Since all parties would pledge $10, the group's $100 is doubled and all end up with the maximum amount of $20. Selfish behaviour has been changed from 'contribute nothing' to 'contribute everything', because the common commitment protects against free-riding. In 1997, the Kyoto negotiators initially did try to agree a common commitment, expressed as a formula for national emissions caps, but failed. In the end, each nation was simply asked to submit their final numbers for insertion into the draft annex5. The result was a patchwork of weak and unstable commitments. Similarly, in response to the 2009 Copenhagen Accord, China pledged emissions equal to those considered 'business as usual' before the accord; and India pledged even less. Enforcement is widely thought to be the missing ingredient in the Kyoto Protocol and crucial for the success of a Paris agreement. This is only half right — both enforcement and a common commitment are required. For example, if drivers chose their own speed limits, there would be no use enforcing them, because everyone would drive at their desired speed. Instead, because it limits others as well, people agree to a common speed limit that is lower than almost everyone's individual limit. In other words, with individual commitments, there is nothing meaningful to enforce, whereas enforcement strengthens a common commitment. What could all countries commit to? National limits on the quantity of emissions will not work. Kyoto negotiators suggested at least ten formulae to determine the reductions that each nation should make, but could not agree. When attention turned to reducing emissions by some percentage relative to 1990 levels, individual commitments ranged from an 8% decrease to a 10% increase. The United States and developing countries made no commitments at all. Percentage pledges failed because countries differ; for instance, some economies declined after 1990 and some grew. Developing countries fear caps that curb their growth. Instead they see it as fair to allocate emission permits on an equal per capita basis. Because permit sales would result in huge wealth transfers to poor countries, rich countries find such proposals unacceptable6. There is no longer any serious discussion of a common commitment to reduce the quantity of carbon emissions. Global carbon price- We, and others, propose an alternative: a global carbon-price commitment7. Each country would commit to place charges on carbon emissions from fossil-fuel use (by taxes or cap-and-trade schemes, for example) sufficient to match an agreed global price, which could be set by voting — by a super-majority rule that would produce a coalition of the willing.

Map shows oilsands air pollution doesn't reach N.W.T., Yukon

Date: 12th October, 2015 Source: CBC News



'I am happy to say for you guys, you are looking pretty much in the clear,' says doctor A Canadian physician says people in the territories shouldn't be overly concerned about air pollution from Alberta's oilsands affecting their health. A new computer-generated video from Environment Canada shows how pollution from the oilsands and coal-fired power plants travels across the prairies. It shows the pollution inching over Alberta's border to the North.

Dr. Joe Vipond of the Canadian Association of Physicians for the Environment said the visual representation of air pollution brings awareness of the issue to a whole new level. He said the pollutants shown in the video mix with chemicals in the atmosphere and can cause severe health issues. But he says the North has been spared so far.

"I am happy to say for you guys, you are looking pretty much in the clear. Especially if you look at the combined sulfur -dioxide and nitric-oxide emissions, you don't have anything that's visible on the map," said Vipond, who is advocating for Alberta to close its coal-fired power plants. He noted that the model,

which covers a four-week period, does not take into account pollution originating in the North. It also doesn't capture other elements that affect air quality, such as vehicle emissions or forest fires. In a statement to CBC News, Environment Canada said the model was created "to provide air quality forecasting delivered to Canadians through the Air Quality Health Index Program" and to "predict changes in air pollutant emissions on air quality."

Why USC air pollution researchers are studying air, children's lungs in Africa

Date:12th October, 2015 Source: The San Gabriel Valley Tribune

Smog blankets the San Gabriel Valley as seen from the Covina Hills looking toward downtown Los Angeles. The landmark Wells Fargo building on Barranca Ave. at the 10 Freeway is visible in the foreground. Photo taken in late December 2005. (SGVN/Staff photo by Mike Mullen/SVCITY) USC scientists are taking their landmark study on smog and children's lungs on the road, part of the realization that dirty air anywhere on the planet can drift to distant lands and contribute to global climate change. Armed with $3 million in grant monies from the National Institutes of Health, the Centers for Disease Control and Prevention and Canada's International Development Research Centre, a team of scientists have began studying air pollution in Ethiopia, Kenya, Rwanda and Uganda, USC officials announced Monday.

The Eastern Africa study, one of seven international research centers forming, will provide four rapidly developing countries plagued by severe smog first-ever emission measurements, plus a snapshot of the effects of foul air on the lungs of 4,000 African children. "When it comes to air pollution, it has some global aspects because huge emissions from big polluters like China and India are likely to have huge effects on public health everywhere and on our global climate," said Kiros Berhane, a lead researcher and biostatistics professor at USC. While scientists from the Jet Propulsion Laboratory in La Cañada Flintridge have said air pollution from China drifts into the western United States, Berhane said it's not clear whether smog from Africa travels to the states on the Atlantic seaboard.

However, any emission reduction from vehicles, factories or wood-burning stoves in Africa will reduce greenhouse gases, which do not respect country borders or continents. Instead, they escape into the atmosphere, trapping heat and raising the planet's temperature. "What makes this timely, especially in Sub-Saharan Africa, is the rapid industrialization going on in the last few years. There is talk that the manufacturing industry may move from Asian countries to African countries," Berhane said on Monday. While developing countries are mostly resistant to placing limits on greenhouse gases, USC's five-year study in African countries is being welcomed by government officials interested in growing a green economy, he said.

USC will train researchers from these African countries and will be installing monitoring equipment in capital cities. "Part of the training will be how science can influence policy," Berhane said. Besides the global implications, Berhane and co-researcher Jonathan Samet, director of USC's Institute for Global Health, will be testing the lungs of children who are exposed to higher levels of both indoor and outdoor air pollution than those living in Southern California.

The African study uses a similar methodology from USC's 21-year USC's Children's Health Study, which

found Southern California children ages 11-15 between 2007 and 2011 had healthier lungs than those in the same region during earlier time periods, evidence that as air pollution levels fall, children's lungs are healthier. The Eastern Africa studies would be the first in those countries to measure air pollution and children's lung functionality, he said. While most everyone in the United States knows that ozone, particulates from diesel trucks and nitrogen oxides, can cause asthma in children and precipitate lung diseases later on in life, such as COPD, many don't make that connection in developing countries, he said. In African industrialized cities, residents are exposed to high levels of particulates from indoor sources, such as wood-burning stoves, as well as outdoor air pollution from tailpipe emissions. These factors, along with pesticide use and mining hazards, cause almost one quarter of the world's deaths, according to the World Health Organization. "There is nothing like local data to influence policy makers," Berhane he said.

With the threat of coal exports, Oakland piles more pollution on a polluted community

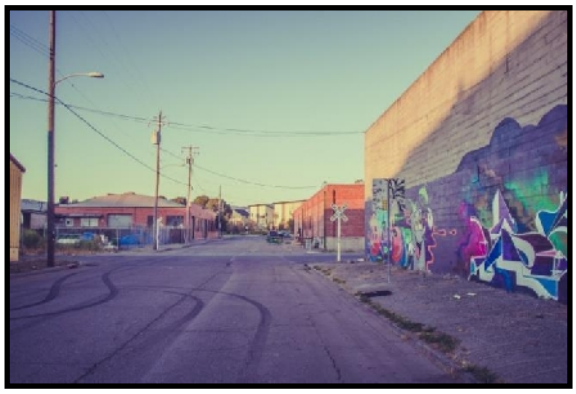
Date: 13th October, 2015 Source: Grist

For Margaret Gordon, West Oakland is home. So when she learned that a new shipping terminal would be bringing coal right through the heart of it, Gordon was angry. They'd been promised this wouldn't happen. She joined the hundreds of residents who showed up at City council to voice their concerns.Gordon, founder of West Oakland Environmental Indicators Project, has spent the past 18 years rallying people around environmental issues in her neighborhood, specifically when it comes to air quality. She was concerned that the coal exports would bring even more air pollution into West Oakland, a predominantly black community already known for having worse air quality than other parts of the city. In 2012, the West Oakland City Council authorized the construction of a new shipping terminal at the old army base. The terminal's developer, Phil Tagami, promised that coal would not be one of the commodities shipped through it. Then Tagami brought on a contractor — Terminal Logistics Solutions — with $53 million in investment from the state of Utah, for the express purpose of sending coal to coal-burning power plants in Asia. The coal would travel by rail to the West Oakland port, potentially sending plumes of coal dust into the air and water. Now, to try to put a stop to this, a group of activists are bringing a lawsuit against the city, asking for a proper environmental review.

As Jasmin Vargas, an associate director for Communities for a Better Environment (CBE) in Oakland, pointed out during the City Council public hearing, the people living near the tracks in Oakland are more likely to be people of color and low-income. According to a CBE study done this year, 91 percent of the people within a mile of the railroad tracks in Oakland are people of color. Compare that to the percentage of people of color away from the railroad tracks: just 64 percent.

Citing these statistics in front of the City Council last month, Vargas stated:
You are perpetuating environmental racism on the communities who have been affected the most for decades from all these pollutions. Stop thinking about mitigating [the effects of coal exports] and start challenging the root problem here, which is that communities have been dumping grounds that have been overburdened by fossil fuels and other industries. Her words were met with a loud roar from the crowd. She ended with a question for the City Council: "Are you going to stand with environmental justice communities or are you going to keep lining the pockets of a dead industry?"

Vargas was one of hundreds at the City Council public hearing expressing their concerns with exporting coal through Oakland. The crowd included residents, environmental experts, workers, students, professors, pastors, and activists, concerned about everything from poor air quality in West Oakland, to pollution in both the air and the rivers near the railroad tracks, to the climate change effects from burning coal in Asia. Elaine Brown, a former Black Panther, spoke about how the pollution from coal could destroy the crops in her urban garden, an oasis in a community stricken by food deserts. The developer had promised to cover the coal trains moving through Oakland, but that would only mitigate the problem of coal dust, not eliminate it completely. As an environmental expert reminded the City Council, even the lowest levels of coal pollution can have major effects on public health.



Not everyone in the crowd opposed the terminal's coal exports unequivocally. Many spoke to the fact that the exports would bring jobs to the neighborhood. Multiple leaders of the faith community in West Oakland stated that they were most concerned with jobs — as poverty, hunger, and homelessness in West Oakland are a real and growing problem — and therefore, the terminal should be applauded for providing more of them. Other labor activists spoke out against the coal exports. The International Longshore and Warehouse Union and the Alameda Labor Council both formally came out against the exports due to health concerns to workers. Susan Schacher, a member of a teachers' union, reminded the city council that "there are no jobs on a dead planet." In the end, it is a predominantly black and low-income neighborhood that will bear the brunt of exporting coal through West Oakland. For those who live there, these potential coal exports are just the latest in a series of environmental concerns. Over the years, the air pollution in West Oakland has become a public health crisis. The port and shipping centers in West Oakland bring a large number of trucks through the neighborhood, many often idling for long amounts of time. Their diesel exhaust worsens the air quality, resulting in a larger amount of residents suffering with breathing-related conditions. The West Oakland Environmental Indicators Project, under the direction of Gordon, has been focused on doing community-participatory research to determine information on asthma and breathing-related issues in the neighborhood.

What did they find? In West Oakland, a predominantly black and working-class neighborhood, one out of five children will go to the ER because of an asthma attack. The neighborhood also has an increased level of chronic obstructive pulmonary disease, which amounts to a predicted lifespan 10 years shorter than that of the predominantly white community nearby in Oakland Hills. Gordon's work and that of others organizing in the neighborhood has resulted in some major wins: There's a new idling limit stating that trucks can't idle for longer than five minutes, a parking facility that keeps trucks from parking on the sides of the road in West Oakland, a rule that no trucks older than 2003 can do import and export work at the Oakland Port, and filters on ships and trucks to reduce the diesel particulate that goes into the air. But the coal exports now threatening to come into West Oakland could backtrack on all the successes they've fought for to mitigate the harmful effects to their air quality.

USC to partner on air pollution and health study in Eastern Africa

Date: October 13, 2015 Source: CBC News

It will mark the first time scientists continuously record air pollution data to investigate the health of children in Ethiopia, Kenya, Rwanda and Uganda.

A long-running and widely cited USC study on the health effects of pollution on children is exporting its methods to Eastern Africa. USC and Addis Ababa University in Ethiopia have been awarded a $3 million joint grant to develop a regional Global Environmental and Occupational Health (GEOHealth) Hub in Eastern Africa — one of only seven in the world. This will be the first time scientists continuously record air pollution data to investigate its health effects on children in Ethiopia, Kenya, Rwanda and Uganda, said Kiros Berhane, a USC professor of biostatistics and co-principal investigator of the newly funded international partnership.

This type of study is such a novel idea in Eastern Africa, researchers will need to install air monitoring stations. The training of international scientists and students in the methods of the study is part of USC's emphasis on research with a global impact. USC and Addis Ababa University scientists will study health problems stemming from air pollution, Berhane said. The primary objective is to see if air pollution negatively influences health. If so, the team will collaborate with policymakers to address problem areas. "When it comes to air pollution, huge emissions from big polluters like China and India are likely to have huge effects on public health everywhere and on our global climate," said Berhane, who was born in Ethiopia. "These problems are global, so studying things only in the U.S. may not make sense and may not give us a full picture."

Looking abroad to find local solutions

While scientists won't be able to make direct comparisons between the USC Children's Health Study and the Eastern Africa Children's Health Study, the findings could still add to scientists' understanding of how high air pollution may affect health.

"The levels of air pollution in the Eastern Africa setting are going to be very high compared to even the dirtiest possible community in Southern California," Berhane said. "So qualitatively what the Eastern African studies could give us is actually a much higher end of pollution compared to anything we have seen in the Southern California study."

USC researchers hypothesize the percentage of children who are below the healthy lung function threshold will be much higher in Eastern Africa.

"In a way you could extend the pollution branch," Berhane said. "We still should be able to at least say — if it materializes — that as we go way beyond the levels that we see in Southern California, there is increased risk of children's respiratory health being compromised."

A five-year research map- Despite recent advances, hazards associated with air pollution, pesticides, mining, workplace risks and other factors continue in many low- and middle-income countries. Regional GEOHealth Hubs will examine how these risks are linked to illness and how to control them. U.S. scientists will train Ethiopian, Kenyan, Rwandan and Ugandan researchers in partner GEOHealth Hub universities for five years. Trainees will investigate occupational risk factors and the health impacts of air pollution and climate change. The study started last month and is set to conclude in August 2020.

In the first year, experts at USC, the South Coast Air Quality Management District and the University of Wisconsin-Madison will train an inaugural Eastern Africa cohort of lead scientists how to conduct research, including setting up air quality monitoring stations and collecting respiratory health data. Scientists in Eastern Africa will also learn how to translate findings into policies. These trainees will lead the hub's research activities in their respective countries. The Eastern Africa Children's Health Study, which will

begin in year two, will look at the impact of air pollution on the respiratory health of 9- to 10-year-old students in Ethiopia, Kenya, Rwanda and Uganda — 4,000 children in all. This approach resembles that of the initial USC Children's Health Study, which began as a one-off query and concluded as a longitudinal study lasting 21 years. By the hub's final year, a dozen lead scientists will be trained to continue their work as new leaders in GEOHealth research. The goal is for the Eastern African hubs to be self-sustainable and to extend its capabilities into other countries in the region.

A global burden- About a quarter of global disease burden may be avoidable if existing environmental health interventions and strategies were used, according to the World Health Organization. Infrastructure for environmental monitoring, workplace surveillance, policymaking and regulation is often limited or non-existent in areas experiencing rapid industrialization. "We recognize that governments are hamstrung by a lack of resources," said Jonathan Samet, chair of the Department of Preventive Medicine, director of the Institute for Global Health and a co-principal investigator of the GEOHealth Hub. "We hope to develop clear evidence that will motivate policymakers to take action to protect their populations." Other international hubs in India, Bangladesh, Southeast Asia, the Caribbean, South America and West Africa will address GEOHealth topics focused on the most pressing challenges in that region. In Eastern Africa, air pollution is one of the biggest concerns, according to the GEOHealth Hub's initial assessment.

Where the money came from- The National Institutes of Health's Fogarty International Center, the National Institute of Environmental Health Sciences, the Centers for Disease Control and Prevention, and Canada's International Development Research Centre awarded the five-year, $3 million grant on Sept. 28 to a team comprising the USC Institute for Global Health, the USC Department of Preventive Medicine and the Addis Ababa University School of Public Health. "I don't think these studies in Eastern Africa would have been possible without the experience that we have gained in the USC Children's Health Study," Berhane said. "We have the technical expertise to do it and we have able partners on the other side able to carry this with us." The award follows a three-year planning grant USC received to explore the development of an Eastern Africa GEOHealth Hub.

Why Scientists Are So Worried About the Ice Shelves of Antarctica

Date: 13th October, 2015 Source: NDTV

When it comes to climate change, Antarctica is one of the world's major places of concern, mostly because of the sheer amount of ice it contains - enough to theoretically cause about 200 feet of sea-level rise if it were all to melt - not that anyone thinks that will happen anytime soon. Still, smaller parts could be destabilized, and understanding how the Antarctic ice sheet will react to future climate change is a big priority for scientists.

One important key to building this understanding is studying Antarctic ice shelves, which are large, floating platforms of ice - sometimes spanning hundreds or thousands of square miles - that form where where an ice sheet meets the ocean. "They play an incredibly important role in constraining the flow of this land ice into the ocean," says Luke Trusel, a postdoctoral scholar at the Woods Hole Oceanographic Institution, comparing ice shelves to the "cork in a champagne bottle." If an ice shelf breaks off, it can unleash a flow of ice into the ocean from the ice sheet behind it, which can contribute to sea-level rise in a major way.

Indeed, without ice shelves to provide buttressing, glaciers behind the ice shelves flow faster, pouring more and more ice into the ocean. In order to get a better grip on how climate change could affect Antarctic ice shelves, Trusel and a group of other researchers conducted a study to see how rising air temperatures might

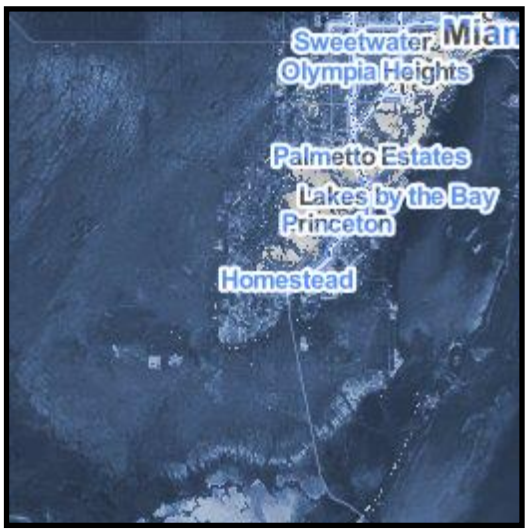
affect surface melting in Antarctica. This is a process that can directly influence the destabilizing of ice shelves. Past observations have shown that as ice melts on a shelf's surface, the melted water starts to pool, or "pond," and trickle down into imperfections in the ice, causing the cracks to deepen and widen - which can eventually cause ice shelves to collapse, unleashing the flow of land ice behind them.

"Increases in air temperature, and surface melt and ponding, has led to the abrupt and catastrophic collapse of a number of ice shelves," says Trusel, lead author of the study, which was published Monday in Nature Geoscience. These collapses have mostly been observed on the Antarctic Peninsula, where the thinning and retreat of ice shelves has been particularly pronounced, thanks to higher-than-average warming in the area. The concern, though, is that more ice shelves that ring around Antarctica, including its colder regions, will start to give way as temperatures continue to rise and that other more inland parts of Antarctica will then follow suit. The researchers used models to investigate the potential future impacts of two different climate scenarios: a "business-as-usual" trajectory, in which greenhouse gas emissions continue to rise throughout the century, and a more middle-of-the-road trajectory, in which emissions start declining before mid-century and there's less associated global warming. They found that under both scenarios, Antarctic-wide surface melt doubles by the year 2050, with the amount of meltwater produced coming close to 200 gigatons per year (a gigaton is a billion metric tons). This is a troubling finding, said Nerilie Abram, a researcher from the Centre of Excellence for Climate System Science at Australian National University who was not involved with the study, in an e-mail to The Post. But, she said, "I think that the more interesting result is to look at the huge divergence in predicted Antarctic ice melt during the second half of the century."

After 2050, the projections for the two climate scenarios differ drastically. In the middle-of-the-road scenario, melt doesn't increase much after mid-century. But in the business-as-usual scenario, melt continues to speed up, eventually hitting a rate of more than 600 gigatons per year by the end of the century. "The most important results are . . . that we can see how quickly melting can evolve," Trusel said. The results suggest that ice shelf surface melting increases exponentially with air temperature. The authors are careful to note that their projections for surface melt "do not foretell ice shelf collapse," meaning they can't say for sure how Antarctic ice shelves will respond to the future melting the models indicate. But a look at past events on the Antarctic Peninsula can provide some insight into what's likely to happen. Recently collapsed ice shelves on the Antarctic Peninsula, such as the Larsen A and Larsen B ice shelves, gave way as a result of high levels of melt, brought about at least partially by atmospheric warming. In the projections for the business-as-usual scenario, "we see melt reaching, or at least approaching or exceeding, these levels that we experienced pre-collapse on these ice shelves," Trusel says. So while the authors make no specific predictions about future ice shelf collapses, the results do suggest that they could occur if warming advances far enough. "The greatest concern probably in the near term is about West Antarctica," Trusel said. Some scientists believe that the West Antarctic ice sheet is already becoming unstable , and so it's among the regions most vulnerable to future ice sheet collapses. It also contains enough ice to cause close to a dozen feet of sea-level rise, which makes it a major focus area. One thing to remember is that snowfall could provide some cushioning in different parts of Antarctica, said Ted Scambos , lead scientist for the science team at the National Snow and Ice Data Center, in an e-mail to The Post. (Scambos was not involved with the study.) Some areas get more snow cover than the region of the Antarctic Peninsula where ice shelf collapses have previously been observed. "More snowfall during the cooler months means that the shelf can absorb more melt and still not produce the meltwater flooding of the surface that is considered to be the key part of the disintegration model for ice shelf breakup," Scambos said. Scambos was also involved in a recent study that demonstrated how powerful winds can scrape away massive amounts of snow from the Antarctic surface, creating pockets where rapid erosion takes place. And there are many other factors, not examined in this particular study, that can also affect the stability of Antarctic ice shelves. For instance, rising ocean temperatures can also help to destabilize ice shelves by increasing ice melt from the bottom up.

Melting of Antarctic Ice Shelves Could Double by 2050, Dramatically Increasing Sea Level Rise

Date: 13th October, 2015 Source: Ecowatch



If countries act fast to reduce global greenhouse gas emissions, according to new research, there is still time to curtail the most cataclysmic Antarctic ice melt.However, according to a study published Monday in the journal Nature Geoscience, if fossil fuel consumption maintains its current rate, Antarctica may experience a widespread collapse of its ice shelves, which could spur significant sea level rise. Researchers employed a combination of satellite observations of ice surface melting and climate model simulations under scenarios of intermediate and high levels of greenhouse gas emissions.

Under both emissions scenarios, by 2050, the models indicate a "strong potential" for the doubling of surface melting of Antarctica's ice shelves, which are the "floating extensions" of the continent's ice sheets. When extended to 2100, the trajectories diverge, with the more intense scenario showing "ice sheet surface melting approaches or exceeds intensities associated with ice shelf collapse in the past" and the reduced-emissions scenario showing "relatively little increase in ice sheet melting" after 2050.

"The data presented in this study clearly show that climate policy and therefore the trajectory of greenhouse gas emissions over the coming century, have an enormous control over the future fate of surface melting of Antarctic ice shelves, which we must consider when assessing their long-term stability and potential indirect contributions to sea level rise," said Clark University Associate Professor of Geography Karen Frey, who contributed to the study along with researchers from the Woods Hole Oceanographic Institution (WHOI), Institute for Marine and Atmospheric Research at Utrecht University, and Royal Netherlands Meteorological Institute.

Luke Trusel, lead author and postdoctoral scholar at WHOI, added that the results "illustrate just how rapidly melting in Antarctica can intensify in a warming climate." As WHOI explains, ice shelves have a "door stop" effect on sea level rise, as they slow the flow of ice from glaciers and ice sheets into the ocean, where it melts. The study follows a report last month which found that the Antarctic ice sheet would melt completely if all of the world's coal, oil and gas reserves were extracted and burned. Another, put forth by former NASA Scientist James Hansen this summer, argued that glacial melting will "likely" occur this century and could cause as much as a ten foot sea-level rise in as little as fifty years.

All of this comes in the lead-up to the United Nations climate talks in Paris beginning Nov. 30, during which international delegates are expected to cement an international climate agreement. However, countries on the front-lines of the most pressing climate impacts, such as sea level rise, are concerned that the pact will not go far enough to stem the worst effects of global warming. Check out this interactive map that allows you to see the potential sea level rise on cities, depending on how the world acts on climate:

Climate change is having devastating effect on global health, U of T profs tell roundtable

Date: 13th October, 2015 Source: U of T News

U of T, French embassy and United Nations Association in Canada jointly sponsor event. The hottest summer on record, the drought in California, wildfires in British Columbia and even the refugee crisis in Syria – all are consequences of global warming, said experts gathered at the University of Toronto last week. But there is hope, Professor Richard Peltier said, pointing to the European Union.

"The EU leads in reducing greenhouse gasses, yet at the same time it is increasing its Gross Domestic Product," said Peltier. "GDP increases while emissions decrease. We can do the same." Peltier, the director of U of T's Centre for Global Change Science (CGCS) made the comments on Oct. 8, during a roundtable discussion at the Isabel Bader Theatre on climate change and health cosponsored by U of T, the French embassy and the United Nations Association in Canada. It was one of 12 events held across North America leading up to the United Nations Climate Change Conference to be hosted by France in December 2015.

Called FACTS (French Ameri-Can Climate TalkS), the events aimed to mobilize French, American, and Canadian public opinion about the issues being addressed at the climate change conference in Paris. The U of T event featured remarks by Ontario Lieutenant-Governor (and former U of T adjunct professor) Elizabeth Dowdeswell and Ontario environment and climate change minister Glen Murray, who, in a passionate speech, noted how a drought in Syria helped fuel that country's current refugee crisis. "The roots of conflict in Syria are complex," Murray said, "But climate change, drought and social unrest are all contributing factors." Murray added that Canada is one of the most wasteful societies in the world, but can still find the ability to lead in facing environmental challenges.

The highlight of the evening was a panel discussion led by Globe and Mail Report on Business editor Paul Waldie. Participating in the discussion were Peltier, U of T Dalla Lana School of Public Health professor James Orbinski, Patricia Beneke, regional director of the United Nation Environment Programme Regional Office for North America, and Jean-François Toussaint, a cardiologist and professor of physiology at University Paris Descartes - France. Orbinski, who is also the research chair in global health at Wilfrid Laurier University, cited falling crop yields in the southern hemisphere and an increase in Lyme disease as some of the effects of global climate change on health.

"Only collective action can tackle these problems such as climate change and infectious diseases," he said. Peltier pointed to heat waves in India and Pakistan that have led to thousands of deaths. He also warned that climate change events can have far-ranging consequences, citing his own research on the effects of the California drought on Ontario's climate. Peltier said U of T became involved in this event when he was contacted by the French embassy in Ottawa with a request to help. "We provided modest monetary support and I also invited the School of Environment to be co-sponsor with the CGCS." The climate change conference in France will be the largest diplomatic event ever hosted by France and one of the largest climate change events ever, said Marc Trouyet, Consul General of France in Toronto. The conference objective is to achieve a legally binding and universal agreement on climate from all the nations of the world.

Want To Know How Sea Level Rise Will Impact Your Hometown? There's A Map For That

Date: 14th October, 2015 Source: Climate Progress

If you want to know whether your city has the potential to be underwater due to rising sea levels, there's now a map for that. In conjunction with research published Monday in the Proceedings of the National Academy of Sciences, Climate Central launched 'Mapping Choices,' an interactive tool that lets users compare sea level rise in different cities based on various carbon scenarios, from aggressive carbon cuts to unchecked pollution. "I think we read a lot of projections about future temperature increases or impact, but it can be hard to understand what they really mean," Ben Strauss, vice president for sea level and climate impacts at Climate Central and lead author of the study, told ThinkProgress. "We wanted to do a research project that would literally give people a picture, or a map, of the different outcomes that we could see. This is a story that can have different endings, and the endings depend on what we do."

If left unchecked, carbon pollution could lead to between 14 and 33 feet of long-term global sea level rise, the study found. That magnitude of sea level rise would threaten to submerge land that is currently home to between 20 and 31 million Americans, including at least 20 major U.S. cities with more than 100,000 residents. With aggressive carbon cuts, the study found, half of these cities could be spared from rising seas — but major cities like New Orleans and Miami are likely to be permanently threatened by rising sea level even with aggressive action on climate change. In addition to looking at sea level rise, the study looked at "lock-in dates" for long term sea level rise — dates beyond which the effect of carbon emissions doom the cities to inundation. Under a high-carbon pathway (RCP 8.5), a quarter of Boston would be "locked-in" to long term sea level rise around 2045, and New York City would have until 2095 — but cities like Miami, New Orleans, and Charleston have already passed their lock-in date.

"Many cities have features that depend on our energy path, but some appear to be already lost," Strauss said. "It is hard to imagine how we can defend South Florida in the long run. It is hard to imagine how we can defend New Orleans in the long run." To understand how carbon emissions will impact sea level rise, the researchers essentially combined two well-established lines of research — one relating to carbon emissions and global warming, and another relating warming to long term sea level rise. After combining those lines of research in what Strauss referred to as a "statistically appropriate way," the researchers were able to build a relationship between how much carbon is emitted into the atmosphere and how much sea levels can be expected to rise. The researchers then applied that relationship to coastal topography maps, and, using census data and information about historic high tide lines, mapped the areas that would be inundated, under different carbon emission scenarios, in the future.

The time frame on inundation, Strauss explained, is long term. "The sea levels that we're projecting could, with a small chance, occur as soon as 2200, but they might take many more years to unfold," he said. But Strauss underscored the idea that even though sea level rise could take centuries to reach catastrophic levels, the choices society makes in the coming decades will have a large impact on just how high the global waters will go. "We're doing our best to make this challenge concrete by showing you what it means for

your zip code, your city, the places you care about, and explaining why the consequences may take a long time to unfold," Strauss said. "Some of America's most culturally important cities are at stake. Not just Miami and New Orleans, but New York, Washington, D.C., Philadelphia, Boston. Will we preserve and protect our great coastal cities, or will we not? The answer depends on how much carbon we put in the atmosphere."

Melting of Antarctic ice shelves may double by 2050

Date: 14th October, 2015 Source: The Times of India

WASHINGTON: The surface melting of Antarctic ice shelves may double by 2050 and surpass intensities associated with ice shelf collapse by 2100 if greenhouse gas emissions continue at the present rate, a new study has warned. Ice shelves are the floating extensions of the continent's massive land-based ice sheets, researchers said. While the melting or breakup of floating ice shelves does not directly raise sea level, ice shelves do have a "door stop" effect: They slow the flow of ice from glaciers and ice sheets into the ocean, where it melts and raises sea levels.

"Our results illustrate just how rapidly melting in Antarctica can intensify in a warming climate," said Luke Trusel, lead author and postdoctoral scholar at Woods Hole Oceanographic Institution (WHOI) in US. "This has already occurred in places like the Antarctic Peninsula where we've observed warming and abrupt ice shelf collapses in the last few decades," said Trusel.

"Our model projections show that similar levels of melt may occur across coastal Antarctica near the end of this century, raising concerns about future ice shelf stability," he said. To study how melting evolves over time and to predict future ice sheet melting along the entire Antarctic coastline, the scientists combined satellite observations of ice surface melting with climate model simulations under scenarios of intermediate and high levels of greenhouse gas emissions until the year 2100. The results indicate a strong potential for the doubling of Antarctica-wide ice sheet surface melting by 2050, under either emissions scenario.

However, between 2050 and 2100, the models show a significant divergence between the two scenarios. Under the high-emissions climate scenario, by 2100 ice sheet surface melting approaches or exceeds intensities associated with ice shelf collapse in the past. Under the reduced-emissions scenario, there is relatively little increase in ice sheet melting after the doubling in 2050.

"The data presented in this study clearly show that climate policy, and therefore the trajectory of greenhouse gas emissions over the coming century, have an enormous control over the future fate of surface melting of Antarctic ice shelves, which we must consider when assessing their long-term stability and potential indirect contributions to sea level rise," said Karen Frey, Clark University Associate Professor of Geography. The study was published in the journal Nature Geoscience.

Interactive Map Shows 414 U.S. Cities Already Locked Into Catastrophic Sea Level Rise

Date: 14th October, 2015 Source: Ecowatch

According to a study published Monday in the journal Nature Geoscience, if fossil fuel consumption maintains its current rate, Antarctica may experience a widespread collapse of its ice shelves, which could spur significant sea level rise. Another study published Monday in the journal Proceedings of the National

Academy of Sciences (PNAS), looks at how rising sea levels will affect U.S. coastal cities over time based on various carbon scenarios, from aggressive carbon cuts to unchecked pollution. Researchers found that 414 towns and cities "have already passed their lock-in date, or the point at which it's guaranteed that more than half the city's populated land will eventually be underwater no matter how much humans decrease carbon emissions; it's just a matter of when," says Huffington Post. That's "the date where we let the genie out of the bottle, when it's past the point of no return," lead study author Benjamin Strauss of Climate Central told Huffington Post. The study follows a report last month which found that the Antarctic ice sheet would melt completely if all of the world's coal, oil and gas reserves were extracted and burned. Another, put forth by former NASA Scientist James Hansen this summer, argued that glacial melting will "likely" occur this century and could cause as much as a 10-foot sea-level rise in as little as 50 years. All of these reports confirm that sea level rise would be devastating for coastal cities in the U.S. To illustrate just how destructive it would be, Climate Central, in conjunction with the PNAS study, created an interactive map showing which U.S. cities we could lose to sea level rise, in what year we will lock in enough future sea level rise to inundate each city and what percentage of the population in each city lives below the locked-in sea level rise.

Climate change special science express train to be flagged off tomorrow

Date: 14th October, 2015 Source: The Times of India

NEW DELHI: As a momentum to the Paris climate summit is building up across the globe, India will on Thursday launch a massive awareness drive on the global challenge by flagging off a 'climate change special' science express train as a moving information platform to step up debate and discussion over the crucial issue of global warming. The 16-coach train will travel across the country in next seven months and make people aware of the implications of global warming and the measures which may be taken at both local and national level to tackle the common threat. The 'Science Express-Climate Change Special (SECCS)' train during its seven-month journey will cover 18,000 km and halt at 64 locations, spread over 20 states. The train will be flagged off jointly by the Union environment minister Prakash Javadekar, railway minister Suresh Prabhu and science and technology minister Harsh Vardhan here at Safdarjung railway station. "The state-of-the-art exhibition aboard SECCS aims to create awareness among various sections of the society, especially the students, about various issues & challenges associated with Climate Change and how it can be combated through mitigation and adaptation," said an official statement of the ministry of science.

Of the 16 coaches of SECCS, exhibition in 8 coaches will be exclusively devoted to information, case studies and material related to various aspect of climate change, the underlying science, impacts, adaptation activities, mitigation solutions and policy approaches in a manner that is easy to understand and interesting for not just school students but also the masses. "The exhibition will convey a strong message on climate change and will also be a good opportunity to generate dialogue and discussion," said the statement. The 'Science Express' is an innovative science exhibition mounted on a 16 coach AC train which has been custom-built for Department of Science & Technology (DST) by the Indian Railways (IR). This unique mobile exposition was initially launched on October 30, 2007 by DST, in collaboration with German government and Max Planck Society and it travelled across India in 4 phases of 6-7 months duration each. In 2011, as a joint initiative of DST and then ministry of environment and forests, Science Express was rolled out as 'Biodiversity Special' which showcased the myriad 'Biodiversity of India' and it traversed the length of breadth of India in 3 runs.

During seven successful tours spanning 1,20,000 kms across India, Science Express received an overwhelming response at 391 halts, usually of 3-4 days duration each. "So far, in 1404 exhibition days more than 1.33 crore (13.3 million) people, primarily students & teachers, have visited it. It has thus

become the largest, longest running and most visited mobile science exhibition and created several records in its wake, including six entries in the Limca Book of Records," said the statement.

Climate change is the most important environmental issue, with short term as well as long term and large scale impact. From shifting weather patterns that threaten food production, to rising sea levels that increase the risk of catastrophic flooding, the impacts of climate change are not just global in scope and unprecedented in scale but more severely affect poor and marginalized people. However, there is very little understanding about climate change and its impacts. Keeping this in mind, the government this year had decided to model the Science Express train on the theme of climate change.

For Climate Change, 2015 could be a decisive year, when leaders of 190 nations will gather in Paris from November 30 to December 11 to discuss a new global agreement on climate change during 21st session of Conference of the Parties (COP 21) to the United Nations Framework Convention on Climate Change (UNFCCC). "Thus it was rational to shift the focus of Science Express to the theme 'climate change' as it will affect the biodiversity of not just India but the entire globe as well," said the science ministry. The broad theme covered in each coach of the science express will be as follows:

Coach 1 - Understanding climate change: The physical science of climate system, climate change - its causes and history - and industrial revolution and concept that all systems are connected.
Coach 2 - Impact of climate change: Introduction to concept of ecosystem services, climate change impacts on selected ecosystems and sectors and also how to reduce it.
Coach 3 - Adaptation-concepts: Concepts of adaptation and example form day to day life, adaptation strategies and stories from field.
Coach 4 - Adaptation-India's action: Various national, state and local level action and adaptation programmes and their links with national strategies and international actions.
Coach 5 - Mitigation-concepts: Concept and definition with examples from everyday life, emphasis on restoring balance, enhancing sinks (carbon stores) and reducing emission through renewable energy (RE) technologies.
Coach 6 - Mitigation-India's action: Various national, state and local level action and adaptation programme implemented by India and how those are linked with national strategies and international actions. Low carbon strategies, ambitious goal to increase RE.
Coach 7 - International negotiation on climate change: Introduction to UNFCCC, IPCC and internationally agreed action and targets. Explaining concept of equity and common but differential responsibility, Polluter pays, Kyoto protocol and other key outcomes of major COP, etc. Introduction to Intended Nationally Determined Contributions (INDC).
Coach 8 - Handprint: What can one do at school, on roads, at home and in offices and focus on concept of lifestyle choices?

The rest of the rake will have exhibits on themes like Wildlife and Nature Conservation work being carried out by different research institutions across India with focus on Tigers, Turtles, Coral Reefs, Amphibians, etc. besides development in field of Biotechnology, Innovations in S&T, Science Education, Schemes of DST, Careers in S&T, and so on.

Climate Change Is A Problem For Everyone, Protesters Across The Country Say

Date: 15th October , 2015 Source: Climate Progress

“Hey hey ho ho climate change has got to go!” Chants and drums rang through the streets of downtown Washington, D.C. yesterday afternoon during the peak of rush hour traffic. About 500 people gathered from different sectors, advocacy groups, and areas of the region to rally around the fight for climate and social justice as a part of the People’s Climate Movement’s National Day of Action. Protesters held a die-in

in front of the American Petroleum Institute, staged a short performance about the role big oil companies play in U.S. politics and economy, marched to Freedom Plaza to hear speeches from local leaders, and stood in solidarity and hope for global climate change justice. D.C. was one of 170 communities in 47 states that protested on Wednesday for sustainable, just, and inclusive economies. People rallied to demand stronger action on climate from political leaders and called out corporations and institutions that are blocking economic and political progress on climate change, such as the American Petroleum Institute. "We had all of the segments of D.C. here, from all over the city and from all over the region coming together showing the beautiful face of what it looks like to have a unified climate movement," Keya Chatterjee, executive director of the U.S. Climate Action Network, told ThinkProgress. Last year's People's Climate March in New York brought in over 400,000 people and was the largest climate march in history. This year's focus was on the localization of climate change impacts, giving communities across the nation the ability to voice the injustices they have personally faced with climate change. People from a range of sectors were represented in these protests, including youth, social and racial justice leaders, workers, mothers, faith leaders, and environmentalists. The People's Climate Movement's logic is "to change everything, it takes everyone."

"This year is a really great follow up to what happened last year," Marissa Knodel, Climate campaigner for Friends of the Earth, said at the rally in D.C. "What we have this year sends a really strong message. Climate change impacts every single corner of our country and our globe and that's what you are seeing this year. You're seeing how different cities are rallying around the issues that are affecting them locally."

On Wednesday, activists paddled down the Missouri River and marched to Gov. Jay Nixon's office in Jefferson City to deliver a petition calling for carbon emission cuts in Missouri. Protesters in Seattle, Washington, marched the main streets and watched a screening of "This Changes Everything," with author and science historian Naomi Klein. Groups in Orlando, Florida, spent the afternoon outside the offices of Senator and presidential candidate Marco Rubio to demand bold climate action. Faith leaders in Florence, South Carolina examined the connection between the state's recent historic flooding and climate change during an event. Colleges and universities across the country also took part in voicing their demands for climate and worker rights.

"The point really is that climate change is a concern for people all across the spectrum — it is not just an elite group of folks that are concerned about the Rocky Mountains," David Mott from property services workers union 32BJ SEIU said at D.C.'s rally. He brought his guitar along to the rally and played music during the die-in at API and at the end of the event.

"[Climate change] is the concern of workers, it is a concern for people of color, it is a concern for indigenous people, it is a concern for everybody," he said. "Part of this movement is saying that the costs of climate change cannot be worn on the backs of working people. These guys that created it, they have to pay the costs of cleaning up their mess." Groups like the Mom's Clean Air Force, Service Employees International Union (SEIU), Sustain US, Energy Justice Network, D.C. Power, U.S. Climate Action Network, and many others also played key roles in delivering the message.

"We need to be holding corporations that limit our resources accountable for environmental destruction and impact on front-line communities of real people who deserve access to clean air and water and who matter," said Ruth Tyson during her speech in D.C.'s Freedom Plaza. Tyson is Prince George's County's Environmental Justice Organizer for the Environmental Justice Network. Her county is already facing side-effects of burning fossil fuels and increased health risks, she said.

"In our fight for justice, we must constantly be asking ourselves who is being left out, or who will feel the impact of the decisions we make today," Tyson said. "This means not just considering them in the movement, but having them at the table." The event was timed between Pope Francis' visit to the United States — during which he addressed climate change and broad social issues in front of a joint session of Congress — and the Paris climate talks happening this December. Climate action is still largely looked at as a partisan issue — just this past Friday Republican-led House of Representatives voted to lift the oil export ban. "There are consequences to blocking action of climate change and there are consequences to climate denial, actual people are getting hurt," said Keya Chatterjee. "People in our communities are getting hurt and we're not going to stand for it anymore. Places like the American Petroleum Institute have got to get out of the way."

Overall, the crowd and organizers emphasized the need to be hopeful and the importance of the national action day. "Movements change politics," said Chatterjee. "We need three things to get action on climate change: we need an activist minority, a permissive majority, and political leadership. What we're showing in the People's Climate Movement is that not only do we have an activist minority, but it is broad, it is across all demographics, and it is not going away. We are in every community in this country; we are here and we are not going away and nothing is going to make us give up."

Even Fossil Fuel Companies Support An International Climate Agreement

Date: 15th October, 2015 Source: Climate Progress

In a joint statement released Wednesday by the Center for Climate and Energy Solutions, 14 major Fortune 500 companies voiced their support for a strong global agreement on climate change.

The 14-company coalition represents a broad set of business interests, from technology giants like Intel and HP to the electronics manufacturer Siemens Corporation. But the letter also includes supporters that might not seem like the most natural allies to a global climate agreement, including coal mining companies like BHP Billiton and Rio Tinto, oil and gas companies like BP and Shell, and industrial manufacturers like Alcoa and LafargeHolcim. Together, the companies have a combined revenues of $1.1 trillion and employ more than 1.5 million people, according to the Center for Climate and Energy Solutions.

"These are companies with real skin in the game – either they're large emitters or their products are," Center for Climate and Energy Solutions President Bob Perciasepe said in a statement. "They know emissions need to come down and are taking steps on their own. But they believe the low-carbon transition requires stronger leadership from governments, too."

In the statement, the companies outline four ways that a climate agreement in Paris could "strengthen the role of, and minimize risks to, the private sector." These include providing long-term direction when it comes to decarbonizing the global economy, requiring countries to be transparent about their policies, requiring all the world's major economies to be a part of the deal in order to ensure comparability across the world, and facilitating the growth of a global carbon market, which the statement calls a "critical tool for cost-effective emissions reduction."

"They want some clarity, transparency, and predictability in policy response to climate change, because that helps them better prepare their investments," Tim Juliani, senior director for business strategy and partnerships at the Center for Climate and Energy Solutions, told ThinkProgress. "They recognize that policy is moving forward, and they want to see a comparability of efforts across economies." The companies in support of the statement join a growing wave of corporations that have called for climate action in advance of the Paris talks. In early October, leaders from ten of the world's biggest food companies published a letter to Congress, urging leaders to "meaningfully address the reality of climate change." Earlier this summer, seven oil companies submitted climate pledges to the United Nations. And, earlier this spring, the heads of BP, Shell, BG Group, Statoil, Eni, and Total — the world's top oil producers — wrote a letter to U.N. climate chief Christiana Figueres voicing their support for an international climate agreement.

"Statements such as these show that there is strong business support for a global climate agreement," Juliani said. "You can see real momentum building for a strong agreement in Paris, and that's an important trend that I think will continue." As the Paris conference nears — and countries continue to submit individual pledges in advance of the meeting — the Sierra Club's John Coequyt thinks more businesses could be pulled along by global momentum. "With clean energy booming and emissions reduction commitments rolling in from around the globe, it's simply not an option for any company to effectively stop the momentum building toward a significant climate deal in Paris," Coequyt, Sierra Club's director of federal and international climate programs, told ThinkProgress.

Antarctic study points to 'scary' future with global warming

Date: 15th October, 2015 Source: Business Standard

Global sea levels will rise substantially more than previously thought and almost irreversibly if greenhouse gas emissions continue, according to New Zealand-led research released on Thursday. An international team led by Nicholas Golledge, of Victoria University's Antarctic Research Centre, used state-of-the-art computer modelling to simulate the Antarctic ice-sheet's response to a warming climate under a range of greenhouse gas emission scenarios. They found that all but one of the scenarios, that of significantly reduced emissions beyond 2020, would lead to the loss of large parts of the Antarctic ice-sheet, which in turn would result in a substantial rise in the global sea-level, Xinhua reported.

"The long reaction time of the Antarctic ice-sheet, which can take thousands of years to fully manifest its response to changes in environmental conditions, coupled with the fact that CO2 (carbon dioxide) lingers in the atmosphere for a very long time means that the warming we generate now will affect the ice-sheet in ways that will be incredibly hard to undo," Golledge said in a statement. In its 2013 Assessment Report, the Intergovernmental Panel on Climate Change (IPCC) predicted that the Antarctic ice-sheet would contribute only 5 centimetres to global sea-level rise by the end of this century even for its warmest emissions

scenario. But Victoria University professor Tim Naish, who was a lead author of the IPCC report, cautioned that at the time the report was written there was insufficient scientific knowledge on how the Antarctic ice-sheet might respond to future warming, meaning the IPCC sea-level projections could have been too modest. "Our new models include processes that take place when ice-sheets come into contact with the ocean. Around 93 percent of the heat from anthropogenic global warming has gone into the ocean, and these warming ocean waters are now coming into contact with the floating margins of the Antarctic ice sheet, known as ice-shelves," said Golledge.

"If we lose these ice-shelves, the Antarctic contribution to sea-level rise by 2,100 will be nearer 40 centimetres." To avoid the loss of the Antarctic ice-shelves, and an associated commitment to many metres of sea-level rise, the study showed atmospheric warming needed to be kept below 2 degrees centigrade above present levels. "Missing the 2 degrees centigrade target will result in an Antarctic contribution to sea-level rise that could be up to 10 metres above present day," said Golledge.

"The stakes are obviously very high, 10 percent of the world's population lives within 10 metres of present sea level." To restrict global warming to 2 degrees centigrade and prevent the more dangerous consequences of climate change, the United Nations climate change meeting in Paris later this year had to agree to reduce global CO2 emissions to zero before the end of the century, Naish said in the statement. "To be on track this will require a global commitment to 30 percent reduction, below year 1990 levels, by the year 2030." The last time CO2 concentrations in the atmosphere were similar to present levels was about 3 million years ago, when sea levels were 20 metres higher than now, said Golledge.

U.S. exports its greenhouse-gas emissions - as coal. Profitable coal

Date: 15th October, 2015 Source: The Washington Post

This is part of a series exploring how the world's hunger for cheap electricity is complicating efforts to combat climate change. Gillette, Wyo. — A few feet below this prairie town lies one of North America's biggest coal deposits, a 100-foot-thick slab of brittle black rock spanning an area the size of Rhode Island — nearly all of it owned by the U.S. taxpayer.Just a dozen nearby mines, scattered across a valley known as the Powder River Basin, contain enough coal to meet the country's electricity needs for decades. But burning all of it would release more than 450 billion tons of carbon dioxide into the atmosphere — more than all greenhouse-gas emissions from all sources since 2000.

The Obama administration is seeking to curb the United States' appetite for the basin's coal, which scientists say must remain mostly in the ground to prevent a disastrous warming of the planet. Yet each year, nearly half a billion tons of this U.S.-owned fuel are hauled from the region's vast strip mines and millions of tons are shipped overseas for other countries to burn.

Government and industry reports predict a surge in exports of Powder River coal over the next decade, at a time when climate experts are warning of an urgent need to reduce coal burning to prevent global temperatures from soaring. Each shipment highlights what critics describe as a hypocrisy underlying U.S. climate policy: While boasting of pollution cuts at home, the United States is facilitating the sale of large quantities of government-owned coal abroad. "We're a fossil-fuel-exporting superpower that goes around lecturing the rest of the world about cutting emissions," said Paul Bledsoe, who was an adviser on climate during the Clinton administration. "The United States is reducing its domestic coal use and then simply exporting some of those emissions abroad."

The production of electricity is the leading source of man-made greenhouse gases in the atmosphere, and the global demand for electricity, particularly in developing nations, will only grow. Coal accounts for 40 percent of the electricity produced globally — and more in China and India. In December, the United States

will join more than 190 other countries in Paris to negotiate a climate treaty, one that will be built largely on the pledges of individual nations to cut down on greenhouse-gas emissions. Restraining industrial and transportation-related emissions won't be sufficient to meet the promises — electricity has to be part of the mix. The Obama administration has pledged ambitious cuts in carbon pollution over the next 15 years, but that does not reflect emissions from coal and other fuels sold to nations in Asia, Europe and North Africa. Because of accounting procedures approved by diplomats during past climate negotiations, countries are responsible only for the emissions that occur within their borders. "The Obama administration can't have it both ways, limiting carbon pollution while encouraging exports of coal from U.S. public lands to overseas markets," said Amanda Jahshan, an energy fellow with the Natural Resources Defense Council's office in Bozeman, Mont.

Administration officials acknowledge the policy dissonance, which stems from decades-old programs Congress created to ensure that taxpayers receive the maximum benefit from minerals and fossil fuels buried in government-owned land in Western states. The policies allow coal companies to lease the rights to federal coal deposits — often at prices far below market rates — and then sell the coal at home or abroad. In the Powder River Basin, the energy-rich region that spans northeastern Wyoming and southeastern Montana, foreign exports represent a modest share of the overall coal production: about 15 million tons annually, most of it sold to Asian countries such as China and India. But with domestic demand shrinking, mining firms are looking to sell more coal abroad. Even as exports have fallen because of the economic downturn in Asia, U.S. companies are building the infrastructure for what analysts think will be a booming export market by the end of the decade. Backing the industry are lawmakers in Congress and state houses who are pushing for new rail lines and port facilities to handle the increased traffic. U.S. officials have given mixed signals about whether they would support such an increase. Interior Secretary Sally Jewell, whose department manages coal leases, recently called for realigning the government's coal policies in a way that is "consistent with our climate policies."

Yet, the government continues issuing new leases for Powder River coal, in ever greater quantities. The Interior Department is finalizing leases for 2.5 billion tons of Powder River coal, and agency documents released earlier this year propose making an additional 10 billion tons available for mining — and, potentially exporting — over the next 25 to 30 years.

Antarctic study points to 'scary' future with global warming

Date: 15th October, 2015 Source: Business Standard

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been too modest. "Our new models include processes that take place when ice-sheets come into contact with the ocean. Around 93 percent of the heat from anthropogenic global warming has gone into the ocean, and these warming ocean waters are now coming into contact with the floating margins of the Antarctic ice sheet, known as ice-shelves," said Golledge. "If we lose these ice-shelves, the Antarctic contribution to sea-level rise by 2,100 will be nearer 40 centimetres."

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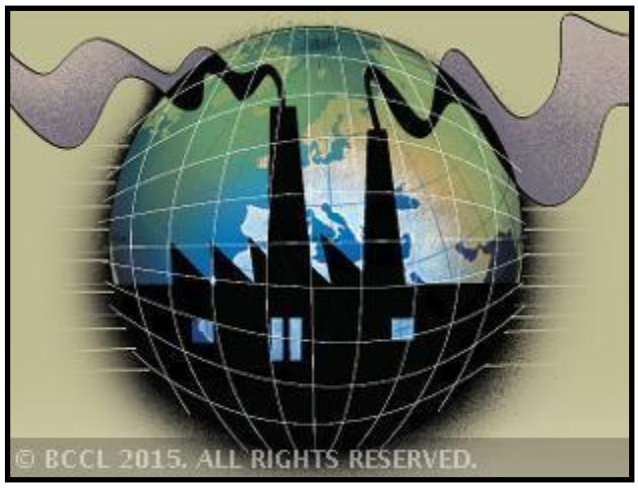
UN climate talks: Tough issues on the table, consensus on crucial points remains elusive

Date:16th October, 2015 Source: The Economic Times



PARIS: Diplomats convene in Bonn Monday for the last five-day negotiating session before 195 nations try to ink a global climate pact in December. The UN talks have made progress toward an agreement, but consensus remains elusive on many crucial points. Here are some of the outstanding key issues: Not all countries agree on how much temperature increase is too much. UN scientists have set a goal of preventing a rise of more than 2 degrees Celsius (3.6 degrees Fahrenheit) over pre-Industrial Revolution levels. But small island states and poor nations -- which will get hit early and hard by global warming -- are pushing for a lower ceiling of 1.5 degrees Celsius.

Whatever goal is agreed, exactly how the nations would collectively reach it is also still subject to debate. In 2009 rich countries pledged $100 billion (87 billion euros) per year starting in 2020 to help poor countries fight climate change and adapt to its impacts. A recent report by the Organisation for Economic Co-operation and Development (OECD), an intergovernmental body, said climate finance hit $62 billion in 2014. But sharp disagreement remains on how much of the money should be from public or private sources, what accounting methods should be used, and the appropriate split between grants and loans. More recently, the world's poorest nations have also pushed for payouts -- beyond the $100 billion -- for "loss and damage" caused by global warming. Rich nations have balked at the concept of "compensation", but have agreed to discuss the issue. One pillar of the Paris climate agreement will be the pledges that nearly 150 nations have already made for reducing their greenhouse gas emissions. China, the United States and the European Union -- which together pump out over half the world's carbon dioxide pollution -- have led the way. The pledges made so far, however, would still cause Earth to warm by 2.7 degrees Celsius, well past the danger mark, according to an analysis released in early October. In response, some negotiators have proposed including a mechanism that would encourage countries to re-evaluate and ramp up their

efforts over time. Built into the negotiations is the principle that rich countries have been the major cause of the problem and are thus more responsible for fixing it. The negotiations are taking place under the auspices of the 1992 charter of the UN Framework Convention on Climate Change, which enshrined this principle of "differentiation".But wealthy countries insist that much has changed since then, and point out that nations once tagged as "developing" have made huge economic leaps and become big polluters in their own right.

China is now the world's number one emitter of carbon pollution, overtaking the US, and India is number four. The extent to which the "differentiation" principle will stymie progress -- as it has in the past -- remains to be seen.

In India, Climate Change Ranks behind Coal for Development

Date: 16th October, 2015 Source: Scientific American

SINGRAULI, India—Here at the foot of a mountain of coal mining debris live 150 people in one of the most polluted places on Earth. The air is dense with coal dust and other particulates. The drinking water source is a spring that emerges from the coal dump. When the rains come, landslides from the rock pile threaten to crush the small mud homes at its foot. Kunti Baiga, who is 25 or 30 years old by her best reckoning, lives there with her kids—two boys and a girl. The coal mining company, Northern Coalfields Ltd., has offered her family a spot in a resettlement camp nearby. But she refuses to move because she has seen the miserable conditions there. "We would rather be crushed by the debris here rather than under the roof of those houses," she said. "I would rather die here."

The coal boom is meant to power India's economic growth and supply the 400 million people like Baiga who do not have electricity. Indeed, India sees its energy mix as inextricably linked to coal. Electricity demand is estimated to double by 2022 nationwide, and coal production is expected to double to 1 billion metric tons by then. Much of it would be burned in carbon-spewing power plants to generate an additional 103 gigawatts of capacity.

India	
Population	
1,276,267,000 (2015)	
Land area	
3,287,590 km2	
Total GHG emissions (MtCO2e) per year	
1997	2012
1,476	2,707
% of global emissions per year	
1997	2012
4.94%	6.72%
GDP per capita	
1997	2012
$427	$1,630

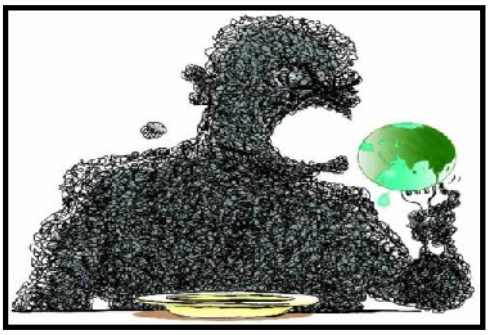
India is already the world's fourth-largest emitter of carbon dioxide after China, the United States and the European Union, releasing more than 2 billion metric tons in 2013. By 2030, emissions are projected to rise to between 4 billion and 5.6 billion metric tons, according to modeling studies. Government leaders are unapologetic about India's right to pollute, just as other nations have done in the quest for prosperity. "We need carbon space, please vacate the carbon space which countries have occupied," Prakash Javadekar, India's environment minister, said in a recent interview. "We want free carbon space where our development can be parked. We want to bring them [poor people] out of poverty. ... And to that end, we'll produce more energy."

And yet, in India's race to develop, people like Baiga get left out. Attacking those who attack coal. Priya Pillai, 37, a senior campaigner with Greenpeace India, has come as close as anyone to challenging the government's position that coal-powered development helps the poor. She believes that is why, on Jan. 11, as she was boarding a flight to London to talk to British ministers about coal extraction in India, she was stopped.

In the coming months, Greenpeace would be targeted as an enemy of the state, its bank accounts would be frozen, and it would be forced to fight in the courts for its survival. But that January morning, Pillai was alone. She was directed to a holding area. Pillai does not have a criminal record, but she said she felt the grip of paranoia. Her suitcase had already been checked in, and she felt convinced that the authorities would put drugs in her bags and arrest her on a false charge. Her fear was the culmination of five years she had spent organizing villagers in Singrauli to protest against coal mining. The region, in central India's Madhya Pradesh state, is so remote that it takes a day's travel from Delhi to reach it. Residents there do not know what is owed them by the government, as it takes away land and awards it to India's biggest energy companies to generate coal-fired electricity and power distant megacities, advocates say. That was the case when Pillai got there in 2011. One morning, she hired a sedan and drove to a village near the Mahan forest, which was slated for destruction. On both sides of the road were houses and farms dotted with cows. To the southeast loomed a 1,200-megawatt power plant built by the Essar Group, an Indian multinational conglomerate. The plant had cost the company 3,600 crore rupees ($550 million). Four villages had already been displaced. Essar and its partner company, Hindalco Industries Ltd., wanted to move two other villages to mine coal to supply the power plant. The mine would destroy 967 hectares of the Mahan forest. Mahan was strategically ideal for Greenpeace, which was looking for a cause to spark a nationwide anti-coal movement. The fight would pit villagers against the might of the government and a mega-energy company, Essar, which was then listed on the London Stock Exchange.

Global warming 'tipping points' identified

Date: 17th October, 2015 Source: The Financial Express



An international team of scientists has identified potential 'tipping points' where abrupt regional climate shifts due to global warming could trigger a natural disaster.An international team of scientists has identified potential 'tipping points' where abrupt regional climate shifts due to global warming could trigger a natural disaster. The scientists analysed the climate model simulations on which the recent 5th Intergovernmental Panel on Climate Change (IPCC) reports are based.

They found evidence of 41 cases of regional abrupt changes in the ocean, sea ice, snow cover, permafrost and terrestrial biosphere. Many of these events occur for global warming levels of less than two degrees, a threshold sometimes presented as a safe limit. However, although most models predict one or more abrupt regional shifts, any specific occurrence typically appears in only a few models.

"This illustrates the high uncertainty in predicting tipping points," said lead author Professor Sybren Drijfhout from Ocean and Earth Science at the University of Southampton. "More precisely, our results show that the different state-of-the-art models agree that abrupt changes are likely, but that predicting when and where they will occur remains very difficult. "Also, our results show that no safe limit exists and that many abrupt shifts already occur for global warming levels much lower than two degrees," he added.

Examples of detected climate tipping include abrupt shifts in sea ice and ocean circulation patterns, as well as abrupt shifts in vegetation and marine productivity. Sea ice abrupt changes were particularly common in the climate simulations. However, various models also predict abrupt changes in Earth system elements such as the Amazon forest, tundra permafrost and snow on the Tibetan plateau. "Interestingly, abrupt events could come out as a cascade of different phenomena," said Victor Brovkin, a co-author from Max Planck Institute for Meteorology (MPI-M). "For example, a collapse of permafrost in Arctic is followed by a rapid increase in forest area there.

This kind of domino effect should have implications not only for natural systems, but also for society," said Brovkin. "The majority of the detected abrupt shifts are distant from the major population centres of the planet, but their occurrence could have implications over large distances," said Martin Claussen, director of the MPI-M and one of the co-authors.

"Our work is only a starting point. Now we need to look deeper into mechanisms of tipping points and design an approach to diagnose them during the next round of climate model simulations for IPCC," Claussen said. The study was published in the journal PNAS.

Out of breath: How air pollution fuels viral infections, fever

Date: 17th October, 2015 Source: Hindustan Times

Air pollution hurts us in more insidious way than we realise . It fuels viral and bacterial infections in the winter months and is a major contributor to rising cases of colds, cough and viral fevers, including swine flu caused by the H1N1 influenza virus. Each year, an adult on average catches viral infections two to three times a year. Young children get them more often, falling ill between four and six times a year, with symptoms in both young and old ranging widely from mild sniffles and a sore throat to a hacking cough, high fever and acute diarrhoea, all of which appear to be leading to more and more hospitalisations each year. Over the past two years, there's also been a palpable increase in the frequency at which viruses and bacteria have been causing infection even among the healthiest of us. Doing everything right no longer ensures you will stay infection free, complained a friend who's been fighting frustrating battles against frequent viral fevers despite leading an obsessively clean and healthy life. A typical day in his life is what most of us make New Year's resolutions about – personal trainer, running, eating organic food, living in an ambience-controlled home and going for regular health check-ups – and yet he battles the same infections the rest of us with far more compromised lifestyle deal with. In his case, urban air pollution appears to be the great leveller undermining his textbook robust immunity. The dense smog that hangs low across north India most of the year around does more than choke out the sun and starve our collective lungs of oxygen. It kills 6.2 lakh people prematurely in India from a wide range of seemingly unrelated diseases, including heart disease, stroke, chronic obstructive pulmonary disease, lung cancer, acute respiratory infections and asthma attacks, among others.

The death estimate from pollution in India in 2013 is a six-fold jump from the 1 lakh deaths estimated in 2000, said the Global Burden of Disease 2013, which tracks deaths and illnesses from all causes across the world. It's the biggest cause of death after high blood pressure, indoor air pollution (mainly from smoking coal and food stoves), tobacco use, and poor nutrition. But most people don't realise that air pollution also hurts us in more insidious way. It fuels viral and bacterial infections in the winter months and is a major contributor to rising cases of colds, cough and viral fevers, including swine flu caused by the H1N1 influenza virus. Airborne particulate matter are a deadly cocktail of dust, organic carbon, black carbon,

nitrates and sulfates found in construction material, vehicular industrial emissions, incinerators, windblown dust, power plants and wood, coal, biomass and agricultural fires.

While studies linking air pollution with viral and bacterial infection in India are small and largely anecdotal, representative data from across the world firmly establishes the link. An analysis of 10 European birth cohorts that between them used data from more than 16,000 children, established a link between air pollution and childhood pneumonia, painful middle-ear infection (otitis media) and croup, which is an upper airways infection that leads to children developing a harsh, barking cough because of inflammation around the vocal cords, windpipe and bronchial tubes. The study, published in the journal Environmental Health Perspectives last year, found oxides of nitrogen – byproducts of vehicular emissions, power plants and coal burning -- were the most harmful for young children. Viral identification data from positive identification count and outbreak records that included emergency visits for influenza-like illness, severe acute respiratory infection and meteorological factors/air pollution in the city of Porto Alegre in Brazil, from November 2008 to October 2010 showed that 22% of the close to 12,000 hospitalisations were triggered by air pollutants. The data, which was collated using time-series analysis and published in the Journal Influenza and other Respiratory Viruses showed that apart from the mean concentration of pollution, other related environmental factors that played a role were temperature, humidity and the duration of sunshine.

It's no safer indoors. A study in the journal Inhalation Toxicology found dampness (marker for dust mites, endotoxins and reduced ventilation) and mould was consistently linked with respiratory symptoms of cough, wheezing, and upper respiratory infections.

Researchers at Geohealth Laboratory, University of Canterbury in New Zealand went a step further and used virology prediction tools to predict the numbers of hospital admissions. Writing in the Australian and New Zealand Journal of Public Health,they used various computational methodologies such as neural networks, theoretical computer algorithms and data mining techniques to study the relationship between air pollution, climate and hospital admissions and plan to predict and prevent potential outbreaks.

Cleaning the air is possible with legislation and public participation, as is predicting outbreaks and planning ahead. And the sooner we do it, the healthier we are likely to be.

John Kerry urges 'ambitious' climate change deal to ensure food security

Date: 17th October, 2015 Source: The Guardian

Secretary of state says global warming biggest threat and calls on countries to be on the 'same page' as Milan Expo focuses on new approaches to sustainable food. Secretary of state John Kerry on Saturday urged global leaders to agree to an "ambitious" deal at a climate conference in Paris in December, saying global warming was the biggest threat to global food security.

"We need every country on the same page, pushing an ambitious, durable and inclusive agreement that will finally put us on the path toward a global clean-energy future," Kerry told an audience at the Milan Expo, where the focus is on "feeding the planet" and new approaches to sustainable food. Kerry said extreme weather patterns – with 19 of the 20 warmest years on record occurring in the past two decades – meant the world must act now, in a co-ordinated way.

A climate deal would boost the confidence of businesses to invest in low-carbon, clean energy alternatives, and "hopefully move the private sector to be one of the great agents of action in addressing the climate challenge", Kerry said. Kerry said the migrant crisis in Europe, caused by Syrians and Africans fleeing

conflict, would pale in comparison to the mass migration that intense drought, rising sea levels and other impacts of climate change were likely to bring.

Just before war erupted in Syria, the country had faced its worst drought on record, Kerry said, forcing as many as 1.5 million people from farms to cities and intensifying the political uprising against Syrian president Bashar al-Assad in 2011 that eventually led to the war.

“I’m not suggesting the crisis in Syria was caused by climate change … but the devastating drought made a bad situation a whole lot worse,” he said. The United Nations climate conference of is designed to reach a plan to cap steadily rising greenhouse gas emissions to avert a dramatic rise in extreme weather.

Earlier, Kerry held talks with his Italian counterpart in which they discussed Europe’s refugee crisis, violence in the Middle East and Russia’s role in Europe and the Syrian crisis.

New technology is keeping the air we breathe under an unprecedented level of scrutiny

Date: 18th October, 2015 Source: Los Angeles Times

Measure twice, cut once, they say. Unless you are trying to save the planet. In that case, measure and cut constantly. Rising calls to create cleaner air and limit climate change are driving a surge in new technology for measuring air emissions and other pollutants — a data revolution that is opening new windows into the micro-mechanics of environmental damage. The momentum for new monitoring tools is rooted in increasingly stringent regulations, including California's cap-and-trade program for greenhouse gas emissions, and newly tightened federal standards and programs to monitor drought and soil contamination. A variety of clean-tech companies have arisen to help industries meet the new requirements, but the new tools and data are also being created by academics, tinkerers and concerned citizens — just ask Volkswagen, whose deceptive efforts to skirt emissions-testing standards were discovered with the help of a small university lab in West Virginia.

Taking it all into account, the Earth is coming under an unprecedented new level of scrutiny. For more than a year, satellites launched by NASA's Jet Propulsion Laboratory have been orbiting Earth to track the global flow of carbon emissions. In Colorado, workers are using infrared cameras to find methane leaking from natural gas wells. In Boston, researchers using new measuring devices have detected "fugitive emissions" in hundreds of places across the city, including the Massachusetts State House.

Los Gatos Research in Silicon Valley now makes portable equipment for measuring greenhouse gases and other pollution that has been used on airplanes and in national forests. Piccaro, another California company, makes the machines that have been used to measure methane leaks in Boston and other cities. Other startups have created software that collects existing air quality data into apps that can advise asthmatics on areas to avoid and steer cyclists toward the least-polluted paths to work.

"There are a lot of companies picking up on this, but who is interested in the data — to me, that's also fascinating," said Colette Heald, an atmospheric chemist at the Massachusetts Institute of Technology. "We're in this moment of a huge growth in curiosity — of people trying to understand their environment. That coincides with the technology to do something more." The push is not limited to measuring air and emissions. Tools to sample soil, test seismic regions, monitor water quality, test ocean acidity and improve weather forecasting are all on the rise. Drought has prompted new efforts to map groundwater and stream

flows across the West. In space, NASA recently began a global precipitation measurement program intended, in part, to more accurately predict extreme weather events and the availability of water.

The Obama administration has rolled out a series of regulatory changes intended either to reduce pollutants in the air people breathe or limit greenhouse gases — and sometimes both. This month, the Environmental Protection Agency finalized new rules to reduce ozone and, for the first time, required so-called fenceline testing near oil refineries to track pollutants such as benzene that may be escaping — a task that requires sensitive monitoring equipment.

Industry groups often oppose new rules because complying costs money, but these rules can also drive technological development and new industries. While older emissions-monitoring devices may occupy the footprint of a living room, equipment is being developed that is portable and more sophisticated. "Fifteen years ago we were talking about percent — the percentage of a particular species in a gas," said Chris Anthony, who oversees analytical products for the ABB Group, which has expanded its investments in air and gas monitoring in recent years, including buying Los Gatos Research in 2013. "Five years ago, 10 years ago, we started talking about parts per million. In many areas now, we're measuring parts per billion, which is very, very low levels of trace gas in exhaust."

Chet Wayland, the director of the air quality assessment division within the EPA's office of air quality planning and standards, recalled a research conference the agency hosted a few years ago where he met a graduate student who showed him a hand-held, homemade device that measured air pollution. The parts appeared to cost about $50.

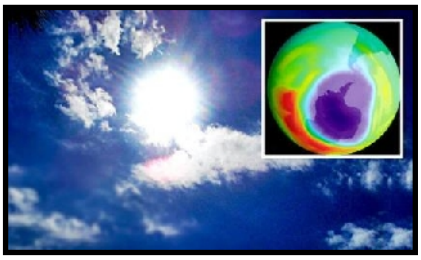
"It wasn't great but it was not bad," Wayland recalled. "I'm sitting there going, 'Oh, my gosh.' I'm used to working in the world where these devices are $30,000 and they're highly sophisticated, and here's somebody who built this in a lab basically by himself. That's when I realized that the world was changing." Wayland and one of his colleagues, Dan Costa, who works on air and climate issues in the EPA's Office of Research and Development, said that as more companies and individuals make affordable equipment, they need to demonstrate that their products are accurate and reliable.

"That's one of the key issues we at the EPA are trying to focus on," Wayland said. "When the technology is out there and everyone starts using it, the question is, how good is the data? If the data's not high enough quality, then we're not going to make regulatory decisions based on that." He added, "Where is this data going to reside in 10 years, when all these sensors are out there, and who's going to [manage] that information? Right now it's kind of organic so there's no centralized place where all of this information is going." Two years ago, Heald, the professor at MIT, helped lead a group of students who created a campus air quality monitoring network. They launched a website where people can track gases such as ozone and carbon monoxide.

But the site also includes a disclaimer, warning that the numbers were not necessarily "regulatory grade" measurements. Costa said the EPA's long-term vision is "this harmonization, a synthesis of the gold standard monitoring network [run by government] with the evolving sensor technology" used by citizen groups and individuals. Satellites are expected to play an increasing role in that goal. New equipment is being developed by NASA that will provide multiple daily readings of air pollutants from a geostationary satellite, and the agency's Orbiting Carbon Observatory, launched last year and run from the Jet Propulsion Laboratory at the California Institute of Technology, is intended to help scientists study how carbon travels.

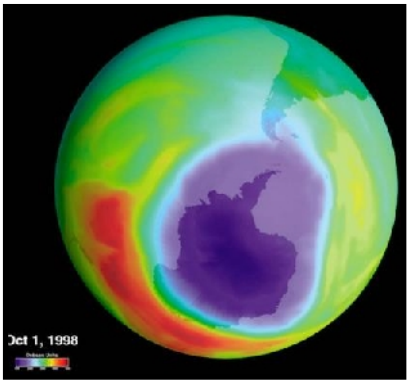
Ozone recovery shock: Nasa says hole in Ozone Layer should be 'half closed in 5 years'

Date:19th October, 2015 Source: Express



THE INFAMOUS hole in the ozone layer discovered around 40 years ago is repairing and should have half closed within five years, Nasa has sensationally claimed. Unveiling a new ozone layer monitoring system SAGE III, the US space agency said evidence shows it had been recovering for the past 18 years. Depletion of the ozone layer, which blocks out harmful UV radiation rays from the sun, was one of the great environmental scandals of the 1970s, when the hole first came to light, and more so 1980s when it was flagged as an international crisis, and led to bans on the use of chlorofluorocarbons (CFCs) in aerosols and fridges.Earth's stratospheric ozone layer is a belt of naturally occurring ozone gas that sits 10 to 30 miles above Earth and serves as a shield from the harmful ultraviolet radiation emitted by the sun, which can cause skin cancer and cataracts, and damage crops and marine plant life. In 1987 most countries signed up to the Montreal Protocol to protect the ozone layer by limiting the use of or banning certain chemicals.

Use of chlorine, one of the main contributors to ozone depletion, continued to peak, until 1997, and Nasa's Stratospheric Aerosol and Gas Experiment (SAGE) and SAGE II studies showed that since this dropped off, the ozone has begun to recover.



Now a SAGE III instrument, an updated version of 1990s technology, is being placed on the International Space Station (ISS) to continued monitoring the ozone to ensure it keeps repairing. Researchers have found that even a 1% change in ozone layer can lead to a 4% increase in skin cancer. In a Nasa interview about SAGE III posted online, Joe Zawodny, Nasa project scientist at the Langley Research Center, in Hampton, Virginia, USA, said: "with SAGE III, we're gonna be coming on here in the 2016 time frame through 2020, and the expectation for models is that we'll be in a period of recovery. "We should have recovered roughly half of the ozone that we lost from 1980 to 1997. "So that's why we're doing this mission is to figure out what the pattern of recovery is, whether the models are showing the same pattern of recovery.

"If they're not, what subtle things are they getting wrong in their model that will help improve their ability to predict future changes? Mr Zawodny said: "Human activity on the planet has gotten to the scale where we're impacting our environment, whether it's deforestation in the Amazon, pollution in local rivers, or pumping things into the atmosphere. We need to keep track. It's our responsibility to keep track of the effects of those impacts." But more needs to be done in developing countries to ensure the hole is fully closed, as they have lagged behind more developed nations in eradicating the gasses.

Fatima Mede, Permanent Secretary, of the Nigerian Federal Ministry of Environment, said: "Over 98 per cent of ozone depleting substances has been reduced by the Montreal Protocol and by scientific evidence. "The ozone layer is healing itself and expected to recover by the middle of this century. This has been achieved primarily by the prevention of large increases in ultraviolet in most parts of the globe." She said over 100 million cases of skin cancer will be avoided with the implementation of this protocol and many millions of extra cases of cataracts will be prevented by 2100 as well as positive improvements in agriculture. In Rwanda, the Environment Management Authority (REMA) is still working hard on phasing out HCFC (hydrochlorofluorocarbons) gases used in cooling equipment, which contain ozone-destroying chlorine. Collette Ruhamya, the deputy director-general of REMA, said: "By 2020, the importation of the gases that are used in appliances like refrigerators and air conditioners will be prohibited, and this started by reducing import of ozone-depleting refrigeration gas in the country."

Illegal importation of the cheaper gases, however continues. At least 67.80 tonnes of the gas was imported in 2012, and it rose to 75.8 tonnes in 2013. Meanwhile, in Cuba, experts have started developing a plant based on Japanese technology to deal with the destruction of substances that cause ozone layer depletion. There 2,500,000 refrigerators and almost 300,000 air conditioners are set to be destroyed.

Rich Nations Failing to Do 'Fair Share' to Fight Climate Change

Date: 19th October, 2015 Source: Ecowatch

Friends of the Earth International warned today that rich countries—those most responsible for climate change—are putting us on course for irreversible and more devastating climate change, instead of taking the urgently needed radical action to reduce their carbon emissions.

The warning was issued as governments from around the world start a week-long gathering at the UN climate talks in Bonn to negotiate, for the first time, the text of a new global climate treaty to be agreed in Paris in December. "Emission cut pledges made by rich countries so far are less than half of what we need to avoid runaway climate change," said Susann Scherbarth, climate justice and energy campaigner at Friends of the Earth Europe. "The draft Paris agreement on the negotiating table this week shows that many seem ready to accept irreversible and devastating consequences for people and the planet.

"This draft would even dismantle several key principles of the UN climate convention, such as equity. This is simply unacceptable. Richer countries must do their fair share. The new treaty must protect poorer countries and people, not let richer countries off the hook."

"Politicians are on track to fail us at their summit in Paris," said Dipti Bhatnagar, Friends of the Earth International's climate justice coordinator. "Many politicians, under pressure from transnational corporate polluters profiting from fossil fuels and dirty energy, are promoting coal, fracking and nuclear at the UN and nationally. Instead, they should commit to drastic emission cuts and a transformation of our energy system." Hundreds of thousands of people are paying with their lives for our governments' continued inaction. But the real leaders, the people, are taking action and showing the way with real solutions, such as community controlled renewable energy.

Thousands of people from all over the world, including Friends of the Earth supporters, plan to go to Paris to make their voices heard during the United Nations climate summit and to mobilize further in 2016 and beyond. "Our governments must stop dirty energy and urgently follow the real leaders—the people, not the polluters. More and more people are supporting the real solutions, resisting fossil fuel extraction and leading us towards climate-safe societies," said Bhatnagar.

Climate justice organizations, social movements, faith groups, trade unions, environmental and development organizations released a new report today: Fair Shares: A Civil Society Equity Review of INDCs. The report shows that many developing countries are pledging to do more than their "fair share" to cut emissions while rich countries are dangerously failing to pull their weight. The report is based on the information governments have submitted to the UN about their Intended Nationally Determined Contributions (INDCs), which outline by how much they pledge to cut their emissions. The report argues that while "equity" is a core principle in the UN process to find a global deal, countries have so far been allowed to determine their own targets on a purely national basis without reference to the scale of the global effort needed. In the report, the fair share that each country should have in tackling climate change is measured based on their level of responsibility in causing the crisis as well as their capacity to tackle climate change at this moment in time.

Film a Day of Climate Action Nov. 29

Date:19th October, 2015 Source: Ecowatch

Connect4Climate, the global partnership program of the World Bank Group, the online platform Vimeo and partners have joined forces to challenge citizens around the world to film Climate Action on one day, Nov. 29. Dedicated to driving climate action around the world, the 24-hour Film a #Day4Climate Action challenge asks aspiring filmmakers and citizens worldwide to document climate actions, solutions and conversations happening on a day dedicated to global climate mobilization. On Nov. 29, a day before the UN Framework Convention on Climate Change (UNFCCC) COP21 meeting starts in Paris with a gathering of global leaders, citizens all around the world will get out and call for an ambitious outcome in Paris. The 21st Conference of the Parties of the UNFCCC is expected to adopt a binding agreement on the long-term reduction of greenhouse gas emissions.

As part of Connect4Climate's Film4Climate Initiative, Film a #Day4Climate Action invites people globally to share their story from Nov. 29 on what we should do to prevent dangerous climate change and save our planet. The stories all need to be filmed and edited down to no more than three minutes in 24 hour and submitted on the Vimeo's group channel: Film a #Day4Climate Action—November 29, by the next day. Submitted video messages will be featured during the Youth Day at COP21 and at events across the city. The videos will also be brought together in a documentary telling the story of how citizens around the world showed their support for climate action. A highly celebrated editor and filmmaker will lead this effort and the outcome will be then launched at the World Bank Group in 2016.

"Telling stories in a way which allows others to experience a world, which they never would have otherwise seen, changes people," said Lucia Grenna, program manager at Connect4Climate. "It has the power to change their perspectives, opinions and hearts. This is why film is such a powerful tool to encourage climate action." Why Now?- Just one day before the crucial climate negotiations in Paris begin, coinciding with the Global Climate March—a decisive call for bold actions on climate change—this challenge represents an opportunity for people to come together through the power of video and share their messages, pledges and solutions for climate change. Everyone, everywhere, united to build a resilient clean future!

Connect4Climate aims to raise global awareness about climate change in line with the World Bank's mission to end extreme poverty within a generation and boost shared prosperity. As World Bank Group President Jim Yong Kim said, "We will never end poverty if we don't tackle climate change.

New 'Plume Air' app helps Londoners dodge pollution

Date:19th October, 2015 Source: RT

A new pollution-forecasting app which tells its users when to stay indoors to avoid inhaling toxic fumes has been downloaded by over 3,000 Londoners. The Plume Air Report app, which is designed to make people "breathe better," was first launched in France to beat high pollution levels. However, it is now available in over 150 cities including London and New York. It uses hourly data from sensors around London to monitor levels of nitrogen dioxide and carbon monoxide. This helps to forecast accurate air quality levels throughout the day.

The forecasting app ranks air quality levels from "fresh" to "extreme pollution" and alerts users who are at high risk of inhaling toxic fumes with a red warning. Additional tailored advice is also offered to cyclists, runners, parents and those planning to eat outdoors. The app's founder Romain Lancombe said the Plume Air Report will reduce the impact pollution has on its users' health. "What we've built is digital tools to help people breathe better, by informing them on what it is that they're breathing," Lancombe said during a speech at Google. "This means that we can put a pollution forecast in the hands of everyone. "So you know if the air is fresh, if it's moderately polluted or if it's highly polluted in order to avoid the higher pollution peaks and when to go running for example.

"If you follow these recommendations you will be able to reduce the overall impact of pollution on your health. "Our goal is to help you breathe better by bringing you information on how to avoid pollution." According to a King's College London study, 9,400 people die every year in London due to long-term exposure to air pollution. In 2014, the capital's Mayor Boris Johnson came under criticism after further research showed Oxford Street had the worst nitrogen dioxide levels in the world because of its high concentration of diesel buses. Speaking at the CityLab 2015 Summit on Monday, the Deputy Mayor for Transport Isabel Dedring said: "Everybody should get a lot more exercised about air pollution than they do, because it does have very obvious and immediate health impacts. "We did a study showing 4,300 people in London are dying prematurely because of air pollution. "Now the level is probably three times higher than that because of other materials we hadn't taken into account."

Dalai Lama: Climate Change Is Destroying Tibet's 'Roof of the World'

Date: 20th October, 2015 Source: Ecowatch

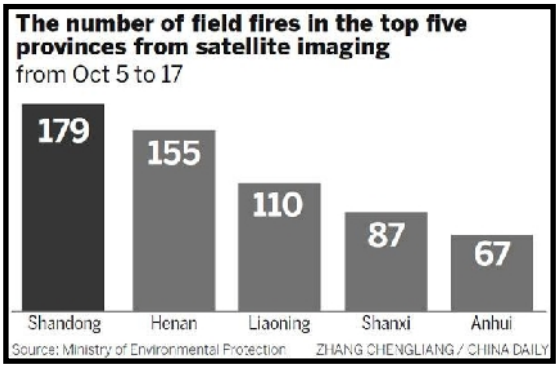
The Dalai Lama urged strong climate action today "to limit global warming and to protect fragile environments, including the Himalayan glaciers and Tibetan plateau," reports the AP. As world leaders prepare to meet in Paris for the COP21 UN Climate Change Summit, the Dalai Lama created a video message for the world.

"This is not a question of one nation or two nations. This is a question of humanity. Our world is our home," the Dalai Lama told AP. "There's no other planet where we may move or shift." "Temperatures for Tibet's high-altitude plateau—referred to as the Roof of the World—are rising about three times faster than the global average, and are 1.3 degrees Celsius higher than they were 50 years ago," reports AP. The Tibetan plateau is also referred to as the Third Pole because it has the largest store of ice outside of the North and South poles, according to Reuters. The importance of the Tibetan plateau cannot be understated, "with some 40 percent of the world's freshwater locked into the frozen Himalayan glaciers and feeding seven major rivers that run through China, Nepal, India, Pakistan and Bangladesh," says AP. The Dalai Lama told Reuters that "two-thirds of the glaciers in their mountain homeland may disappear by 2050."

Furthermore, "Up to 70 percent of the plateau is covered in permafrost, with large reserves of both carbon dioxide and methane trapped within the ice," says AP. If that permafrost melts, the trapped carbon dioxide and methane—which is 25 times more potent than carbon dioxide—could drastically increase greenhouse gas emissions. The Tibetan government estimates 12,300 million tons of carbon dioxide alone could be released if the permafrost thaws. The Tibetan spiritual leader also took the opportunity to plea for a "say in the talks," according to the AP. The exiled government will send its own delegates to the Paris talks, but it will not have a vote because it is not recognized as an independent nation. Just as Pope Francis has ramped up his calls to address climate change—especially during his visit to the U.S. last month—the Dalai Lama has also become an outspoken advocate for climate action. In June, the Dalai Lama endorsed the Pope's encyclical on climate change.

Farmland hot spots increase air pollution

Date: 20th October, 2015 Source: China Daily

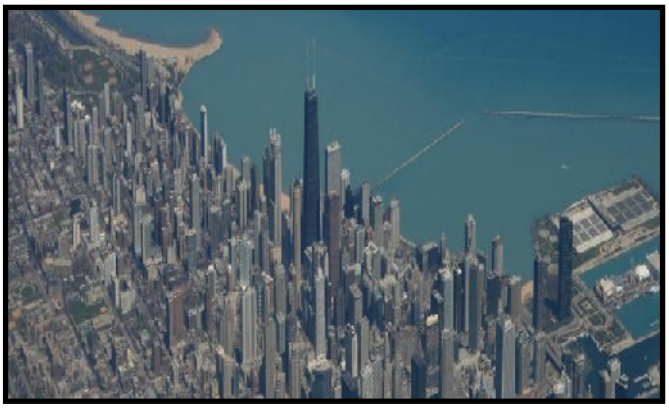


A rise in clearing farmland by burning leftover straw has increased air pollution in parts of northeastern China, the environmental watchdog has warned. The Ministry of Environmental Protection found 862 suspected hot spots nationwide from Oct 5-17 from satellite sensing technology, an annual increase of 6.7 percent, authorities said on Sunday. The fires have been a major reason for rising air pollution in northeastern China, with the environmental watchdog pointing out that many hot spots were found in areas where burning farmland fields is illegal such as near airports and expressways. "Among the 324 suspected spots exposed last week, 31 percent of them were found in Liaoning province," said Wang Dongqing, deputy head of the ministry's environmental monitoring department.

Apart from satellite evidence, ground inspections showed an increase in farmland fires on the outskirts of Shenyang and Tieling in Liaoning province on Friday and Saturday, the ministry reported. "October is the main month for clearing farmland by burning fields in provinces of Liaoning, Jilin and Heilongjiang, which has a negative effect on air quality," Wang said. The three provinces accounted for 63.2 percent of the country's farmland hot spots between Sept 20 to Nov 20 last year. This in turn pushed Shenyang, the capital of Liaoning province, into the top 10 of cities suffering severe air pollution. Using limited amounts of straw for domestic heating is not an option with cheap coal prices, so farmers simply burn it, Sun Baoya, head of the agricultural environmental protection department of Shenyang, told Central China Television on Monday. The three provinces have also failed to come up with a collection process to ease the problem, Wang at the Ministry of Environmental Protection said.

Long-banned chemicals still in paint, contaminating Chicago's air

Date: 21st October, 2015 Source: Environmental Health News



Hundreds of pounds of toxic PCBs, banned in the '70s, taint Chicago's air each year; sources include paints still sold on the market.More than 400 pounds of toxic PCBs are emitted to Chicago's air each year and researchers warn that some of this load comes via a chemical reaction in paint still sold in hardware stores. New research designed to inventory the chemicals in Chicago finds soils, sewage sludge and paint are major sources and current cleanup strategies may not be the most effective for protecting people's health.

The chemicals were once widely used as electrical insulators and industrial lubricants but were banned in the late 1970s when researchers found them building up in people and linked them to health effects such as cancer, heart problems and impacts to brain development. PCBs, short for polychlorinated biphenyls, now seem to be a byproduct of certain pigment production. In recent years researchers have found that some paints, clothing, newspapers and magazines contain forms of the chemicals, usually a specific compound

called PCB-11. “Architectural paint that we buy at hardware stores contributes to a significant amount of PCBs people are exposed to every day. That’s just crazy,” said Keri Hornbuckle, a professor at the University of Iowa’s department of civil and environmental engineering, who previously foundmore than 50 PCB compounds in 33 commercial paint pigments purchased from U.S. stores. PCBs build up in the fat tissues of fish and some animals and eating such foods has long been considered the major exposure route for humans. But there is increasing evidence that inhaling airborne PCBs also plays a role in people’s toxic load and such exposures—small as they are—can result in disease.

“PCBs are dangerous chemicals … even low concentrations of PCBs in air constitute an important route of exposure and disease, especially if the exposure is prolonged,” wrote Dr. David Carpenter, director of the Institute for Health and the Environment at the University at Albany-SUNY, in a report this year on airborne PCBs. In the first comprehensive inventory of PCBs for a city, Hornbuckle and colleagues examined where the chemicals are and where airborne emissions come from in Chicago.
Paints—both on the exterior and interior of buildings—were just a sliver of the city’s PCBs load, but contributed 7 percent of total emissions. They calculated paint emissions by looking at the annual volume of paint sold in the city estimated to have PCB-containing pigments, and past studies of how the chemicals are emitted from paint. Some of the larger emissions sources were drying sewage sludge and contaminated soils. City soils—which accounted for 31 percent of emissions—did not include Superfund sites or other areas know to be contaminated, said co-author Scott Spak, an assistant professor of urban and regional planning and engineering at the University of Iowa.

“These are soils across the city—parks, backyards, highway medians,” Spak said. “This makes cleaning up urban soils across cities one of the harder sources to mitigate,” he said. While all PCBs can escape from soils, PCB-11 is one of the most volatile forms of the chemical, the authors warn, saying it may be emitted to air within hours to days of applying the paint. Sixty percent of 85 women from East Chicago, Indiana, and Columbus Junction, Iowa, had traces of PCB-11 in their blood, according to a 2013 study from Hornbuckle and colleagues. Steve Sides—vice president of the American Coatings Association, which represents paint manufacturers—said in an email that they are aware of studies finding low levels of contaminants in paint materials but had “nothing to add” in regards to the Chicago study.

PCBs as a byproduct of pigment manufacturing remain exempt from the Toxic Control Substances Act, the federal law regulating chemicals because the amounts aren’t large enough to be significant. The U.S. Environmental Protection Agency, which enforces chemical regulation, has requested that federal scientists from the National Toxicology Program investigate PCB-11’s potential to harm people, said EPA spokeswoman Cathy Milbourn in an email.

In addition, there are limits on the concentrations of such “inadvertently generated PCBs”, Milbourn said. “Specifically an annual average of no more than 25 [parts per million] and a 50 [parts per million] maximum” in products manufactured or imported into the United States, she said. Hornbuckle and Spak argue that, while the concentrations of PCBs in paint may be small, the EPA should consider that the chemicals are easily released into air. EHN welcomes republication of our stories, but we require that publications include the author's name and Environmental Health News at the top of the piece, along with a link back to EHN's version.

Brown cloud over Lanier causes concern for some

Date:22nd October, 2015 Source: Gainesvilletimes

Prescribed burn, fossil fuel emissions are possible causes- A mysterious brown cloud over northeast Gainesville on Wednesday afternoon and Thursday morning interrupted otherwise bluebird skies. John O’Sullivan, a professor in the University of North Georgia’s Institute for Environmental & Spatial Analysis,

spotted the cloud and snapped photos of it hovering above parts of Lake Lanier. “It appeared to be almost sitting still,” he said. There were additional sightings along Browns Bridge Road on Thursday.

O’Sullivan said it resembled an atmospheric brown cloud, though he couldn’t be sure.

According to Encyclopedia Britannica, an atmospheric brown cloud is “a layer of pollution containing aerosols such as soot or dust that absorb as well as scatter incoming solar radiation, leading to regional and global climatic effects and posing risks to human health and food security.” These sources of air pollution are caused by fossil fuel emissions and have grown along with industrial development around the world. They can cause cardiovascular and respiratory problems.

Other causes for the cloud include fires in the area. “If we can't find the source, it's sort of like a UFO reporting,” O’Sullivan said. A prescribed burn was held Wednesday off Glade Farm Road in North Hall. Additionally, online U.S. Forest Service maps showed several fires on the northeastern end of Lake Lanier between Wednesday and Thursday.

Recent wildfires in northern Alabama showed up on satellite images this week, and the smoke could have drifted east.“This could be particulate matter or nitrogen dioxides from those, combined with the fact that we have not had rain in a while to wash out pollutants from our regional traffic and power plant/factory emissions,” said Jamie Mitchem, also a professor in the UNG Institute for Environmental & Spatial Analysis. “In addition, even large swarms of bugs can look like brown clouds, but they usually move around.” Mitchem said he could not conclusively identify the source.

“Based on the shadows, the sun appears to be shining in the direction of the cloud so the color does not appear to be merely a shadow, but more likely a cloud of moisture mixed with some air pollution,” Mitchem said. The state Department of Natural Resources Air Quality Index showed rising levels of air pollution

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Exxon Sowed Doubt About Climate Science for Decades by Stressing Uncertainty

Date: 22nd October, 2015 Source: Inside Climate News

Collaborating with the Bush-Cheney White House, Exxon turned ordinary scientific uncertainties into weapons of mass confusion. As he wrapped up nine years as the federal government's chief scientist for global warming research, Michael MacCracken lashed out at ExxonMobil for opposing the advance of climate science. His own great-grandfather, he told the Exxon board, had been John D. Rockefeller's legal counsel a century earlier. "What I rather imagine he would say is that you are on the wrong side of history, and you need to find a way to change your position," he wrote. Addressed to chairman Lee Raymond on the letterhead of the United States Global Change Research Program, his September 2002 letter was not just forceful, but unusually personal.

No wonder: in the opening days of the oil-friendly Bush-Cheney administration, Exxon's chief lobbyist had written the new head of the White House environmental council demanding that MacCracken be fired for "political and scientific bias." Exxon was also attacking other officials in the U.S. government and at the

UN's Intergovernmental Panel on Climate Change (IPCC), MacCracken wrote, interfering with their work behind the scenes and distorting it in public.

Exxon wanted scientists who disputed the mainstream science on climate change to oversee Washington's work with the IPCC, the authoritative body that defines the scientific consensus on global warming, documents written by an Exxon lobbyist and one of its scientists show. The company persuaded the White House to block the reappointment of the IPCC chairman, a World Bank scientist. Exxon's top climate researcher, Brian Flannery, was pushing the White House for a wholesale revision of federal climate science. The company wanted a new strategy to focus on the uncertainties.

"To call ExxonMobil's position out of the mainstream is thus a gross understatement," MacCracken wrote. "To be in opposition to the key scientific findings is rather appalling for such an established and scientific organization." MacCracken had a long history of collaboration with Exxon researchers. He knew that during the 1970s and 1980s, well before the general public understood the risks of global warming, the company's researchers had worked at the cutting edge of climate change science. He had edited and even co-authored some of their reports. So he found it galling that Exxon was now leading a concerted effort to sow confusion about fossil fuels, carbon dioxide and the greenhouse effect.

Exxon had turned a colleague into its enemy. It was a vivid example of Exxon's undermining of mainstream science and embrace of denial and misinformation, which became most pronounced after President George W. Bush took office. The campaign climaxed when Bush pulled out of the Kyoto Protocol in 2001. Taking the U.S. out of the international climate change treaty was Exxon's key goal, and the reason for its persistent emphasis on the uncertainty of climate science. This in-depth series by InsideClimate News has explored Exxon's early engagement with climate research more than 35 years ago – and its subsequent use of scientific uncertainty as a shield against forceful action on global warming. The series is based on Exxon documents, interviews, and other evidence from an eight-month investigation. "What happened was an incredible disconnect in people trained in physical science and engineering," recalled Martin Hoffert, a New York University professor who collaborated with Exxon's team as its early computer modeling confirmed the emerging scientific consensus on global warming. "It's an untold story of how we got to the point where climate change has become a threat to the world."

The Uncertainty Agenda- As the Bush-Cheney administration arrived in the White House in 2001, ExxonMobil (NYSE: XOM) now had partners for a climate uncertainty strategy. Just weeks after Bush was sworn in, Exxon's top lobbyist Randy Randol sent the White House a memo complaining that "Clinton/Gore carry-overs with aggressive agendas" were still playing a role at the IPCC as it prepared its next assessment of the climate science consensus. MacCracken and three colleagues should be replaced, or at least kept out of "any decisional activities," he wrote. Meanwhile, U.S. input to the IPCC should be delayed. Further, two scientists highly critical of the prevailing consensus should be enlisted: John Christy of the University of Alabama should take the science lead and Richard Lindzen of MIT should review U.S. submissions to the IPCC. Exxon had been circulating a proposal to fundamentally overhaul MacCracken's global change research program, by emphasizing the uncertainties of climate science.

The timing was not coincidental because the administration, as required by law, was about to lay out a new federal climate research strategy. Exxon and its allies wanted the work done during the Clinton-Gore years to be marginalized. In March 2002, Flannery, Exxon's science strategy and programs manager, contacted John H. Marburger, the president's incoming assistant for science and technology, to pitch the company's favored approach of emphasizing the uncertainty. Earlier discussions, he asserted, "have not sought to place the uncertainty in the context of why it is important to public policy." Exxon's position paper, attached to his letter, took a dig at the work of the IPCC. "A major frustration to many is the all-too-apparent bias of IPCC to downplay the significance of scientific uncertainty and gaps," the memo said.

Devil in the diesel? London struggles to meet air quality limits

Date: 22nd October, 2015 Source: Yahoo News

London (AFP) - Eddie Connor, a 41-year-old actor who has lived in London all his life and who suffers from a severe form of asthma, recognises the signs all too well. "I start coughing or I feel my breathing getting shallower. It's like putting a piece of cling-film over my face," said Connor, who blames air pollution and particularly diesel fumes in the British capital for triggering his symptoms. Pockets of central London rank among the most polluted in Europe and the city's emissions exceed European Union norms, although on average it ranks relatively well compared to other EU capitals such as Amsterdam and Paris. Up to 9,416 people are estimated to have died in London as a result of long-term exposure to pollution in 2010, according to a study by King's College London (KCL) published in July, a fifth of all deaths that year.

The research showed for the first time the health impacts of two pollutants found in exhaust fumes from diesel vehicles -- nitrogen dioxide (NO2) and fine particulate matter (or PM2.5) -- and showed that the problem was far greater than previously thought.

"You could take very dramatic steps immediately," James Thornton, a former environmental lawyer and chief executive of ClientEarth, which brought and won a case against the UK government this year over failure to comply with EU limits, told AFP. "This is not rocket science -- you need to have Ultra Low Emission Zones, you need to ban the worst diesels, you need to take steps on traffic management." Billions in costs -Diesels now account for a majority of UK new car sales, a result of their reputation for being cheaper and more environmentally-friendly than petrol alternatives along with years of favourable government policy aimed at cutting carbon emissions. But recent evidence shows that the particulates in diesel emissions can cause a variety of health problems due to their ability to penetrate deep into the lungs and cross into the bloodstream.

The cost to London's economy of these health impacts ranges up to £3.7 billion (5.0 billion euros, $5.7 billion) yearly, the KCL study showed. According to World Bank data, London ranked 2,516th out of 3,226 world cities with a population of more than 100,000 in a ranking that put the most polluted cities at the top. Amsterdam and Paris scored slightly worse than London, although parts of the city centre such as Oxford Street -- often clogged with buses and taxis -- have recorded alarmingly high spikes in pollutants that are among the highest in Europe. Gary Fuller, an air pollution scientist at KCL, said the problem of inadequate vehicle emissions testing exposed by the recent Volkswagen cheating scandal may be a factor in the high levels of NO2 in London. "For a long time now -- we've been pointing this out since 2003 -- air pollution in London hasn't been going down as fast as it should be," Fuller told AFP.

- 'Jump in awareness'- A draft government air quality plan last month admitted that the combined impact of NO2 and particulates "represents a significant public health challenge" but said EU limits for NO2 in London would not be reached until 2025 at the earliest. It blamed the "the size and complexity" of the capital's transport networks and suggested the introduction of more electric cars and the use of more low-emission technologies as the way forward. The proposals follow a ruling by Britain's Supreme Court in April which declared NO2 levels in the UK illegal and ordered the government to act. London's City Hall says that the mayor's plans to tackle air pollution "will ensure that 80 percent of central London meets EU legal limits for NO2 by 2020". But some people cannot wait that long. Former British science minister Paul

Drayson, who himself suffers from asthma, last month launched a pollution monitoring app called CleanSpace designed to create a crowd-sourced network which will allow users to plan cleaner routes of travel. Drayson said he hoped the technology would lead to "a major jump in awareness and action on air quality"."People lack access to useful, actionable information about the air quality where they are and what they can do to reduce their exposure," he said.

Emissions scandal shows EU failings, but reform elusive

Date: 23rd October, 2015 Source: DW

The Volkswagen scandal has exposed the fact that EU rules on car emissions are not being enforced and that test procedures don't reflect reality. Next week will see changes to that system - but not substantial ones. Elsbieta Bienkowska did not mince words when reacting to the revelations that Volkswagen had manipulated emissions. "Our message is clear: zero tolerance on fraud and rigorous compliance with EU rules," said Bienkowska, the EU's industry commissioner. The words came in the wake of "dieselgate," in which the US Environmental Protection Agency exposed that German carmaker Volkswagen had used software to manipulate emissions readings of diesel cars to meet EPA regulations.

Volkswagen later admitted to having used the software in 11 million sold all over the world. But environmental activists paint a picture that shows not-so-rigorous compliance with EU legislation on car emissions - and a lot of tolerance for that. Rules that are not followed- EU legislation on the subject dates back several years, to 2007. It states the importance of reducing vehicle emissions to achieve such air-quality objectives as "reducing harmful effects on human health."

There were 430,000 premature deaths in EU member states in 2011 because of bad air, according to the European Environment Agency. The 2007 emissions regulation prohibits "the use of defeat devices that reduce the effectiveness of emission control systems" and mandates that by 2009 EU member states introduce penalties to impose on manufacturers who flout the law.

So far, not a single member state has introduced such penalties. Nor have there been any investigations into defeat devices - though a 2013 report by the European Commission's Joint Research Center was only one example detailing the possibility that such devices could exist and be used to activate emissions control systems. "Years have passed, but the European Commission hasn't taken any action," says Axel Friedrich, who used to head up a department at Germany's Federal Environment Agency and now works as a consultant. He says the Commission has shown itself capable of taking action to ensure compliance with its regulations and directives in other matters - for instance, by taking member states to the European Court of Justice or opening infringement procedures for air pollution.

Earlier this month Gerben-Jan Gerbrandy, a Dutch member of the European Parliament's liberal bloc, also asked why no investigations and infringement procedures had been launched with regard to violations of emission limits. Representatives say, though, that the Commission established a working group to develop a new procedure to reflect emissions on the road rather than tests done under lab conditions back in 2011. Powerful automotive lobby Friedrich says there is a simple explanation of why the Commission has not been more active in enforcing the regulations: Relations between the car industry and politics are too close - both in Germany and in Brussels.

According to the Corporate Europe Observatory, a campaign group that aims to expose the influence by corporations and lobby groups on EU policymaking, the car lobby is one of the most powerful in Brussels, spending about 18 million euros in 2014 to influence climate, energy, trade and transport policy.

Aside from the question of political will, there is that of political power. The European Union has no equivalent of the EPA. In order to sell cars in the United States, manufacturers must demonstrate compliance with the Clean Air Act and EPA regulations; in Europem, manufacturers can choose a member state in which to seek certification.

"We have 28 European agencies for certification," Friedrich says. "They compete with each other. And if one manufacturer has problems getting a car certified, he just takes it to another country." Once a car type has been approved by one EU member state, that decision applies to the other 27 countries. Yet, Friedrich says, creating a European agency to control compliance with emission regulations is not the way to go.

"I think there should be control of the national authorities instead," he says, arguing that car emissions are an environmental problem that responsible national agencies should be in charge of. In the case of Germany, certification is in the hands of the Federal Motor Transport Authority. Friedrich's former employer, on the other hand, the Federal Environment Authority, "only has the power to admonish politicians:

It can't recall cars." Commission to introduce new test proceduresThough changes to national certification procedures do not appear imminent, the European Commission is in the process of overhauling test procedures. Following years of consultations, the Commission is set to come forth on October 26 with a new regulation introducing a "real driving emission" test that better reflects normal conditions of use than lab procedures do.The new test procedures, to be implemented in January, will involve a device to measure emissions attached to the rear of the car. In the initial phase, these new devices will only be used for monitoring purposes; they measure will not have an impact on certification. Also, emission limits will be raised for this transition period, meaning that instead of the 80 milligrams of nitrogen oxides allowed to be emitted per kilometer (0.13 grams per mile) under the Euro 6 norm, cars will be allowed to emit more.

How long that first phase will last and by what factor emission limits will be raised is still being debated. Friedrich calls the new test a step in the right direction - but only a very small step. "Why do road tests and lab tests when you know lab tests won't show you real-life emissions?" he asks. The only way to get test results that reflect reality is to test randomly, he says, like the EPA does in the United States. However the European Union improves test procedures in the near future, enforcing emission limits appears likely to remain a sore spot for some time to come.

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3 Biggest Fossil Fuel Consumers Fall ‘Far Short of Fair’ to Contain Global Warming

Date: 24th October, 2015 Source: Eco Watch

Pledges by the three titans of greenhouse gas emission—Europe, the U.S. and China, which are the three biggest fossil fuel consumers—fall “far short of fair” and may not be nearly enough to contain global warming, according to new research. In the complex game of power politics, development economics, environmental campaigning, climate science and greenhouse gas accounting that will

characterize the forthcoming UN climate summit in Paris, COP21, in December, the most important components so far are the declarations of intent made by the most developed nations. The U.S. has announced plans to reduce emissions by 28 percent by 2025 and 83 percent by 2050. The EU is aiming for 40 percent by 2030 and 80 percent by 2050. China has said its emissions will "peak" by 2025 and then start declining, and it aims to improve energy efficiency by 60 to 65 percent. The question then is: does this set the world on course to contain global warming to 2°C? Harsh Demands- The answer is probably "no," say Glen Peters, senior research fellow at the Centre for International Climate and Environmental Research in Oslo, Susan Solomon, professor of atmospheric chemistry and climate science at the Massachusetts Institute of Technology, and Pierre Friedlingstein, chair in mathematical modeling of climate systems at the University of Exeter, UK.

They have been looking at the sums, and they report in Environmental Research Letters that the promises of the big three translate into harsh demands for the rest of the world. If the 2°C target is to be met, the remainder of the world would have to commit to per capita carbon dioxide emissions somewhere between seven and 14 times lower than the EU, U.S. or China by 2030. Carbon accounting—the calculations that involve how much carbon dioxide can safely be emitted before temperatures rise to dangerous levels—is notoriously difficult, and under continuous revision. But one working estimate right now is that the world can burn coal, oil and natural gas at a level that will have dumped 3.7 trillion tonnes of carbon dioxide in the atmosphere before the global average temperatures notch up 2°C above the levels before the Industrial Revolution. Since humans have been burning fossil fuels at increasing rates for the last 200 years, that leaves just 1 trillion tonnes—about 30 years' worth at the current levels—before the planetary thermometer rises to the danger level. The study puts it bluntly: when combined, the European, U.S. and Chinese pledges don't leave much room for other countries to burn fossil fuels to power their economies. If any agreement in Paris is to be "globally inclusive and effective in the long term", then by implication the rich nations will have to do a lot more than they have pledged to do. Struggling to Develop- "The challenge of the problem is that we have about 7 billion people on the planet, and about 1 billion of us live pretty well," Professor Solomon says. "The other 6 billion are struggling to develop, and if they develop using carbon, as we did, the planet is going to get quite hot. And hot is, of course, just the beginning of the story in terms of what climate change actually means." The scientists calculate that, even if the EU, China and the U.S. fulfill their pledges, it commits the planet to a warming of at least 3°C. Even a rise of 2°C would represent a huge change—resulting in sea level rise, a greater frequency of extremes of temperature and dramatic shifts of climatic conditions. In 2003, an unprecedented heatwave in Europe caused at least 10,000 deaths, with some estimating many times more than that figure. "That summer was about 2°C hotter than an average European summer," Professor Solomon says. "By 2050, every summer in Europe will probably be 2°C hotter than average, if we keep going the way we're going right now. Three degrees, in my opinion, is a really frightening change."

Ozone Depletion by Refrigerators, Automobile ACs Small but Measurable: Nasa Study

Date:24th October, 2015 Source: GadGets360

A class of chemical coolants used in refrigerators and in home and automobile air conditioners contributes to ozone depletion by a small but measurable amount, says a new Nasa study. The ozone layer comprises a belt of ozone molecules located primarily in the lower stratosphere. It is responsible for absorbing most of the sun's harmful ultraviolet radiation before it reaches Earth's surface. The researchers estimated that the common chemical coolants known as hydrofluorocarbons (HFCs) will cause a 0.035 percent decrease in ozone by 2050.

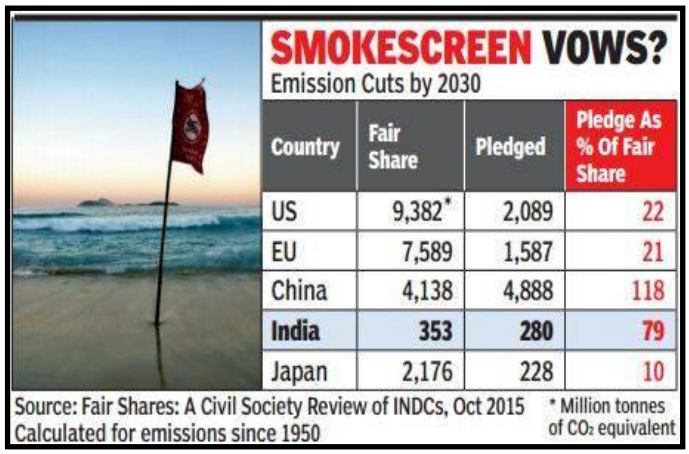
"We are not suggesting HFCs are an existential threat to the ozone layer or to ozone hole recovery, but the impact is not zero as has been claimed," said lead study author Margaret Hurwitz, atmospheric scientist at Nasa's Goddard Space Flight Centre in Greenbelt, Maryland. The study, which focused on the five types of HFCs expected to contribute the most to global warming in 2050, found that the gases indirectly contribute to ozone depletion. HFC emissions cause increased warming of the stratosphere, speeding up the chemical reactions that destroy ozone molecules, and they also decrease ozone levels in the tropics by accelerating the upward movement of ozone-poor air, the findings showed. HFCs have been adopted as replacements for chlorofluorocarbons (CFC) and hydrochlorofluorocarbons (HCFC) in refrigerators and in home and automobile air conditioners. CFCs were largely responsible for the ozone depletion first observed by scientists in the 1980s, most notably the ozone hole above Antarctica, which continues today. "HFCs are, in fact, weak ozone-depleting substances," Hurwitz noted. But the scientists also found that HFCs have a nearly linear impact on stratospheric temperature and ozone change. For example, reducing HFC emissions by 50 percent would decrease the ozone change by a comparable amount.

Such a direct relationship will prove useful for evaluating the impacts of emerging HFCs, Hurwitz said. "We can provide policy makers with an estimate of the stratospheric impacts of new HFC gases," Hurwitz noted. While HFCs are only weak ozone-depleting substances, they are, like CFCs and HCFCs, strong greenhouse gases. If production trends continue, projections show that, by 2050, the amount of global warming by all HFCs could be as large as 20 percent that of carbon dioxide, the study pointed out.

India promising more than rich bloc on emission cuts

Date:25th October, 2015 Source: The Economic Times

If you add up all the promises of carbon emission cuts made by different countries, the total is still not big enough to prevent global temperatures from crossing the red line of 2°C rise by the end of this century, according to two different analyses by scientists. Another report released by 16 major global NGOs finds that richer countries or blocs like the US and the European Union are promising cuts which are much below their accumulated shares of emissions. Developing countries like India and China are committing to much more in comparison.



Climate Action Tracker, one of the groups, which includes the Potsdam Institute for Climate Impact Research, says there is a 66 per cent probability that the temperatures may rise by 3°C. Climate Interactive, a US based non-profit, is predicting that temperature rise will be 3.5°C with current proposals. Scientists had earlier concluded that a 2°C rise will entail sea level rise up to 4 feet because of polar ice caps melting, increasing extreme events like typhoons, changes in rainfall patterns and loss of biodiversity.

Till now, all global negotiations, including the Kyoto Protocol, had kept the 2-degree-rise as their final target. In five weeks from now, 195 countries are going to meet at Paris to thrash out a climate change

agreement. To prepare for that the countries had been asked to submit their voluntary targets of carbon emissions .

As the recent preparatory talks in Bonn, Germany, showed, there is going to be much acrimony at the Paris meet. Two issues that are causing the biggest discord are responsibility and money. Greenhouse gases started rising dangerously in the earth's atmosphere with the Industrial Revolution in the West. It has been estimated that of the total excessive carbon in the atmosphere, just five countries or blocs are responsible for more than two-thirds: US, European Union, Russia, China and Japan.

This is when you count from 1850 onwards. Why is this relevant? Because the more carbon you add to the earth's atmosphere, the more temperatures will rise. Future increases are bound to happen because so much carbon has been pumped in the past. So, many argue that the chief emitters of the past have more responsibility than those like India who started contributing to emissions significantly only recently.

According to an analysis by a group of 16 civil society organizations, current promises of advanced countries are way below what they owe the world given their historical shares of emissions. The US emission cut plan is about a fifth of what their 'fair share' should be while that of the European Union is slightly more than a fifth of its share, the report released on Monday said. Japan is cutting emissions by only a tenth of what it should while Russia is not going in for any cuts at all.

The developing countries, including India and China, are broadly meeting their fair share of emission cuts, the civil society analysis points out. Another side of this problem — and another contentious issue at the climate talks — is money.

The rich countries who have used up the carbon space in the atmosphere need to compensate the emission cuts to be done elsewhere in other countries. This is necessary not only because of their historical responsibility but also because they own many of the technologies necessary to cut emissions.

A recent review by the IMF and World Bank found that the developed countries had no clear plans to give $100 billion they pledged in 2009 for helping emission cuts in the developing world. The rich block could come up with a plan for only $77 billion even though several banks were on board for lending.

Air pollution stunting children's lungs, study finds

Date: 25th October, 2015 Source: Telegraph

A six-year study finds children living in highly polluted parts of cities have up to 10 per cent less lung capacity than normal, with warnings the damage could be permanent

High levels of air pollution are stunting the growth of children’s lungs, a major study has found. Eight and nine-year-olds living in cities with high levels of fumes from diesel cars have up to 10 per cent les lung capacity than normal, the research suggests. Over six years, researchers examined the lung function of 2,400 children at 25 schools across east London, and found a direct correlation between air pollutant exposure and reduced lung growth. Such children have an increased risk of disease such as asthma and bronchitis and, and the prospect of a permanent reduction in lung capacity.

The tests checked the volume of air each child could breathe, as well as levels of inflammation in their lungs, with urine tests to check for heavy metals, which are produced by vehicles. Overall, those living in areas with high levels of particulates and nitrogen dioxide had up to 10 per cent reduced lung capacity the study led by Prof Chris Griffiths, principal investigator at the Medical Research Council and Asthma UK Centre in Allergic Mechanisms of Asthma. “The data shows that traffic pollution stops children’s lungs growing properly,” Ian Mudway, a respiratory toxicologist at King’s College London told the Sunday Times. “The evidence suggests that by 8-9 years old, children from the most polluted areas have 5 to 10 per cent less lung capacity and they may never get that back.” The study was designed to assess the impact of London’s Low Emission Zone (LEZ) which since 2008 has discouraged larger diesel vehicles such as lorries from entering the capital. The research found the measure had made no difference. “It is very disappointing that the LEZ, which was specifically designed as a major public health intervention, has so far brought about no change,” said Prof Griffiths. “This raises questions over the government’s current consultation on air quality, which is based around the idea of creating similar low emission zones in up to 30 other polluted urban areas. There appears to be no evidence that these low emission zones can reduce pollution or improve health.” Other studies have shown diesel pollutants causing lung inflammation, researchers said, with tests showing black carbon from diesel exhaust emissions inside children’s lung cells. Earlier this year research suggested that air pollution could increase the risk of brain damage and small strokes which are linked to dementia.

Singapore urges ASEAN to act on lethal haze

Date:25th October, 2015 Source: The Economic Times

SINGAPORE: Singapore today urged fellow ASEAN members to take "firm and decisive action" against the lethal haze still spreading across the region ahead of a group summit in Malaysia next month. The city-state, one of the most badly affected by recurring smog from land fires in Indonesia, issued the call after Singaporean troops and firefighters returned from an international assistance mission in Indonesia's Sumatra island. "ASEAN must take firm and decisive action, through enhanced regional cooperation, to help prevent the recurrence of this transboundary problem," Singapore's Ministry of Foreign Affairs (MFA) said in a statement. "Singapore will work closely with other ASEAN countries to fully operationalise the ASEAN Haze Monitoring System, and other cooperative initiatives," it said. The haze has killed at least 10 in Indonesia and caused respiratory illnesses in half a million, Jakarta authorities said, while winds have carried the smoke into Singapore, Malaysia, Thailand and the Philippines this year. In some instances this has forced the closure of schools, disrupted air traffic and restricted people indoors. Thai officials said the haze was the worst they had seen in a decade and called its continuing spread a "crisis". Leaders of the 10-member Association of Southeast Asian Nations (ASEAN) will hold a summit in Kuala Lumpur on November 19 before expanding to meet their counterparts from key trading partners in the following two days.

The agenda of the summit has not been made public, but diplomatic sources say the haze is likely to be raised by member countries affected by the pollution. The MFA said Singapore will pursue legal action against "errant companies responsible for the haze" and called on Indonesia to respond to "our repeated requests to share information" on the firms. Paper and palm oil firms have been blamed for deliberately setting off fires to clear land - including flammable peat-rich terrain - for cultivation, a traditional practice aggravated this year by drier-than-usual conditions due to the El Nino weather phenomenon. Singapore last month launched legal action that could lead to massive fines against Indonesian companies.

Five Indonesian companies including multinational Asia Pulp and Paper (APP), part of the Sinar Mas conglomerate, have been served with legal notices.

A Global Agreement On Climate Change Likely Won't Include Carbon Pricing

Date: 27th October, 2015 Source: Climate Progress

Christiana Figueres, head of the United Nations Framework Convention on Climate Change, which will meet in Paris in December to hammer out worldwide carbon emissions reductions, said Tuesday that the conference will not include global carbon pricing. Carbon pricing has been gaining support from a broad range of stakeholders, including the IMF, the World Bank, oil and gas companies, and world leaders. But agreeing on what the price would look like and how it would be charged is too big a challenge for this round of negotiations, Figueres said.

"(Many have said) we need a carbon price and (investment) would be so much easier with a carbon price, but life is much more complex than that," Figueres said. "It's not quite what we will have." Climate policy experts, though, weren't rattled by the comments. The Paris agreement is part of a larger framework, building off the 1992 convention, said Joe Robertson, the global strategy director at Citizens' Climate Lobby. The goals are to come up with a legally binding outcome, identify strong national plans, move forward on financing commitments, and establish action platforms that can help member countries achieve carbon reduction targets. "This is the next step forward in an ongoing framework," Robertson told ThinkProgress, saying it is not a "Big Bang" treaty that is going to end global warming in December. "It's not possible. That's not what the world is trying to do — and it should not be reported that way." On a domestic level, introducing a price on climate at the Paris conference could trigger the need for congressional ratification. International agreements that bind or prohibit U.S. actions that aren't already part of U.S. law must be approved by Congress. As Figueres pointed out Monday, there are already pricing mechanisms in use or planned across much of the globe. And more are expected. The Carbon Pricing Leadership Coalition — a group representing global leaders, non-profits, and corporations — is one of the so-called action platforms and will help global economies implement carbon pricing. The coalition will work with member states to help build carbon pricing mechanisms, either through fees, taxes, or cap and trade systems, that will help them more efficiently achieve reduction pledges. In the meantime, U.S. states are developing carbon reduction plans. Many of these plans will likely include some system of cap and trade or carbon fee as economically efficient ways to meet the mandates of the Clean Power Plan. The carbon pricing landscape is shifting quickly. Some experts have called for a global carbon fee, and suggested that if China, the United States, and the EU began collecting fees at their borders, the scheme would quickly go global.

"The only approach that would work is an across-the-board rising carbon fee covering every fossil fuel at the source — the first sale at the domestic mine or port of entry," Jim Hansen, a leading climate scientist, told ThinkProgress last week. And Robertson agreed that the world is heading in that direction. The EU has already floated the idea of border fee. "We know that the U.S. Congress understands it, we know that the EU understands it, we know that China understands it," Robertson said. "Within the next few years, that is an absolute inevitability."

Global warming to accelerate drylands expansion: Study

Date:27th October, 2015 Source: Zee News

Beijing: If global emissions continue to rise, drylands could cover over half of the world's land surface by 2100, according to a study. Researchers from Lanzhou University in China released study results on climate change in the world's dryland regions recently, Xinhua news agency reported. The paper was published in the latest edition of the journal "Nature Climate Change," on Monday. In a scenario where high emissions continue, by 2100, 56 percent of the world's land surface will be covered by dryland, according to the paper. This will have a disproportionate effect on developing countries, where over three quarters of the expansion is expected to occur, and could exacerbate poverty and land degradation, said Huang Jianping, professor at atmospheric science college under Lanzhou University. Huang and his team said they observed greater warming trends over dryland regions than in humid regions. They concluded that the combination of temperature and aridity increases with population growth in developing countries will amplify the risks and aggravate regional economic development disparity around the world. The study warned of the urgency and importance of emission cuts, and global desertification control, according to Huang. Drylands are regions where precipitation is offset by evaporation from surfaces and plant leaves. They currently cover approximately 40 percent of global land surface and are expected to increase in size due to climate change and human activities. Download the all new Zee News app for Android and iOS to stay up to date with latest headlines and news stories in Politics, Entertainment, Sports, Technology, Business and much more from India and around the world.

Indonesia considers national emergency over forest fires: VP

Date:27th October, 2015 Source: Reuters

Indonesia is considering declaring a national emergency over fires that have been smoldering across the archipelago for weeks, sending haze drifting across much of Southeast Asia, the vice president said on Tuesday. The government would intensify efforts to contain the fires that have caused pollution levels across the region to spike to unhealthy levels, and forced school closures and flight cancellations, Vice President Jusuf Kalla said. "The problem is too big," Kalla said in an interview at his office in Jakarta.

"We are now considering to," he said, referring to a declaration of an emergency, adding that thousands of troops would be deployed to help combat the fires. President Joko Widodo is expected to make a decision on the emergency after returning from the United States, Kalla said.

Kalla's comments come just a day after Widodo announced he would cut short his first official trip to the United States to fly directly to the haze-affected areas. "He will be more focused on domestic problems," Kalla said of the president's decision to cancel his visit to Silicon Valley, where he was expected to discuss investment deals with Apple and Google executives. The fires, often deliberately set by plantation companies and smallholders, have been burning for weeks in the forests and carbon-rich peat lands of Sumatra and Kalimantan islands.

Recently, they have spread to places like Papua as the El Nino weather phenomenon exacerbates the dry season and hampers firefighting efforts. An aide to the vice president, Wijayanto Samirin, said elevating the

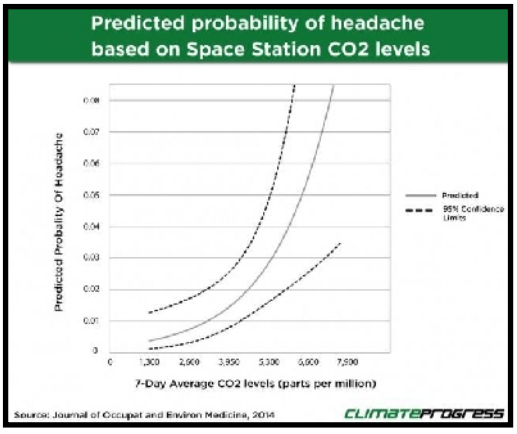
crisis to national emergency status would allow the government to speed up procurement processes for much-needed foreign firefighting equipment. But he added there were concerns that businesses could use the government action to declare force majeure on deals in sectors ranging from palm oil to banking. Kalla said about 40 million Indonesians in five provinces had been affected by the haze. The national disaster agency said late on Monday that haze was starting to spread south toward Java island, where over half the country's population lives. Indonesia has also deployed warships to evacuate infants and other vulnerable residents of haze-hit areas, a minister said last week. The evacuations will be a last resort, said coordinating security minister Luhut Pandjaitan, if authorities are unable to provide care for those suffering from respiratory diseases. The last time the country declared a national emergency was when the Indian Ocean tsunami killed more than 100,000 people in 2004.

It's Taking Less CO2 Than Expected To Cause Health Risks In Astronauts

Date: 28th October, 2015 Source: Climate Progress

NASA has observed CO2-related health impacts on International Space Station (ISS) astronauts at much lower carbon dioxide levels than expected. In an exclusive interview, Climate Progress spoke to Dr. David J. Alexander of NASA's Johnson Space Center, the lead ISS crew surgeon for atmospherics, who monitors the impact O2, CO2, and other gases have on astronauts. In Part 1 of this CP investigative report, I reported on a new study from the Harvard School of Public Health, along with an earlier study from Lawrence Berkeley National Laboratory (LBNL). Those studies found the shocking result that CO2 has a direct and negative impact on human cognition and decision-making in the 900 to 1000 ppm range and very possibly at lower levels. These are levels most Americans and their children are routinely exposed to today inside classrooms, offices, homes, planes, and cars — and that will be increasingly difficult to avoid if we don't succeed in slowing and then stopping the rise of CO2 levels outdoors, which serve as the baseline for CO2 levels indoors. As noted in that post, Dr. Alexander told me he is very familiar with the original study, and "based on our review of the study and the literature combined with our own experience, it seems like a very credible piece of work." In this post, I'll examine what NASA has learned from over a decade of observing ISS astronauts respond to the varying concentrations of CO2 over time on the ISS astronauts. This includes a mechanism by which CO2 levels could affect the brain, and the unexpected finding that for each roughly 1300 ppm increase in CO2 levels, "the odds of a crew member reporting a headache doubled":

To understand the implications of what NASA found, I spoke to Dr. Alexander and reviewed a number of studies he coauthored. These include a 2012 NASA study, "Chronic Exposure to Moderately Elevated CO2 during Long-Duration Space Flight" and the 2014 journal article, "Relationship Between Carbon Dioxide Levels and Reported Headaches on the International Space Station," published in the Journal of Occupational and Environmental Medicine (JOEM). Why astronaut headaches matter to NASA The 2014 study explains why even a 0.01 probability — a one percent chance — of a headache is not too small to matter to NASA: "Although the incidence is not high, the concern of the space medical community is that headaches may be an indicator of underlying increased intracranial pressure" from the combination of a CO2-induced increase in cerebral blood



flow [CBF] and the effects of microgravity on blood flow. The result: “The increase in CBF results in an elevation of intracranial pressure, presumably leading to headache, visual disturbance, impaired mental function, and other central nervous system symptoms.” Significantly, these impacts on astronauts on the ISS do not directly translate to impacts on a typical person on Earth. On the one hand, “microgravity increases sensitivity to CO2,” as Dr. Alexander explained to Climate Progress. On the other hand, astronauts are healthier and more fit than the general population, and, as the 2014 JOEM article put it, “Notably, astronauts are screened during selection for underlying cardiovascular and neurovascular conditions that may predispose to headaches.”

This is key reason Alexander and NASA are currently working with some of the researchers from the terrestrial studies on a specific study to look at the impact of low to moderate CO2 levels on judgment and decision-making for the astronaut cohort, with its unique physical profile and training.

The 2012 study notes that “out of operational necessity, space platforms function with ambient carbon dioxide (CO2) concentrations in excess of normal atmospheric conditions.” The long-duration Spacecraft Maximum Allowable Concentration [SMAC] used by NASA for CO2 is 7000 ppm (0.7%) because “Extensive terrestrial studies support this level as safe and unlikely to cause adverse effects.” Note: NASA generally reports CO2 levels as its atmospheric percentage or its partial pressure of mercury (Hg). CO2 levels in the air are currently 400 parts per million. In other words, “it makes up 0.04% of the atmosphere, equating to a partial pressure of 0.3 mm Hg at standard pressure,” as the JOEM article puts it. In the chart above and in this post, we translate all CO2 levels into ppm.

The EPA did an extensive literature review for its 2000 report, “Carbon dioxide as a fire suppressant: examining the risks” (which is cited by the 2012 NASA study). The EPA review found “headache, dyspnea [labored breathing] upon mild exertion,” at 20,000 ppm, and no reported physiological symptoms at levels substantially below that level. The EPA cites a 1990 Compressed Gas Association table indicating that the “physiological tolerance time” for healthy males CO2 levels with a “maximum exposure limit” of 10,000 ppm and 5,000 ppm is “indefinite.” The ISS ended up selecting “operating CO2 concentrations consistent with the 1996 SMAC limits” of 7,000 ppm for engineering and design reasons.

What NASA researchers found with actual astronauts on the International Space Station (ISS), however, surprised them. ISS “crews routinely report symptoms of acute CO2 toxicity (e.g., headaches, lethargy) that correlated with relative elevations of cabin CO2 below the permissible level.” The 2012 study notes: ISS crews have repeatedly reported symptoms associated with acute CO2 exposure at levels of 0.66% CO2 [6600 ppm], well below the expected symptom threshold of 2.0% CO2 [20,000 ppm]. Headache is typically the first symptom reported by crew, although ground medical personnel anecdotally note changes in mood at levels as low as 0.5% CO2 [5,000 ppm]. Reported symptoms were successfully correlated to ISS CO2 level.
Dr. Alexander explained that anecdotal changes include not just lethargy, but also “not following procedures.” Naturally, NASA has continued to pursue research in this area, since decision-making can be a life-or-death matter for astronauts.

He said there is a “strong suspicion the observed symptoms were CO2 induced,” and that more recent studies are “driving toward that conclusion.” The recent research from LBNL and Harvard “would further bolster” that conclusion.

Exiled by nuclear tests, now threatened by climate change, Bikini islanders seek refuge in U.S.

Date: October 28, 2015 Source: Washington Post

Unamonititled.png This U.S. Navy handout image shows Baker, the second of the two atomic bomb tests, in which a 63-kiloton warhead was exploded 90 feet under water as part of Operation Crossroads, conducted at Bikini Atoll in July 1946 to measure nuclear weapon effects on warships. (U.S. Navy/Handout via Reuters)
On the morning of July 1, 1946, a second sun rose over the remote Pacific island chain of Bikini Atoll. The world's fourth atomic bomb had just been detonated over the area with an "unearthly brilliance that petrified observers," wrote the Washington Post reporter at the scene.

A hundred miles away, from a ship just off the shore of tiny Rongerik Atoll, Bikini's former residents watched a mushroom cloud form over the place that had been their home. Now it was a bomb site, shrouded in toxic nuclear fallout that would render it uninhabitable. The Bikini islanders didn't know that yet; they had agreed to a series of nuclear tests on their islands believing they would be able to return as soon as the experiments ended.

Instead, they began a decades-long nomadic existence that would see Bikini islanders starve on atolls too small and sparse to sustain them and sicken from lingering radiation on others. The tiny community would be relocated five times in as many decades before settling elsewhere in the Marshall Islands. Some islanders watch warily as scientists re-evaluate their old home. Others have tried to move on, settle down. But their bad luck just won't let them. Now, they say, the rising seas and brutal storms brought on by climate change have rendered their new homes uninhabitable. On Wednesday, Marshallese Foreign Minister Tony de Brum will meet with members of Congress and ask for a change in the terms of the fund that was set up to help Bikini islanders resettle. Currently, the fund can only be used to help them buy property in the Marshall Islands, but they're giving up on the Pacific entirely. They want to come to the U.S. instead.

"Kili [is] uninhabitable because of climate change," de Brum told the BBC Tuesday, referring to the tiny island where about 700 people now live.Life on Kili is barely sustainable under the best of circumstances. The Bikini islanders moved there in 1948, after it was clear they would starve if they remained on Rongerik. The new spot was attractive because it was public land, meaning that the Bikini people could establish their own community there, but it had little else to offer. The lack of a natural lagoon effectively eliminated the islanders' traditional fishing culture. Space for farming on the island was sparse, so residents had to rely on imports to supplement what little they could grow locally. Rough seas could stop shipments for months, and the threat of starvation loomed constantly.

In the late '60s, U.S. officials announced that most of the effects of its nuclear detonations had worn off, and some Bikini islanders opted to return to the atoll. But subsequent tests found alarming levels of radiation in the islands' sand, fruit, fish and the people themselves. The hundred or so islanders living in Bikini atoll were re-evacuated in 1978, and most returned to Kili. The intervening years have rendered Kili even more unlivable, islanders say. Bikini Liaison Officer Jack Niedenthal told Radio New Zealand in August that the past four years have been brutal for Kili residents, as higher tides and severe summer storms batter the island.

"The island has been inundated by waves, and not just a little bit," he said. "… It's getting to the point where people are tired of having water in their living rooms and trying to deal with the waves and the water coming over the island." According to the BBC, Kili saw widespread flooding in 2011 and this year. Sea salt is seeping into the ground water, rendering it undrinkable and unusable for agriculture. The island's runway flooded earlier this year, cutting residents off from the world and from the imported supplies they depend on for food. Conditions are just as bad in other parts of the Marshall Islands, where other Bikini islanders live.

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In March 2014, the yearly king tide pulled homes from the Marshall Islands island of Majuro into the ocean and forced the evacuation of 1,000 people. (Dan Zak/The Washington Post) The nation of low-lying islands and atolls is among those most threatened by climate change, its leaders say. "Most countries that are elevated have the option of a managed retreat, but not here — our front line is our last line of defense," Ywao Elanzo, the country's acting director of the Office of Environmental Planning and Policy Coordination, told Al Jazeera in May. If predictions for rising sea levels prove true — NASA announced in August that a global rise of several feet is unavoidable — these islands will be inundated. The majority of homes on Kili, for example, are built less than 4 meters above sea level. The island's highest point isn't much higher. With no other options to save their drowning country — apart from abandoning the area entirely — Marshall Islands leaders have called for huge steps to confront climate change. "Relocation is not an option," de Brum said at a climate change even in 2013. "Because forced relocation is telling us you no longer have a country." But Bikini islanders, who have already been relocated so often, feel differently. Last week, the Department of the Interior issued a letter of support for the idea, recommending that the terms of the fund be altered to allow Bikini islanders to resettle here.

GOP Urged to Talk Climate at Tonight's Debate

Date:28th October 28, 2015 Source: EcoWatch

During tonight's Republican presidential debate, NextGen Climate will run "Who We Are," a new TV and digital ad calling on our next president to lead the world on climate change action and lay out a plan to achieve more than 50 percent clean energy by 2030. The ad will run on CNBC as part of a six-figure national TV and digital buy.

It's time for the Republican presidential candidates to recognize that America is ready to tackle the threat of climate change head-on and lead the world on clean energy solutions. Citigroup estimates that failure to act on climate change will result in $44 trillion in lost global GDP by 2060 and 45 major U.S. companies have committed to cut their carbon pollution and completely transition to clean energy.

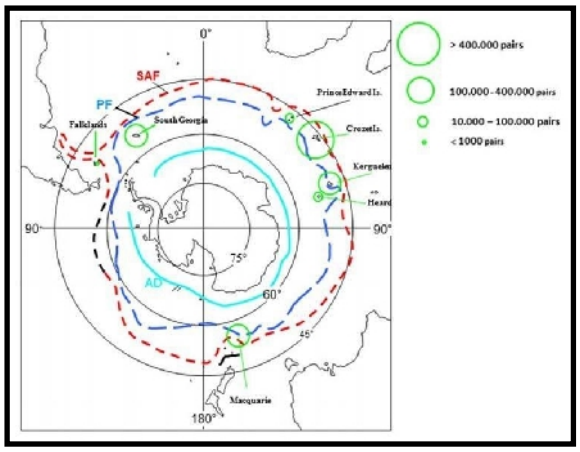
Meanwhile, thousands of American businesses are already seizing the opportunity presented by the transition to clean energy. Last year, the solar industry added jobs 20 times faster than the rest of the economy, with more Americans now employed in wind and solar than coal mining, and investment in clean

energy startups totaling roughly $8 billion annually. Our next president must build on this momentum and lay out a plan to power our country with more than 50 percent clean energy by 2030. #50by30 is achievable, popular and necessary to solve climate change: so what are the Republican presidential candidates waiting for? Climate change and clean energy aren't partisan issues: Republican voters know that climate change is an urgent threat to our country's economic and national security and are looking for leadership from the next president. Poll after poll shows that Republican voters strongly support the transition to a clean energy economy. Last week, a new poll from the University of Texas at Austin shows a "massive shift" on climate attitudes among Republicans, a majority of whom now support increasing clean energy production. Moreover, a Hart Research poll released in August found that 54 percent of Republicans in key battleground states favor a goal to power our country with more than 50 percent clean energy by 2030. Tonight, the Republican presidential candidates must finally listen to their voters and tell the American people how they would tackle the threat of climate change and accelerate the transition to a clean energy economy.

Climate Change 'A Serious Threat' to King Penguins, Study Warns

Date:28th October, 2015 Source: Ecowatch

In a new study, published in Nature Communications, scientists reveal how feeding and breeding of king penguins has varied between 1992 and 2010, and how climate change could put a dent in their numbers. Swimming Further and Diving Deeper The study focused on the Crozet archipelago in the southwest Indian Ocean, around 3,000km southeast of South Africa. With more than 600,000 breeding pairs, the islands are home to the world's largest king penguin population. King penguins breed from mid-December to mid-March. When foraging for food to feed their young, the adults swim south towards the fish-laden waters of the polar front, which is typically 300-500km away. This region, shown as a dotted blue line in the image below, is where the cold ocean surrounding Antarctica meets warmer waters further north.



The position of the front varies from year-to-year with natural fluctuations in the southern Indian and Atlantic oceans. These are, in turn, affected by climate phenomena such as El Niño. Using satellite transmitters attached to selected breeding penguins, the study tracked their movements between 1992 and 2010. In some years, the researchers found the penguins had to swim further and dive deeper to find food. These years coincided with warmer waters in the southern Indian or Atlantic Ocean, which shifted the polar front southwards. An increase in ocean temperatures of 1C in the southwest Indian Ocean, for example, pushes the front 130km further south. In 1997, natural fluctuations conspired to bring "abnormally" warm water to the Crozet islands, pushing the polar front further than scientists had seen before. The satellite tracking showed the penguins had to swim almost twice as far to find food, and dive around 30 percent deeper. The extra distance took its toll on the survival of the penguin population, the researchers say. The following year, the number of breeding pairs had fallen by 34 percent, and took five years to recover to pre-1997 numbers. While the study looked at natural fluctuations, the findings support previous work that suggests king penguin populations could be negatively affected by climate change. The polar front is projected to shift southwards as ocean surface temperatures warm, increasing the distance that breeding penguins will have to swim to reach food. Climate

change, therefore, represents "a serious threat for penguins and other diving predators of the Southern Ocean", the new study concludes.

Most polluted city in the world, Delhi suffers from a toxic blend, says UK study

Date:31st October, 2015 Source: Climate Progress

A new study on air pollution in Delhi by a team of researchers led by the University of Surrey in the United Kingdom has found the city suffers from a "toxic blend of geography, growth, poor energy sources and unfavourable weather that boosts its dangerously high levels of air pollution". The study also recommends all-round solutions instead of just focusing on vehicular pollution. The study was recently published in the journal Atmospheric Environment and includes a professor from IIT Delhi. The team researched how Delhi's landscape, weather, energy consumption culture, and growing urban population combines to elevate concentrations of air pollutants, including ultra-fine particles, the most harmful to human health.

"Air pollution has been placed in the top ten health risks faced by human beings globally. Delhi has the dubious accolade of being regularly cited as the most polluted city in the world, with air pollution causing thousands of excess deaths in a year in this growing megacity," said Dr Prashant Kumar of the University of Surrey. "While it might be easy to blame this on increased use of vehicles, industrial production or a growing population, the truth is that Delhi is a toxic pollutant punchbowl with myriad ingredients, all of which need addressing in the round," said Kumar.

Classified as the world's fifth 'megacity', Delhi has a population of "25.8 million", which continues to grow. With this growth, the study predicted that the number of road vehicles would increase from 4.7 million in 2010 to nearly 26 million by 2030. The total energy consumption in Delhi has risen 57 per cent from 2001 to 2011, said researchers. According to the report, as a landlocked megacity, Delhi has limited avenues for flushing polluted air out of the city.

"Coastal megacities such as Mumbai have at least a chance to 'replace' polluted air with relatively unpolluted sea breezes, whereas Delhi's surrounding regions are sometimes even more polluted than the city," said a statement from the University of Surrey. "The picture of Delhi's pollution problem is complicated and is aggravated by some factors that are out of human control. However, in this growing city it is important that the population is protected in whatever ways they can be from health-endangering pollutants," said Kumar. "There is also a cultural context… even the best technology will not succeed in reducing emissions and improving air quality if it is not considered in a broader framework of economic development," he said.

Want To Reduce Your Carbon Footprint? Here's Which Airlines To Fly.

Date: 31st October, 2015 Source: Climate Progress

A study recently released by the International Council on Clean Transportation (ICCT) found a wide range in fuel efficiency for U.S. airlines. Among the 13 biggest airlines, the least efficient, American, used 25 percent more fuel per passenger mile than Alaskan Airlines, the most efficient way to fly. Alaska, Spirit, Frontier, and Southwest Airlines — all so-called budget airlines — were the most fuel-efficient airlines for

domestic flights in 2014. Other than American, Delta and Virgin America rounded out the worst performers. United and US Airways, the two other big airlines, were in the middle.

The 2014 airline ranking might be helpful for travelers interested in reducing their carbon footprint — or in getting the best deal. Fuel efficiency was tied to profitability, and in today's world of competitive flight pricing, profitability means airlines can lower the cost passed on to consumers. Airlines, too, are interested in decreasing the amount of jet fuel they use on trip. Fuel is a significant portion of airlines' costs, and decreases in emissions were tied in part to newer fleets, as the industry tries to push fuel costs down. Ultimately, cost may be why budget airlines top the ICCT list.

Table 1. Fuel Efficiency Scores (FES), 2014

Rank	Airline	FES	Excess Fuel Per Unit Transport Service
1	Alaska	1.14	–
2	Spirit	1.13	+1%
3	Frontier	1.10	+4%
4	Southwest	1.08	+6%
5	United	1.01	+13%
6	Hawaiian	1.00	+14%
7	US Airways	0.97	+17%
8	Allegiant	0.96	+19%
9	JetBlue	0.95	+20%
9	Sun Country	0.95	+20%
11	Delta	0.94	+21%
12	Virgin America	0.93	+22%
13	American	0.91	+25%

Unfortunately, that efficiency come at a different cost — one to your kneecaps. The biggest driver in fuel reductions from 2013 to 2014 was tied to a 1.6 percent increase in "seating density," according to the report. That means airlines are packing people more closely together. Maybe Airbus is on to something — the company filed a patent this past summer for a design to stack airline seats.

Other ways to improve efficiency and reduce emissions include mechanical improvements, using biofuels or other alternative fuels, or implementing a carbon fee, but some have argued that ticket prices would be an effective way of driving demand down. Research published last year in Atmospheric Environment suggested that the only way airline carbon emissions could be reduced overall, given the expected increase in demand for flights, would be to raise ticket prices.

However it is done, figuring out how to reduce emissions from airplanes is critical. Emissions from airplanes are a significant contributor of greenhouse gases, accounting for more than 10 percent of emissions from the transportation sector in the United States. Worldwide, if commercial aviation were a country, it would rank seventh after Germany in terms of carbon emissions, according to the ICCT. The EPA has found that emissions from aircraft are a hazard to human health. That finding is the first step towards developing regulations. Environmental groups had sued the EPA in order to move the process forward. Usually, when the EPA releases findings like those, it would also put out draft regulations. In this case, though, the EPA has deferred to the International Civil Aviation Organization (ICAO), a group organized by the United Nations. Environmental groups were not happy with the EPA's decision, especially since the ICAO regulations will likely apply only to new aircraft. If the process to curb airline emissions does not go forward, emissions are expected to more than triple by 2050, the ICCT said.

NOVEMBER 2015

Hydropower Will Undermine COP21 as 'False Solution' to Climate Change

Date:02nd November 02, 2015 Source: Ecowatch

Over the past 15 years, the "methane problem" with hydropower has made minor blips in international news and has just begun to infiltrate the discussion of how it is wrong to use hydropower as a solution to fight climate change. The non-profit environmental group International Rivers has spearheaded much of the education and advocacy, and scientific journals as well as climate-related news sites like Climate Central are also taking up the case. Hydropower has been called a "methane factory" and "methane bomb" that is just beginning to rear its ugly head as a major source of greenhouse gas emissions that have so-far been unaccounted for in climate change discussions and analyses.

Scientific studies indicate that methane emissions from hydropower dams and reservoirs can vary dramatically. In northern subarctic climates, methane emissions have been measured as a small fraction of greenhouse gas emissions as compared to coal-fired power plants. In temperate climates like much of the U.S. and Europe, methane emission measurements vary by sub-climate, size of reservoir and vegetation growth, but have been measured from small to large as compared to the emissions from coal-fired power plants. In tropical environments, hydropower methane emissions have been measured as high as double those of the greenhouse emissions of a coal-fired power plant that generates the same amount of electricity. Further, although the Intergovernmental Panel on Climate Change (IPCC) has guidelines on calculating methane emissions from hydropower dams/reservoirs, there have been very few measurements of these methane emissions at the same time that large hydropower projects are being built by the thousands across the planet. One Brazilian scientist estimates that methane from hydropower currently accounts for 23 percent of all human-caused worldwide methane emissions. As hydropower plants proliferate, that number will only increase. Hydropower is almost always greenwashed and sold to the public and policymakers as "clean energy" and "carbon-free." Even though the IPCC lists hydropower's methane emissions as a greenhouse gas source, and over a decade of science refutes the claim that hydropower is clean energy, the myth of carbon-free hydropower is embedded in the Kyoto Protocol's "Clean Development Mechanism" to address planetary climate change and is increasingly being implemented by countries in attendance at COP 21 in Paris. Even worse, the World Bank still lists, promotes and funds hydropower as "clean energy," and nearly every country in the world is building hydropower plants under the same auspices. Even the U.S. government still perpetuates the anti-science myth of clean hydropower. In the lead-up to COP 21, countries have been sending their "Intended Nationally Determined Contributions (INDCs)" to the United Nations. An INDC is a description of how each country intends to reduce its carbon emissions.

Let's look at five quick, random examples out of the 181 INDCs sent to the United Nations so far:

1. China is in the midst of building dozens of massive hydropower plants per year, including the largest on the planet. In its INDC, China states they intend to: "proactively promote the development of hydro power, on the premise of ecological and environmental protection and inhabitant resettlement."
2. India's INDC uses hydropower to meet its emission reduction target, and states: "With a vast potential of more than 100 GW, a number of policy initiatives and actions are being undertaken to aggressively pursue development of country's vast hydro-potential."

3. Japan's INDC states that it intends to reach its "emissions reduction target" in part by getting to nine percent hydropower by 2030. Japan has dozens of currently operating hydropower plants with dozens more in the planning stages.
4. Canada's INDC states that it will use "low-impact hydro" as one of its "investments to encourage the generation of electricity from renewable energy" Canada has dozens of new hydropower dams under construction, and few if any are even remotely considered "low-impact hydro."
5. Costa Rica's INDC boasts: "Costa Rica has a long standing tradition of innovation on hydroelectric generation, in conservation and specially, on matters of climate change." Costa Rica routinely markets itself as having a nearly carbon-free energy system, with more than 80 percent percent coming from hydropower—with absolutely none of the methane emissions measured or accounted for in its INDC—and is just finishing construction of the largest hydropower dam in Central America.

What's even more problematic is that many of the countries around the world that are most aggressively pursuing hydropower don't even list it in their INDC, but rather state they are using the 2006 IPCC Guidelines for National Greenhouse Gas Inventories to calculate their emissions and their reductions in emissions by using various energy types.

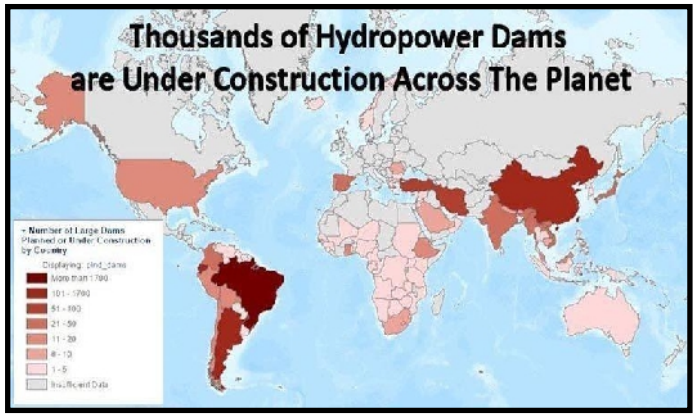
Take Indonesia as just one example, which has built and is continuing to build dozens of massive hydropower dams. In their INDC, Indonesia does not mention hydropower, stating that they will meet emissions reductions and that: "The inventory is based on 2006 IPCC Guideline for National Greenhouse Gas inventories."

I have deep skepticism about whether these countries are using the guidelines correctly, because even in 2006, the guidelines contained methane emissions calculations from dams and reservoirs, including the "CH4 [methane] Emissions From Flooded Lands" appendix to chapter four, which contains specific calculations for methane emissions upstream and downstream of dams. Thus, countries that are completely destroying their rivers and their climate with hydropower including Malaysia, Brazil, Guatemala, Russia and even the U.S. don't even list hydropower as a methane emissions source in their INDC, while including hydropower as a clean energy source, all under the auspices of likely misconstrued or purposely ignored IPCC guidelines.

How bad could it get? The Eastern European Balkan countries have recently announced they want to build 2,700 hydropower dams and every single one is being touted as a clean energy alternative to fight climate change.

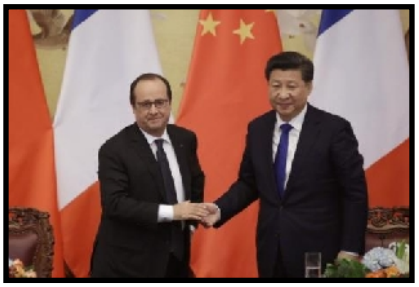
France And China Announce Major Climate Action Agreement

Date: 02nd November, 2015 Source: Climate Progress



Four weeks before representatives from hundreds of countries are set to convene in Paris in the hopes of hammering out an international climate deal, France and China have publicly agreed that any successful deal must include five year check-ins to assess the progress made towards achieving long-term goals. French president François Hollande called the agreement a "historic" moment for climate action, despite falling short of the automatic strengthening of climate commitments that France had hoped to get China to agree to. In order to keep the world below 2°C, often considered the cut-

off for irreversible climate change, experts have argued that regular revisions, which would ideally strengthen international commitments and deepen emissions cuts, will be crucial to sustaining success post-Paris. According to a recent United Nations synthesis of the more than 140 national climate pledges already submitted to the U.N., the world is currently on track for 2.7°C of warming by 2100.



After a meeting Monday, Hollande and Chinese counterpart Xi Jinping issued a joint statement calling climate change "one of the greatest challenges facing humanity." Both countries also reaffirmed their commitment to shifting the world to a low-carbon path by the end of the century, and stressed the responsibility of developed nations in helping developing nations mitigate and adapt to climate change, both through finance and technology.

The two countries agreed that any international climate agreement must include a full review of progress every five years — something that falls short of Hollande's call for "upward revision of the national pledges every five years." France had hoped to get China to agree to mandatory strengthening of emissions cuts every five years, noting that current pledges aren't enough to keep the world below 2°C. As a French diplomat told the Guardian in advance of Monday's meeting, China's position as a major economic power gives it "a leading role" in influencing how other countries approach the Paris climate negotiations. "What we have just established here in this declaration is a likelihood that the Paris conference will succeed," Hollande told reporters Monday. "That doesn't mean that the Paris conference is definitely going to be a success, but the conditions for success have been laid down in Beijing today." Others were more subdued in their praise, with Greenpeace calling the agreement "an incremental step forward." "This is no time for champagne," Jean-François Julliard, the executive director of Greenpeace France, said in a press statement. "This bilateral statement should be another springboard instead of the last word for the Paris agreement."

China, the world's largest emitter of greenhouse gas emissions, has already promised to begin reducing its emissions by 2030, and some senior officials within the government have gone on record saying that the country's emissions could peak even sooner than that. Still, some argue that China could be taking much stronger steps to mitigate its impact to climate change — the country's coal use dropped 8 percent over the first four months of 2015, and senior officials recently announced that strict limits would be put in place on coal consumption in the future. As it stands, some think that China could achieve their climate commitments a full decade before 2030.

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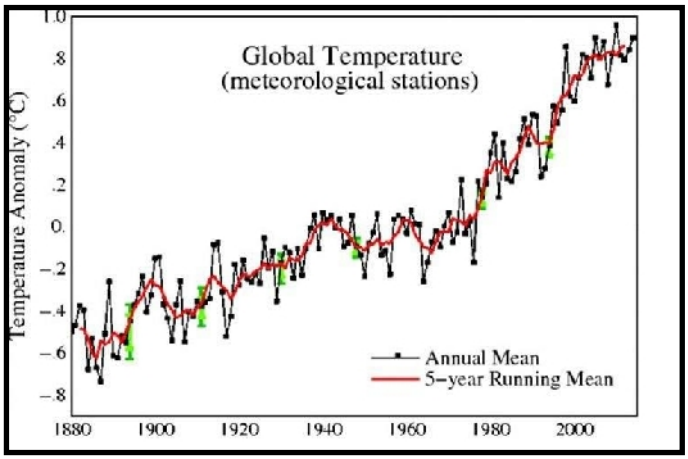
16 Terms You Need to Know to Understand Climate Change

Date: 02nd November , 2015 Source: Ecowatch

We're at a historic moment with the UNFCCC COP 21, the United Nations Framework Convention on Climate Change's 21st Conference of the Parties, in Paris set to begin next month. With world leaders from 195 countries negotiating to reach a global agreement to reduce carbon emissions, expansive news and media coverage is guaranteed. What's also guaranteed in this coverage is a host of scientific jargon and acronyms that can be overwhelming to follow, let alone understand. So this week we're breaking down climate science to its most basic key terms and phrases to help you better grasp what's going on in the world with climate change, both at the United Nations (UN) climate talks and beyond. We've got a lot of ground to cover, so let's jump right in.

Below is our list of the top terms you need to know to understand the basic science and political sphere of climate change:



1. Carbon Dioxide (CO2)- The chemical compound carbon dioxide (also known by its shorthand CO2) is the primary greenhouse gas and driver of climate change. It's an integral part of life cycles on earth, produced through animal respiration (including human respiration) and absorbed by plants to fuel their growth, to name just two ways. Human activities are drastically altering the carbon cycle in many ways. Two of the most impactful are: one, by burning fossil fuels and adding more carbon dioxide into the atmosphere; and two, by affecting the ability of natural sinks (like forests) to remove carbon dioxide from the atmosphere.

2. Greenhouse Gas- A greenhouse gas is a chemical compound found in the Earth's atmosphere, such as carbon dioxide, methane, water vapor and other human-made gases. These gases allow much of the solar radiation to enter the atmosphere, where the energy strikes the Earth and warms the surface. Some of this energy is reflected back towards space as infrared radiation. A portion of this outgoing radiation bounces off the greenhouse gases, trapping the radiation in the atmosphere in the form of heat. The more greenhouse gas molecules there are in the atmosphere, the more heat is trapped and the warmer it will become.

3. Emissions- In the climate change space, emissions refer to greenhouse gases released into the air that are produced by numerous activities, including burning fossil fuels, industrial agriculture and melting permafrost, to name a few. These gases cause heat to be trapped in the atmosphere, slowly increasing the Earth's temperature over time.4. Weather vs. Climate- It's all about timing when it comes to differentiating weather and climate. Weather refers to atmospheric conditions in the short term, including changes in temperature, humidity, precipitation, cloudiness, brightness, wind and visibility. While the weather is always changing, especially over the short term, climate is the average of weather patterns over a longer period of time (usually 30 or more years). So the next time you hear someone question climate change by saying, "You know it's freezing outside, right?," you can gladly explain the difference between weather and climate.

5. Global Warming vs. Climate Change- Many people use these two terms interchangeably, but we think it's important to acknowledge their differences. Global warming is an increase in the Earth's average surface temperature from human-made greenhouse gas emissions. On the other hand, climate change refers to the long-term changes in the Earth's climate, or a region on Earth, and includes more than just the average surface temperature. For example, variations in the amount of snow, sea levels and sea ice can all be consequences of climate change.

6. Fossil Fuels- Fossil fuels are sources of non-renewable energy, formed from the remains of living organisms that were buried millions of years ago. Burning fossil fuels like coal and oil to produce energy is where the majority of greenhouse gases originate. As the world has developed and demand for energy has grown, we've burned more fossil fuels, causing more greenhouse gases to be trapped in the atmosphere and air temperatures to rise.

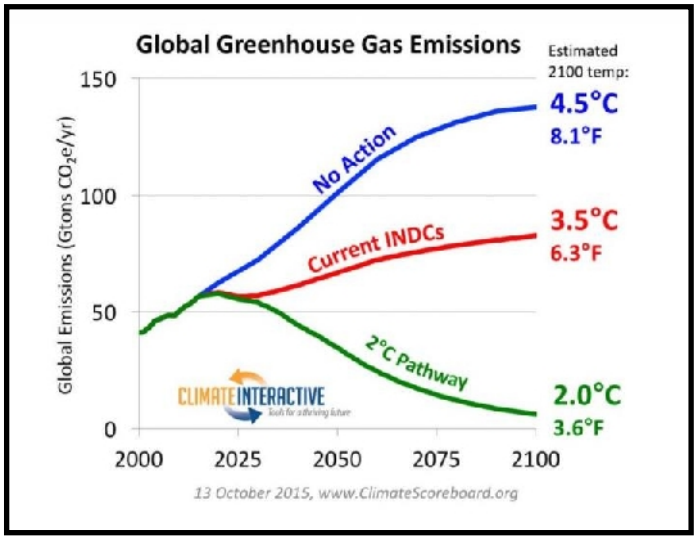
7. Sea-Level Rise - Sea-level rise as it relates to climate change is caused by two major factors. First, more water is released into the ocean as glaciers and land ice melts. Second, the ocean expands as ocean temperatures increase. Both of these consequences of climate change are accelerating sea-level rise around the world, putting millions of people who live in coastal communities at risk.

8. Global Average Temperature- Global average temperature is a long-term look at the Earth's temperature, usually over the course of 30 years, on land and sea. Because weather patterns vary, causing temperatures to be higher or lower than average from time to time due to factors like ocean processes, cloud variability, volcanic activity and other natural cycles, scientists take a longer-term view in order to consider all of the year-to-year changes.

9. Renewable Energy - Renewable energy is energy that comes from naturally replenished resources, such as sunlight, wind, waves and geothermal heat. By the end of 2014, renewables were estimated to make up almost 28 percent of the world's power generating capacity, enough to supply almost 23 percent of global electricity. Because renewables don't produce the greenhouse gases driving climate change, shifting away from fossil fuels to renewables to power our lives will put us on the path to a safe, sustainable planet for future generations.

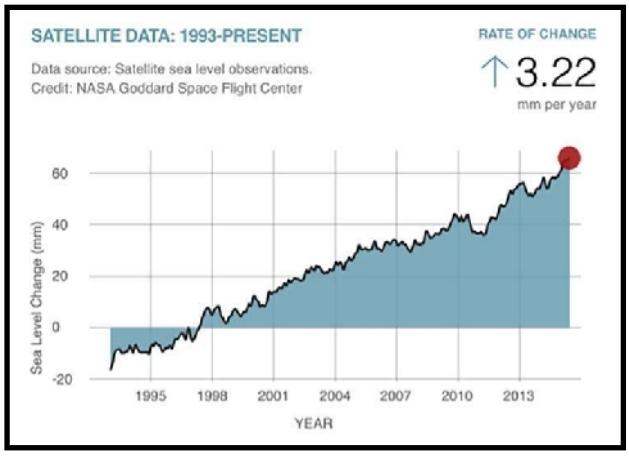
Misleading U.N. Report Confuses Media On Paris Climate Talks

Date:03rd November, 2015 Source: Climate Progress



Memo to media: If countries go no further than their current global climate pledges, the earth will warm a total of 3.5°C by 2100. A very misleading news release from the U.N. Framework Convention on Climate Change (UNFCCC) — coupled with an opaque UNFCCC report on those pledges, which are called intended nationally determined contributions (INDCs) — has, understandably, left the global media thinking the climate talks in Paris get us much closer to 2°C than they actually do. Indeed, the news release contains this too-cleverly worded paragraph quoting UNFCCC Christiana Figueres, Executive Secretary:

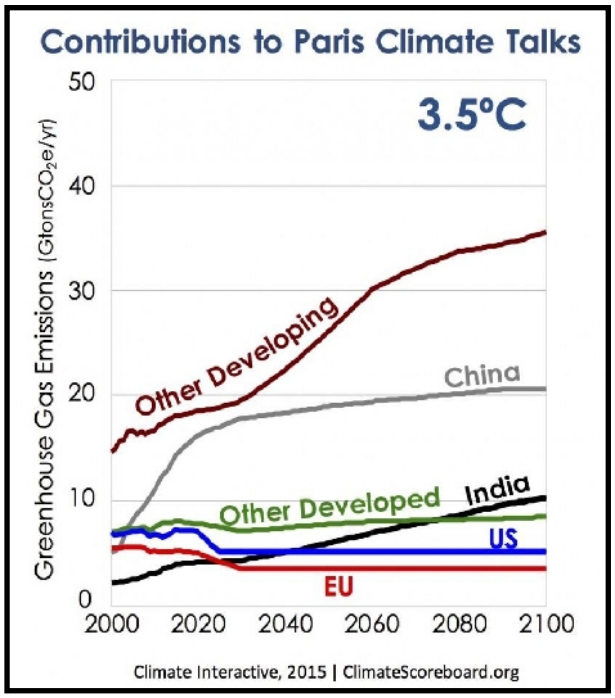
"The INDCs have the capability of limiting the forecast temperature rise to around 2.7 degrees Celsius by 2100, by no means enough but a lot lower than the estimated four, five, or more degrees of warming projected by many prior to the INDCs," said Ms. Figueres. I'm a fan of Figueres and all that she has accomplished in the lead-up to Paris. Indeed, as I've written, "the INDCs have bought us another five to 10 years of staying close to the 2°C path," which is the defense line against very dangerous-to-catastrophic global warming.



But, to repeat, assuming countries meet their current global climate pledges — but go no further — the earth will warm a total of 3.5°C by 2100 (but see note at the end). Climate Interactive has added up the latest commitments and here is where they lead:

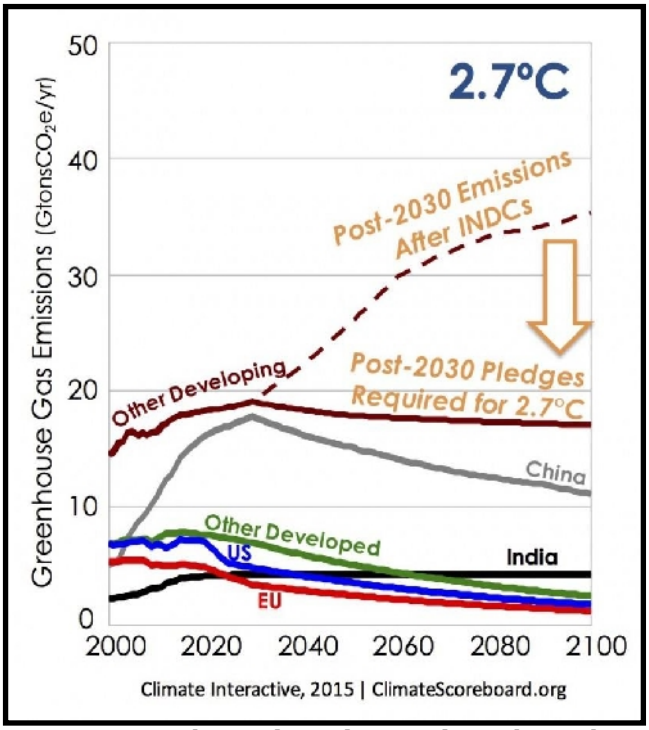
Significantly, while China has agreed to peak CO2 emissions by 2030, "total GHG emissions are likely to continue increasing until 2030, as China has not yet implemented sufficient policies addressing non-CO2 GHG emissions (methane, nitrous oxide, HFCs etc.)," as the analytical team at Climate Action Tracker explains. Also, India has specifically not committed to peak its CO2 emissions yet (nor have some other developing countries that are not yet at India's stage of economic growth).

I have no doubt that countries will make stronger pledges in the future — indeed, China just announced with France that it wants every country to have five-year check-ins to assess progress on the climate commitments. But those pledges have not been made yet, we do not know what they might be, and we certainly should not count them in any analysis of what Paris will achieve.



So why does Figueres say the Paris pledges will limit warming to 2.7°C by 2100? In fact, she doesn't say that. She says they "have the capability of limiting the forecast temperature rise to around 2.7 degrees Celsius by 2100." What does that mean? It means that the overwhelming majority of the pledges end by 2030 — but most of them imply a rate of reduction in CO2 emissions between now and 2030. So, if you assume countries will commit in the future to keep reducing emissions after 2030 at the rate they did before 2030 — and make a bunch of other optimistic assumptions — you can limit warming to 2.7°C in 2100. Here's a quick analogy. You weigh 400 pounds with many weight-related health problems, and a team of doctors say you need to cut your weight sharply. You agree to go on a supervised weight loss regime for two years that will take you down to 300. Should you start telling all of your friends that you'll weigh 200 pounds in 4 years? Of course not. You've got a long way to go. Heck, you're not even at 300 yet. Actually, it is worse than that because the 2.7°C scenario requires a whole other level of effort. Here's one possible 2.7°C pathway:

As you can see, India would have to plateau around 2030 (as would other developing countries). India has has not made such a commitment yet. One of the country's leading politicians says it can do it. Indeed, I believe the combination of ever worsening climate impacts and rapidly dropping costs for clean energy make it all but inevitable that India will ultimately do so — and that the vast majority of other countries will also make stronger pledges in the years to come.



But India has not made a pledge to peak yet, nor have other major developing countries, nor has China agreed to start slashing emissions in 2030, nor has our country agreed to steady reductions in CO2 emissions post-2025. Here's another analogy. You weigh 400 pounds with weight-related health problems, and a team of doctors say you have to lose weight sharply. But you are still gaining 10 pounds a month. You agree to go on a supervised diet and exercise regime that will stop your weight from rising beyond 450 pounds in twelve months. Should you tell everyone that you'll weigh 300 pounds in 3 years? Of course not. And the UNFCCC understands all this, which is why, immediately after Figueres' quote in the news release, the very next paragraph is: The secretariat report does not directly assess implications for temperature change by the end of the century under the INDCs because information on emissions beyond 2030 is required. However, other independent analyses have, based on a range of assumptions, methodologies and data sources, attempted to estimate the impact of the INDCs on temperature leading to a range of average estimates below, at or above 3 degrees C. That means the UK Guardian had the story wrong when they wrote, "Pledges by most of the world's countries on climate change are likely to lead to less than 3C of global warming over the century, analysis of the data by the United Nations suggests." The UNFCCC never made any such analysis or claim. And the only way to make such a claim is to go far beyond the current pledges. But, again, the mistake is understandable since the news release was very misleading on this point.

The best we can say right now is that, if we consider the Paris climate pledges and nothing further, the earth will warm a total of 3.5°C by 2100. Of course, we can continue to say that keeping total warming to 2°C is super cheap because we know that is also true.

Note to nerdtastic readers: Yes, the 3.5°C calculation does assume that no unmodeled carbon cycle feedbacks kick in — such as the permafrost melting. I'll cover that issue in a later post.

It's Our Generation, It's Our Choice: Climate Justice Now

Date: 03rd November, 2015 Source: Ecowatch

When I learned about climate change for the first time in middle school I was stunned; stunned that I hadn't found out before, that this wasn't something my parents talked about every day. The atmosphere might heat up to to the point that the earth would become uninhabitable? I could not comprehend why everyone in society wasn't running around scheming of ways to ensure our survival on this planet. And what would this mean for my home on the outskirts of Austin, Texas? Already, our well water had run out one summer. We went for quite a while without being able to shower or flush the toilet until we had the money to get the well dug a little deeper to reach the aquifer below. I wondered what a hotter planet would mean for our water system: how many more times would we need to dig deeper? How could a summer even hotter than our already scorching days, hot enough to fry an egg on the sidewalk, be habitable?

I tried to think about what I could do to minimize the harm I caused personally through my carbon footprint. I tried to save every page I was handed in school to write my notes on the backs. I recycled and composted obsessively, and wondered whether I could save water by hand washing clothes or energy by line drying. I would cringe every time we sat in traffic, imagining all the tiny particles of carbon our car was coughing out into the atmosphere, slowly eroding the chances of future generations to experience the lushness of a dewy, green spring. Yet ultimately, the task at hand felt impossible. I lived thirty minutes outside Austin in an area where public transportation does not exist. My family did not have the money to live in the city, so this meant driving twenty minutes to school every day and that there was no way for me to reduce these emissions. The lack of public transportation in Texas simply does not allow most citizens to live in a way that could be considered "environmentally conscious."

Gradually I realized—our highways and suburbs were never meant to be compatible with a sustainable future. The system was designed to necessitate fossil fuel dependence. It is no coincidence that Exxon has been cowering under climate denialism for decades for the sake of rogue profit. Exxon's thirty year long campaign to spread doubt about basic climate science has undermined efforts to prevent runaway climate change and has cost millions of lives. Those hit the hardest by climate disaster are communities of color, communities of low economic status, women and young people. Fossil fuel companies stand to gain the most by stifling the stories of those in the Global South whose resources they exploit, whose water and air they poison, and whose lives the media outlets might fail to mourn when they are swept away by every-intensifying natural disasters. It will take all of us, fighting together and demanding a just and sustainable transition, to turn the tides on environmental racism and the devaluing of black, brown and immigrant lives.

When I got to college, I joined Swarthmore Mountain Justice, the on-campus group campaigning for divestment. For the first time, I feel that I have power in my hands to effect change. For so long, I worried that the things I could do on my own to combat climate change were not enough, but I have seen incredible

progress in the work we have done as a collective. Together we can leverage formidable power. Joining together with other students, we will demand the systemic and institutional changes from our leaders we need to ensure a sustainable future. We will demand a just transition away from environmental racism, and an end to the laws that tear families apart and reinforce the illusion that we are anything less than a global community.

As young people, we have the right and the power to create the world we would like to see—world which sustains life; a world which does not discriminate, commit violence or value a life less based on race or class, nationality or immigrant status. The need to see these changes come about has never been so urgent, and I have never felt more excited to join with other students, to take to the streets and demand that politicians take real leadership on the critical issues of our generation.

Soil health improving in US and Canada, due to acid rain decline

Date:04th November, 2015 Source: The Christian Science Monitor

Thanks to pollution regulations, acid rain levels in the northeastern US and eastern Canada are significantly lower today than they were a few decades ago. Group of scientists from the United States and Canada have found that the acidity of soils in some parts of the continent has declined, abating years of harm to plants and aquatic life by reversing the depletion of a critical nutrient in soil: calcium.Scientists have determined this by testing soil samples collected in 27 locations between 2009 and 2014, in the forests of Maine, New Hampshire, Vermont, Ontario and elsewhere in the northeastern US and eastern Canada. They compared their results to those compiled by the same group of scientists working at the same locations between eight and 24 years ago. "The start of widespread soil recovery is a key step to remedy the long legacy of acid rain impacts on terrestrial and aquatic ecosystems," Gregory Lawrence, a US Geological Survey (USGS) soil and water chemist, said in a statement. Dr. Lawrence is a lead author of a paper published on October 23 in the journal Environment Science and Technology with researchers from the USGS, Canadian Forest Service, University of Maine, US Forest Service, and Quebec's parks ministry.

Thanks to pollution regulations in the US (like the Clean Air Act) and in Canada that have curtailed emissions of sulfur dioxide and nitrogen oxide into the atmosphere, acid rain levels today are significantly lower. This is very good news, since acid rain depletes nutritious calcium, a mineral that prevents toxic aluminum from forming in the upper level of soil. This level of soil is dense with nutrients that sustain plant and aquatic life. Aluminum is naturally found a couple of feet below ground, Lawrence tells The Christian Science Monitor, but it's not harmful there. "Acid rain mobilized it and changed it from benign to something harmful," Lawrence explained. Acid rain forced the aluminum to move from its home deep in the soil to the nutritious upper levels. This phenomenon caused environmental havoc – poisoning fish, trees, and plants – during peak acid rain levels dating back to the 1970s. Interestingly, the researchers found that there was actually more aluminum than expected deeper underground, "but that's probably not because of rain," Lawrence says. The researchers say that they believe the aluminum is actually moving back to where it came from, says Dr. Lawrence. "We think this is part of the recovery response," he says. The team hopes to next study the calcium levels in the soil, which aren't declining anymore, but also are not growing. "The most uncertain is the recovery of calcium in the soil," explains Lawrence. "It seems to be a very slow process and we're not sure how slow."

UN Report Measures Significant Progress Ahead of Paris Climate Talks

Date:04th November, 2015 Source: Ecowatch

The United Nations Framework Convention on Climate Change (UNFCCC) released its official analysis of the 146 climate action offers (Intended Nationally Determined Contributions or INDCs) on Oct. 30. Like recent independent analyses of the INDCs, the UNFCCC report shows that these offers represent a substantial step forward in the effort to combat climate change and further accelerate the transformation of the global energy system already underway.

The report indicates that the submitted INDCs—from countries representing more than 86 percent of global emissions—will not be enough to avoid the worst impacts of warming alone, but they provide a significant foundation to build on. Commenting on the report's findings, the Executive Secretary of UNFCCC Christiana Figueres said, "Fully implemented these plans together make a significant dent in the growth of greenhouse gas emissions: as a floor they provide a foundation upon which ever higher ambition can be built." Recognizing the need for building on current commitments, French President Francois Hollande and Chinese President Xi Jinping struck a bilateral agreement in support of including a regular re-visitation and update of INDCs in the Paris agreement text. In their statement, the leaders made it clear that they are jointly working to ensure that the Paris agreement includes a mechanism to ratchet up ambition for a swift, strong move towards a global renewable energy economy.

One of the key findings from the UNFCCC report is that the INDCs countries have submitted will bring global average emissions by up to 8 percent in 2025 and as much as 9 percent by 2030. Climate Action Tracker (CAT) completed a similar analysis earlier this month, finding that the submitted INDCs will likely reduce projected warming in 2100 by 0.9°C (limiting warming to 2.7°C) above pre-industrial temperatures compared to a business-as-usual track. Major emitters like India and China have put forth substantial offers, with encouragement from the U.S. Their INDCs put the countries on track to install twice the current global capacity of wind and solar in the next 15 years. Collectively INDCs and other country actions to combat climate change, are transforming the global energy sector, permitting cheaper, steeper and deeper pollution reductions in the future.

Why a Paris climate agreement could actually be very good for the U.S.

Date:05th November, 2015 Source: Washington Post

With the 2015 UN climate conference looming less than a month away, there's a strong economic reason for the United States to support a strong international agreement to curb carbon emissions, says a new report: There are trillions of dollars to be gained at home from other countries' climate mitigation efforts. The report, which was published on Thursday by the New York University School of Law's Institute for Policy Integrity, calculates that other nations' existing climate policies, by lessening the impacts of climate change, have already benefited the United States to the tune of more than $200 billion, and additional pledges for future action could save the country more than $2 trillion by the year 2030. This number could rise above $10 trillion by mid-century.

"There's a really strong economic self-interest for the United States to try to lead this effort and build a global coalition around [climate] action," said Jason Schwartz, legal director at the Institute for Policy Integrity, who co-authored the report with his colleague Peter Howard. "A lot of the arguments that

advocates use to push the United States to lead are based on moral responsibilities to solve a global problem, and that's certainly a valid perspective — but there's also an economic perspective." Delegates from the United States will gather with dozens of other nations in Paris at the end of this month for the climate summit, where they will attempt to finalize a binding international agreement to cut down on carbon emissions and mitigate the threat of climate change. In advance of the summit, nearly 150 nations, including the United States, have already submitted pledges to slash their greenhouse gas emissions by certain amounts throughout the coming decades. The goal of the Paris meeting will be to develop an agreement that will incorporate the pledges and hold each nation to its own goals, as well as to set up a process for strengthening targets over time.

[Nations' climate pledges will leave emissions rising for years, U.N. says]
So while the United States has already shown initiative on that front, some critics have argued that actually implementing additional emissions reduction policies could backfire. As the authors note in the report, "Opponents of U.S. regulation of greenhouse gas emissions have long cited fears that the rest of the world — and especially China and India — will free-ride on our climate policies if we act first." But the calculations included in Schwartz and Howard's report suggest that, in fact, "the United States already stands to gain more from global efforts on climate change than proposed U.S. regulations would cost," they write. "The report does a good job highlighting the direct economic benefits to the U.S. of global cooperation to mitigate climate change," said Solomon Hsiang, chancellor's associate professor of public policy at the University of California at Berkeley, who was not involved with the report, in an e-mail to The Post. "If the U.S. does not contribute reciprocally to global actions, we will be free-riding on the hard work of other nations." The report's calculations rely on a metric known as the "social cost of carbon," which is the estimated economic cost of every additional ton of carbon dioxide emitted into the atmosphere. This economic cost takes into account damages caused by climate effects, such as agricultural losses, reduced labor productivity, trade interruptions, public health consequences, extreme weather events, floods and human conflicts, among others.

The report uses values for the social cost of carbon established by the federal Interagency Working Group on the Social Cost of Carbon. These costs are expected to increase in the future, as the consequences of climate change escalate. Currently, the working group values the global social cost of one ton of carbon dioxide at $41. By 2050, the working group projects this cost will rise to $79. These values imply that the entire world would save $41 by mitigating one ton of carbon dioxide. This is because greenhouse gases that go into the atmosphere bring about climatic changes that affect the whole planet in the way of rising temperatures and their associated effects. But in order to find out how much the United States alone would save, authors Schwartz and Howard had to take into account estimations of how much of a share the country has of the social cost of carbon — in other words, what percentage of this cost would be returned as a direct benefit to the United States if that one ton of carbon dioxide were saved. The same working group estimated that the U.S. share is anywhere from 7 to 23 percent. So in order to determine how much the United States stands to gain from another country's climate policies, the authors had to calculate how much carbon dioxide was avoided, find the social cost of that amount of carbon and then take the U.S. share of that social cost.

The authors came up with a range of potential savings by assuming either high or low global emissions reduction scenarios and assuming either the high or low end of the estimated range of the U.S. share of the global social cost of carbon (that is, either 7 percent or 23 percent). The authors first looked at other nations that already have existing carbon mitigation policies in place to figure out how much money the United States has already saved from other countries' climate action. One example is the European Union's Emissions Trading Scheme, which has been in effect since 2005, and aims to bring industrial greenhouse gas emissions down to 43 percent of their 2005 levels by the year 2030.

During the past five years alone, Schwartz and Howard write in the paper, "existing global policies have likely reduced up to 24 billion metric tons of carbon dioxide-equivalent emissions, thereby directly

benefiting the United States by at least $60 to $231 billion." And they predict that by 2030, U.S. benefits from existing foreign climate policies could top $2 trillion. Another important consideration is the potential effects of the as-yet-unimplemented climate pledges that will be addressed in Paris. If the pledges are successfully implemented, the authors find that the United States could gain additional benefits of anywhere from $54 billion to $544 billion by the year 2030. And altogether, they estimate that existing and future foreign climate policies could save the United States up to $10 trillion by the middle of the century.

Climate change is moving mountains: study

Date: 06 November, 2015 Source: Live Mint

Scientists say climate change influences the erosion, that can produce a shift in the tectonics.

Washington: A strong relationship exists between global and local climate change and a mountain's internal tectonic plate shifts and topographic changes, researchers have found. Researchers led by geologist Eva Enkelmann from University of Cincinnati in US found that the way a mountain range moves and behaves topographically can also change and create its local climate by redirecting wind and precipitation. The repercussions of these changes can in turn, accelerate the erosion and tectonic seismic activity of that mountain range. "There are two primary processes that result in the building and eroding of mountains and those processes are interacting," said Enkelman. Enkelmann noted that the northern part of the St Elias mountain range — located along the Pacific coastal region of North America — is dry. But the precipitation is very high in the southern area, resulting in more erosion and material coming off the southern flanks. As the climate change influences the erosion, that can produce a shift in the tectonics.

Enkelmann synthesised several different data sets to show how a rapid exhumation occurred in the central part of the mountain range over four to two million years ago. This feedback process between erosion and internal tectonic shifting resulted in a mass of material moving up toward the surface very rapidly.

Enkelmann's model suggests that global climate shifts triggered a change in the rheology — the way material behaves. While the Earth was much warmer millions of years ago, glaciers still existed in the high altitudes. However, 2.6 million years ago the Earth experienced a shift to a colder climate and glaciation intensified. Glaciers grew larger, froze solid, covered the area and did not move.

Enkelmann said the glaciers today are wet-based and are moving, very aggressively eroding material around and out, and in the case of her observation, into the Gulf of Alaska. The tectonic forces continue to move towards Alaska, get pushed underneath and the sediment on top is piling up above the Yakutat plate.

These processes work against each other. The movement of glaciers can compete with the internal buildup. Scientists have suggested that the Himalayas, European Alps and mountains in Taiwan were caused by the same competing reactions as those Enkelmann has observed in southeastern Alaska. According to Enkelmann, the climate-driven erosion can influence the tectonics and change the motion of the rocks in that area. The study was published in the journal Geophysical Research Letters.

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14 Extreme Weather Events Linked to Climate Change

Date: 07th November, 2015 Source: Ecowatch

Even though skeptics would disagree, weather and climate are clearly two different things. We know that the greenhouse gases emitted by human activities such as burning fossil fuels and land use cause global temperatures to rise over long stretches of time, but what effect does that have on the weather today? Well, according to a new study, we can now pin at least 14 extreme weather events in 2014—including heatwaves, drought, wildfires and floods—on climate change.

The report, Explaining Extreme Events of 2014 from a Climate Perspective, published in the Bulletin of the American Meteorological Society, uses research from 32 groups of scientists from around the world. Scientists from National Oceanic and Atmospheric Administration (NOAA) served as four of the five lead editors on the report. The study says, for instance, that the drought in East Africa, extreme rainfall in France, and heat waves felt on nearly every continent can be linked to climate change. However, though California's wildfires have definitely increased over the years due to climate change, the study notes that there was no specific link to the wildfires last year. As for the unusually frigid winter felt in many parts of the U.S. (remember the polar vortex?), the scientists suggest it was influenced not by climate change but by temperature variability. "It is by no means a prevailing one-story-fits-all-events type of approach to this," said Martin Hoerling, an editor of the report and a NOAA meteorologist, at a news conference. "It does require a specific analysis of each case on its own merit." For example, Brazil's horrific drought, is not necessarily due to rising global temperatures but perhaps instead to an increasing population and water consumption. "For each of the past four years, this report has demonstrated that individual events, like temperature extremes, have often been shown to be linked to additional atmospheric greenhouse gases caused by human activities, while other extremes, such as those that are precipitation related, are less likely to be convincingly linked to human activities," said Thomas R. Karl, director of NOAA's National Centers for Environmental Information. "As the science of event attribution continues to advance, so too will our ability to detect and distinguish the effects of long-term climate change and natural variability on individual extreme events. Until this is fully realized, communities would be well-served to look beyond the range of past extreme events to guide future resiliency efforts," he continued. The scientists have urged for more research in this area. "Understanding our influence on specific extreme weather events is groundbreaking science that will help us adapt to climate change," said Stephanie C. Herring, lead editor for the report. "As the field of climate attribution science grows, resource managers, the insurance industry and many others can use the information more effectively for improved decision making and to help communities better prepare for future extreme events."

Here are the study's key findings across the world's continents, with events that can be attributed to climate change in bold:

North America

- Overall probability of California wildfires has increased due to human-induced climate change, however, no specific link could be made for the 2014 fire event
- Though cold winters still occur in the upper Midwest, they are less likely due to climate change
- Cold temperatures along the eastern U.S. were not influenced by climate change and eastern U.S. winter temperatures are becoming less variable
- Tropical cyclones that hit Hawaii were substantially more likely because of human-induced climate change
- Extreme 2013-14 winter storm season over much of North America was driven mainly by natural variability and not human caused climate change

- Human-induced climate change and land-use both played a role in the flooding that occurred in the southeastern Canadian Prairies

South America

- The Argentinean heat wave of December 2013 was made five times more likely because of human-induced climate change
- Water shortages in Southeast Brazil were not found to be largely influenced by climate change, but increasing population and water consumption raised vulnerability

Europe

- All-time record number of storms over the British Isles in winter 2013-14 cannot be linked directly to human-induced warming of the tropical west Pacific
- Extreme rainfall in the United Kingdom during the winter of 2013-2014 was not linked to human-caused climate change
- Hurricane Gonzolo was within historical range of strength for hurricanes transitioning to extratropical storms over Europe
- Extreme rainfall in the Cévennes Mountains in southern France was three times more likely than in 1950 due to climate change
- Human influence increased the probability of record annual mean warmth over Europe, NE Pacific, and NW Atlantic

Middle East and Africa

- Two studies showed that the drought in East Africa was made more severe because of climate change
- The role of climate change in the Middle East drought of 2014 remains unclear. One study showed a role in the southern Levant region of Syria, while another study, which looked more broadly at the Middle East, did not find a climate change influence

Asia

- Extreme heat events in Korea and China were linked to human-caused climate change
- Drought in northeastern Asia, China and Singapore could not conclusively be linked to climate change
- The high west Pacific tropical cyclone activity in 2014 was largely driven by natural variability
- Devastating 2014 floods in Jakarta are becoming more likely due to climate change and other human influences
- Meteorological drivers that led to the extreme Himalayan snowstorm of 2014 have increased in likelihood due to climate change
- Human influence increased the probability of regional high sea surface temperature extremes over the western tropical and northeast Pacific Ocean during 2014

Hold your breath: Pollution levels spike, smog thickens in Delhi

Date:08th November, 2015 Source: Climate Progress

The level of Benzene, exposure to which can have long term adverse health effects including cancer, was alarmingly high at Anand Vihar and few other residential areas like Civil Lines and RK Puram. Delhi's air quality continued to deteriorate Saturday, with particulate matter (PM) levels crossing 700 micrograms per cubic metre — nearly 12 times the permissible limit — in areas like Anand Vihar in the morning. In the majority of monitoring stations, particulate matter known to penetrate the lungs deeply, PM 10 and PM 2.5, were recorded as the prominent pollutants. According to the environment ministry's Air Quality Index (AQI), PM 10 was the most prominent pollutant in Anand Vihar,

and its levels were in the "severe" range.
The AQI data revealed that PM 2.5 was the prominent pollutant in at least three stations — R K Puram, Punjabi Bagh and NSIT Dwarka — and was in the "severe" range of 401-500 micrograms per cubic metre on Saturday evening. According to the AQI, this range of pollutants "affects healthy people and seriously impacts those with existing diseases". In Shadipur, where PM 2.5 was again the prominent pollutant, its levels were in the "very poor" range of 301-400 and this could lead to "respiratory illness on prolonged exposure," according to the AQI. Suspended particulate matter like PM 2.5 and PM 10, once inhaled, have the potential to cause severe damage to the respiratory system, warn doctors.

Meanwhile, Delhi Chief Minister Arvind Kejriwal Saturday urged people not to turn the festival of light into a "festival of smoke". "On this occasion of happiness, I want to make an appeal. Our Delhi is struggling with an acute problem of air pollution, which assumes dangerous proportions on Diwali due to the bursting of fireworks and crackers. This has a detrimental effect on the health of people living here, particularly children and senior citizens. Keeping this in mind, please try not to burst fireworks and crackers. Let us not convert the festival of lights into a festival of smoke," said Kejriwal.

The air quality monitoring stations of System of Air Quality and weather Forecasting and Research (SAFAR), under the Union Ministry of Earth Sciences, showed the average PM 2.5 and PM 10 levels at 272 and 330 respectively, which fall under the "very poor" category. As the day progressed, the capital also came under a blanket of thick smog, a phenomenon scientists at the IMD attributed to multiple factors, including increased moisture levels due to recent western disturbances, burning of crop stubble in neighbouring states and local emissions. The levels of Benzene, a compound associated with cancer and other health problems, also spiked at Anand Vihar and residential areas like Civil Lines and R K Puram, as per the readings of Delhi Pollution Control Committee.

The smog cover will continue till early next week, believe scientists. "The situation is likely to continue till November 9. After that, there is a possibility of western disturbance, which will disperse the pollutants to some extent. But the situation is also due to the recent showers, which introduced a lot of moisture in the air," said a senior IMD official. On Friday as well as Saturday, many traffic police personnel posted across the capital were observed wearing protective masks. "Pollution has been a problem and a lot has been done to educate traffic personnel about it. We have started providing free protective masks," said Muktesh Chander, special commissioner of police (traffic).

Climate change threatens 55 mn in India's coastal areas

Date:09 November, 2015 Source: Money Control

Homes of 55 million people in coastal areas of India are likely to be submerged in sea with a 4 degrees Celsius global increase in temperature, warned a new report published yesterday in Climate Central -- a US-based non-profit research and journalism organisation. Climate change threatens nearly 55 million people in India's coastal areas and could lock in enough sea level rise to submerge land currently home to more than half a billion people globally if the temperature spikes by 4 degrees Celsius -- humanity's current trajectory. Homes of 55 million people in coastal areas of India are likely to be submerged in sea with a 4 degrees Celsius global increase in temperature, warned a new report published yesterday in Climate Central -- a US-based non-profit research and journalism organisation.

It warned that a 4 degrees Celsius increase in temperature could submerge a whopping 145 million in China. The findings comes just weeks ahead of a UN climate summit in Paris from November 30 to December

11. The objective of the summit is to cap the rise in Earth's temperatures to 2 C above pre-industrial levels. Achieving the two-degree goal remains a serious challenge. "A 4C warming scenario could lock in enough sea level rise to submerge land inhabited by half or more of today's population in Shanghai and Shantou, China; Haora (Howrah), Calcutta and Mumbai, India; Hanoi, Vietnam; and Khulna, Bangladesh," it said. The report, however, said that if the increase in global temperature is managed to 2 degrees – the target set by the international community – this man-made calamity could be considerably reduced. If the world temperature rises by 2 degrees Celsius, homes of 20 million people in India would be submerged in sea while the figure is expected to be 64 million in China.China has the most to gain from limiting warming to 2 degrees Celsius. Carbon emissions causing 4 degrees Celsius could lock in enough sea level rise to submerge land currently home to 470 to 760 million people, the report said. It also showed that aggressive carbon emissions cuts resulting in 3.6 degrees Fahrenheit warming — equivalent to 2 degrees Celsius — could bring the numbers down to 130 million. According to the report, China - the world's leading carbon emitter - also leads in coastal risk, with 145 million people living on land ultimately threatened by rising seas if emission levels are not reduced. Twelve other nations each have more than 10 million people living on land at risk, led by India, Bangladesh, Vietnam, and Indonesia. The United States is most threatened outside of Asia, with roughly 25 million people on implicated land. Meeting the 3.6F goal would cut exposure by more than half in the US, China, and India, the world's top three carbon emitters, as well as in many other nations.

Pollution dampens festive air

Date: 09th November, 2015 Source: The Hindu

This season, the level of PM2.5 has already surpassed the levels recorded on Diwali night last year. The Capital's air quality is currently poorer than what it was last year on Diwali day (among the highly polluted days in the city) according to figures released by the monitoring stations.Air quality this season is so poor that the level of PM2.5 has already surpassed the levels recorded on Diwali night last year. With extensive bursting of firecrackers, the festival of lights is also one of the most polluted days of the year. On Diwali 2014, which was on October 23, the PM2.5 levels in Pitampura, Janakpuri and Pragati Maidan was 678, 510 and 323 micrograms per cubic metre respectively, according to a report of the Central Pollution Control Board. But this year, the levels of PM2.5 have already peaked at over 700 micrograms per cubic metre, which is more than 10 times the standard of 60.

Sunday saw severely polluted skies, with the Anand Vihar monitoring station seeing an average PM2.5 level of 490 micrograms per cubic metre, as per the National Air Quality Index. Two other stations — Punjabi Bagh and Mandir Marg — saw "severe" warnings with average PM2.5 levels of 434 and 404 micrograms per cubic metre respectively. Delhi has suffered through bad air quality from October onwards with the situation worsening in November. The heightened levels of PM 10/2.5 drop in temperature and high moisture content among other polluting causes is contributing to low visibility and poor air quality; note several environment observers.

Delhiites suffered through the weekend with many complaints of eyes stinging/watering and experiencing a sense of choking. The World Health Organisation (WHO) has noted that air pollution increases the risk of respiratory and heart disease in the population.
Both short and long-term exposure to air pollutants have been associated to health impacts. More severe impacts affect people who are already ill. Children, the elderly and poor people are more

susceptible. Pollutants of major public health concern include particulate matter, carbon monoxide, ozone, nitrogen dioxide and sulfur dioxide. Outdoor and indoor air pollution cause respiratory and other diseases which can be fatal, notes WHO. Meanwhile, it was the common man on the street who is the worst hit. A daily wager sanitation employee in Pandara Road, Ali (40) from Assam complains that the city becomes unliveable during winter. "I have a constant burning sensation in my eyes and a choking sensation in my chest. During winters, I have a wheezing problem, which worsens during late December and January. The government is doing little to ensure that there is any preventive healthcare offered to the poorer sections of the society. I wear a mask sometimes…besides that there is nothing I can do,'' he said. Also, people who want to go out during the festival season say that the polluted air is 'spoiling the mood'. Ashutosh Gill from Minto Road notes that his family has avoided going out for shopping as his old parents are unable to bear the burning sensation in their eyes and chest. "My father is asthmatic and it is impossible for him to go out for his morning walks. Shopping can get too much for him," he added.

Climate Change Threatens 55 Million in India's Coastal Areas: Report

Date: 09th November 09, 2015 Source: NDTV

WASHINGTON: Climate change threatens nearly 55 million people in India's coastal areas. This could lock in enough rise of sea level to submerge land currently home to more than half a billion people globally if the temperature spikes by four degrees Celsius, which is humanity's current trajectory, according to a new report. The report published yesterday in Climate Central, a US-based non-profit research and journalism organisation also warned that the increase in temperature could submerge a whopping 145 million in China also. The findings come just weeks ahead of a UN climate summit in Paris from November 30 to December 11. The objective of the summit is to cap the rise in Earth's temperatures to two Centigrade above pre-industrial levels. Achieving the two-degree goal remains a serious challenge. "A 4C warming scenario could lock in enough sea level rise to submerge land inhabited by half or more of today's population in Shanghai and Shantou, China; Haora (Howrah), Calcutta and Mumbai, India; Hanoi, Vietnam; and Khulna, Bangladesh," it said. The report, however, said that if the increase in global temperature is managed to two degrees, which is the target set by the international community, then this man-made calamity could be considerably reduced. If the world temperature rises by two degrees Celsius, homes of 20 million people in India would be submerged in sea while the figure is expected to be 64 million in China. Carbon emissions causing four degrees Celsius could lock in enough sea level rise to submerge land currently home to 470 to 760 million people, the report said. It also showed that aggressive carbon emissions cuts resulting in 3.6 degrees Fahrenheit warming - equivalent to two degrees Celsius - could bring the numbers down to 130 million. According to the report, China - the world's leading carbon emitter - also leads in coastal risk, with 145 million people living on land ultimately threatened by rising seas if emission levels are not reduced. Twelve other nations each have more than 10 million people living on land at risk, led by India, Bangladesh, Vietnam, and Indonesia. The United States is most threatened outside of Asia, with roughly 25 million people on implicated land. Meeting the 3.6F goal would cut exposure by more than half in the US, China, and India, the world's top three carbon emitters, as well as in many other nations.

Climate change threatens 55mn in India's coastal areas: Report

Date:09th November, 2015 Source: The Financial Express

Climate change threatens nearly 55 million people in India's coastal areas and could lock in enough sea level rise to submerge land currently home to more than half a billion people globally if the temperature spikes by 4 degrees Celsius -- humanity's current trajectory. Climate change threatens nearly 55 million people in India's coastal areas and could lock in enough sea level rise to submerge land currently home to more than half a billion people globally if the temperature spikes by 4 degrees Celsius — humanity's current trajectory. Homes of 55 million people in coastal areas of India are likely to be submerged in sea with a 4 degrees Celsius global increase in temperature, warned a new report published yesterday in Climate Central — a US-based non-profit research and journalism organisation.

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India makes strong pitch for climate finance ahead of Paris climate summit

Date:10th November, 2015 Source: The Times of India

NEW DELHI: With the world expecting to sign a global climate deal in Paris next month, India on Tuesday said that the crucial issue of post-2020 finance would be fundamental to the success of the climate summit in the French capital where the countries would hopefully arrive at an agreement next month. The issue where rich nations are supposed to contribute to the Green Climate Fund (GCF) - a multilateral fund to help poor and developing countries fight climate change - is currently revolved around nature of contribution and beneficiaries.

Articulating India's point of view on this critical issue where the developed and developing countries are not on the same page at present, India's environment minister Prakash Javadekar said, "The crucial question of post-2020 finance, to our understanding, is fundamental to the success of Paris and has been recognized so, even by the (French) President Francois Hollande.

"While post-2020 finance has to be predictable and scaled up from USD 100 Billion onwards, we do not want to see a change in the very paradigm in which finance has been talked about in the Convention. The commitment to provide finance by developed countries is based on their historical responsibilities and not only on their economic capacities". He was making his Intervention at the closing plenary session of pre-COP at Paris. The three-day pre-COP (conference of parties) was convened in Paris to made progress on many issues before the nation will assemble in the French capital later this month for the crucial climate summit.The entire issue of the climate finance has, of late, become quite tricky as rich nations want the emerging economies like India, Brazil and South Africa should also contribute to the GCF and the money should go to poorer countries. Besides, the rich nations also want loans and existing overseas development assistance (ODA) as counted as the climate finance -- the points which have strongly been opposed by G77 plus China group. India is part of this group comprising 134 developing countries.

Javadekar clearly said that any attempts to enlarge the donor base by 'countries in a position to do so' or 'countries willing to do so', will not be appropriate from India's perspective. He said, "To us, the enlarging of donor base and shrinking of recipient base will amount to tinkering with the basic rubric of the Convention and that is, clearly, not what we intend to do". After conclusion of the pre-COP meet, foreign minister of FRance Laurent Fabius, who will preside over the November 30-December 11 climate summit in Paris, told journalists that progress was made on the principle of five-yearly revision and continuous improvement of countries' pledges on emission cuts. Referring to the upcoming COP21 in the French capital, Javadekar during his intervention said, "We are all aware of the enormity of the task that is before us and time is clearly not on our side. We cannot, therefore, afford to complicate Paris and as I have said umpteen number of times, we should keep Paris simple.

"To us, Paris will be a good beginning, for enhancing our actions under the convention, and there will be life after Paris. We should therefore not try to solve every issue, including technical details in Paris, but leave it for the following COPs". Referring to the pre-2020 actions, the minister in his intervention sought to remind the rich nations of their commitments where they are supposed to cut their carbon emission by 2020. He said, "Pre-2020 actions are key to building trust among parties (countries) and precursor to enhanced efforts in post-2020 period. We strongly believe that there can be no 'Action Holiday' in the pre-2020 period and the Paris decision on the pre-2020 actions should incorporate elements of ambitious mitigation actions by developed countries and enhanced support to developing countries to enable them to take affirmative climate action".

CLIMATE FINANCE:
* Issue of climate finance continues to be a sticky point ahead of COP21
* Rich nations are expected to contribute to the Green Climate Fund (GCF) - a multilateral fund to help countries fight climate change
* It is a financial arm of the UNFCCC
* There is a goal to mobilize $100 billion a year from both public and private sources to the fund beyond 2020
* There is, however, no clear road map to mobilize $100 billion a year from 2020
* Rich nations want the emerging economies, including India, too contribute to the GCF
* Rich nations also want that the money to be provided to only poor nations and not to countries like India
* 134 countries of the G77 plus China group, including India, want all rich nations must contribute to the GCF and the money should be made available to all developing countries under a global climate deal
* Developing countries want the rich nations to keep loans and existing overseas development assistance out of the climate finance.
* Developing countries also want the rich nations to scale up their contributions to the GCF beyond $100 Billion per year target

Climate Change: Rise In Temperature To Threaten 55 Million People in India's Coastal Areas

Date: 10th November, 2015 Source: All India Roundup

Climate change is likely to threaten 55 million people in India's coastal areas and could lock in enough sea level rise to submerge land currently home to more than half a billion people globally if the temperature rises by 4 degrees Celsius. Mumbai and Kolkata are among the top 10 megacities across the world that face a serious threat due to rising sea levels owing to climate change, according to a report released on 9 November by Climate Central, a US-based non-profit research journalism organization.

It warned that a 4°C increase in temperature could submerge a whopping 145 million in China alone and as many as 11 million people are at risk in Mumbai alone if the global temperature rises by 4°C, said the report. The findings came just weeks ahead of a UN climate summit to be held in Paris from November 30 to December 11. The objective of the summit is to cap the rise in Earth's temperatures to 2°C above pre-industrial levels, and this remains a serious challenge. The report said that carbon emissions, causing 4°C of warming, could result into rise in sea levels that could submerge land, currently home to 470 to 760 million people. It could also mean unstoppable rise of sea levels over centuries to come. "A 4 degrees Celsius warming scenario could lock in enough sea level rise to submerge land inhabited by half or more of today's population in Shanghai and Shantou, China; Haora (Howrah), Calcutta and Mumbai, India; Hanoi, Vietnam; and Khulna, Bangladesh," the report said. The report, however, added that aggressive carbon cuts, resulting in 2°C warming, could bring down the number of people who will get affected to 130 million.

According to the report, China faces maximum risk with 145 million people under threat due to rising sea levels, if emissions are not reduced. Besides China, the report said 12 other nations, including India, Bangladesh, Indonesia and Vietnam, each have more than 10 million people at risk.

According to the report, China faces maximum risk with 145 million people under threat due to rising sea levels, if emissions are not reduced. Besides China, the report said 12 other nations, including India, Bangladesh, Indonesia and Vietnam, each have more than 10 million people at risk. Mumbai has 11 million people at risk after 4°C of warming; the number drops to 5.8 million in case of 2°C warming.

Climate change tied to lower birth rate in U.S.: researchers

Date: 10th November, 2015 Source: Reuters

Climate change has likely been contributing to a steady decline in the U.S. birth rate, researchers said, predicting as many as 100,000 fewer babies born each year by the end of the century. Data shows the number of babies born drops in the eight to 10 months after a spate of days on which the average temperature exceeds 80°F (26.6 °C), according to research by the National Bureau of Economic Research, a non-partisan group based in Cambridge, Massachusetts.

The reason remains unclear, researchers said. People may have fewer sexual relations during warmer weather, or more likely such weather affects reproductive health, they said. For men, exposure to extreme heat can negatively affect semen quality and testosterone, and in women it could have an impact on menstruation, ovulation and implantation of fertilized eggs. The data showed that on average between 1931 through 2010, each hot day resulted in 1,165 fewer baby births across the United States some nine months later. The trend could result in some 100,000 fewer babies born per year in the United States by the end of

this century, according to the study. "We still don't know exactly how these temperature shocks are going to impact developing countries," said Alan Barreca, a co-author and professor of economics at Tulane University in New Orleans, Louisiana. The U.S. birthrate has largely been on the decline over several decades, although the number of births increased slightly in 2014, according to the Centers for Disease Control and Prevention. Air conditioning could mitigate some of the impact of climate change on fertility, the study said. However, hydrofluorocarbons (HFCs), the potent greenhouse gases used in air conditioning, would contribute to global warming, Barreca said. World leaders meet in Paris later this month to work on a plan to reduce the effects of climate change. (Reporting by Sebastien Malo, Editing by Ellen Wulfhorst. Please credit the Thomson Reuters Foundation, the charitable arm of Thomson Reuters, that covers humanitarian news, women's rights, trafficking, corruption and climate change. Visit www.trust.org)

The World's Most Toxic Air

Date: 10th November, 2015 Source: Eco Watch

It's been unseasonably hot in North India this month; but cooler weather brings not relief but stinging eyes and painful breath. Air pollution has become headline news here—one of the snippets that flowed from President Obama's visit was that breathing the air had cut six hours off his life-expectancy. Soot levels are up to 16 times higher than World Health Organization safety levels, double Beijing's. Corporations routinely try to reassure their staff by providing air purifiers for their offices.

Delhi came to the edge of unlivable air pollution once before, in the 1990's. Highly polluting two-cycle three wheeler motor rickshaws were a main villain. A campaign led by the Center for Science and the Environment, capped by a Supreme Court ruling, converted the rickshaws to CNG and the air immediately improved. But three decades of vehicle growth, exacerbated by government subsidies for diesel fuel which drove the auto market towards dirtier diesel models, brought the return of choking air. This time there is no single fix like CNG in the wings. Not all of Delhi's problem is the result of poorly controlled industry. The early winter problem is significantly exacerbated by the burning rice straw in the fields after the harvest. And cultural practices matter. When three babies sued to prevent the use of firecrackers to celebrate India's Diwali festival, because the crackers create enormous clouds of smoke, the courts declined to intervene, referring to well established custom.

They did, however, rule that trucks passing through Delhi bound for other destinations were to pay a special toll to encourage the to route around the heavily polluted capital. (Many of the destinations were Delhi suburbs which lie outside its boundaries but are fully economically integrated). When the company which manages the truck check points into Delhi initially refused to collect the tolls, the courts instead ordered such non-local loads turned back, even though in some cases the crops the trucks were carrying would rot on the longer routes around the city. The result was a nightmare—long lines of trucks waiting at the check-points, belching out pollutants and wasting fuels while inspectors used handkerchiefs as respiratory protection. Eventually the collection of the toll was implemented—but if it accomplishes its purpose and causes truckers to drive around Delhi instead of through it, regional pollution could well increase because the new routes will be longer and more fuel wasting. What is really needed is cleaner trucks and cleaner fuels or better ways of delivering goods than using trucks—but these take time. This kind of rough and ineffective justice is often a marker of early efforts to cope with the first wave of public concern over air pollution. Typically the effort is made to eliminate or reduce the source of pollution only when air quality is particularly bad. Mexico City experimented with prohibiting vehicles from driving one day a week during bad smog episodes, based on the last digit on the license plate. Families responding by buying an additional car, often a polluting clunker, for the day their regular sedan was banned. China banned factories from operating during the Olympics; factories stepped up production and pollution after the games ended. My own San Francisco sponsors "spare the air days" on which the public is encouraged to make special efforts to use transit to get to work. (Bizarrely, bicycling is also encouraged on these heavily polluted days, at the same time that health authorities warn against such heavy physical exercise.)

Industries resist real modernization. When governments accede to these pressures to avoid genuine solutions, they resort to "squeeze the driver" strategies like the Delhi truck tax. But public demand eventually requires solutions—requiring cleaner fuels as Delhi did with 3-wheelers and CNG, imposing tougher emission standards on new cars as Mexico eventually was forced to do, installing pollution controls of power plants as the Obama Administration is finally requiring in the U.S. The costs are enormous. Delaying modernization once air pollution hits the public concern threshold is invariably penny-wise and pound foolish. This is true even if you ignore the economic and health costs of the pollution itself. First, squeeze the driver solutions typically generate a lot of ancillary expenses, like raising the costs of shipping goods to Delhi suburbs or the increased driving in Mexico by clunkers. But more important, delaying action means that another generation of poorly engineered vehicles or poorly controlled power plants and factories, get built. When the public finally demands clean air, not band aids, governments are left with two economically unattractive options. Either impose truly draconian limits on new vehicles and facilities, to make up for the failure to control those just built; or insist on retrofitting (power plants) or junking (cars, as in the U.S. cash-to-clunkers program) vehicles and industrial facilities goods that should have been properly designed and pollution optimized in the first place. Retrofitting is astonishingly more expensive than doing it right in the first place. One of the major reasons for the shut-down of more than 200 U.S. coal power plants is that for decades power companies lobbied, successfully, to avoid installing mercury and sulfur pollution controls on them, choosing instead to purchase slightly cheaper coal and install high stacks to spread the pollution around. Now that the Obama Administration is insisting on cleaning up pollution, instead of dispersing it, pollution controls that might have been affordable as original equipment for plants built in the 1970's and 1980's are prohibitive. So delay is typical, whether we are looking at the U.S. or India. (Or London, where Mayor Boris Johnson has proposed to wait until 2020 to take any further action over London's resurgent pollution, saying its air is not as bad as that in Beijing or even Paris. Instead, he urged Londoners to spend less time outdoors to improve their health). Delay is expensive, as India is likely to find out when it proceeds with current government plants to clean up public health pollutants from the huge cadre of recent coal plants it has built without scrubbers and other state of the art pollution equipment.

Carbon emissions: Rising sea levels threaten 3 Indian cities

Date: 10th November 2015 Source: International Business

India and China lead the list of countries likely to be most affected by a 4 degrees Celsius rise in temperature caused by carbon emissions, according to a report by Climate Central - a US based non-profit research organisation. The rise in sea levels because of the climate change can lead to the submergence of land inhabited by 200 million people in the two countries alone, and 470 to 760 million people globally. Global megacities in Asia, with the top ten populations, that may lose the most land to sea are Shanghai, Hong Kong, Calcutta, Mumbai, Dhaka, Jakarta, and Hanoi. Limiting the rise in temperature to 2 degrees Celsius would, however, reduce the risk for 35 million people in India and 64 million in China. China and India, among other countries would receive major benefits in their coastal areas by cutting carbon emissions that would limit the rise in temperature to 2 degrees Celsius. Cities in India – Calcutta, Mumbai and Cuttack - should restrict exposure to 24%, 27% and 7% of its population as opposed to 51%, 50% and 18% should the temperature rise to 4 degrees Celsius. In China, Hong Kong, Tianjin and Shenzen can, similarly, restrict the repercussions to 31%, 12% and 9% as opposed to 46%, 29% and 20% of its population.

The 4 degrees Celsius rise can prove disastrous for cities like Shanghai and Shantou in China; Howrah district in Calcutta and Mumbai, by submerging land inhabited by half or more of today's population. Howrah district in Calcutta, which lies next to the Hooghly river, where 60% population is at

risk, would benefit by the 2 degrees Celsius difference in the warming scenario. The risk would be cut three-fold, as would Wuxi, a city near Shanghai, China on the banks of the Taihu Lake. However, the Asian megacities of Shanghai and Hong Kong in China and Mumbai in India, in spite of limiting the temperature rise to 2 degrees Celsius, would still have 25% of its lands submerged in the impending rise in sea level. At the UN summit, the Paris Climate Conference - COP21, to be held in December 2015, issues that would determine the future of climate change and management, and lives of millions of people in the world would find expression. The aim of the conference would be to legally bind more than 190 countries to a universal agreement on climate, with the aim of keeping global warming below 2°C.

Climate Change Poised to Push 100 Million Into 'Extreme Poverty' by 2030

Date: 10th November , 2015 Source: Eco Watch

Adding urgency to the call for bold emissions cuts and a radical rethinking of the global economy, a new report from the World Bank warns that human-caused climate change could push more than 100 million people into extreme poverty within just 15 years. Entitled "Shock Waves: Managing the Impacts of Climate Change on Poverty," the World Bank's study differs from previous efforts by looking at the poverty impacts of climate change at the household level, rather than at the level of national economies. Already, global warming is sparking higher agricultural prices; increasing "natural hazards" such as heat waves, droughts and floods; and exacerbating public health issues, the report states. Without "immediate" adoption of mitigation, adaptation and emission-reduction policies, the World Bank cautions that rising greenhouse gases—and temperatures—will continue to ravage vulnerable populations, dragging them further into poverty.

The bank's most recent estimate puts the number of people currently living in extreme poverty at 702 million or 9.6 percent of the world's population. "Poor people and poor countries are exposed and vulnerable to all types of climate-related shocks—natural disasters that destroy assets and livelihoods; waterborne diseases and pests that become more prevalent during heat waves, floods or droughts; crop failure from reduced rainfall; and spikes in food prices that follow extreme weather events," it reads. "Climate-related shocks also affect those who are not poor but remain vulnerable and can drag them into poverty—for example, when a flood destroys a micro-enterprise, a drought decimates a herd or contaminated water makes a child sick."

For example, the report states that by 2030, crop yield losses could mean that food prices would be 12 percent higher on average in Sub-Saharan Africa. "The strain on poor households, who spend as much as 60 percent of their income on food, could be acute," the World Bank declares. Meanwhile, in India alone, an additional 45 million people could be pushed over the poverty line by 2030, primarily due to agricultural shocks and increased incidence of disease.

To combat these devastating impacts, Shock Waves recommends implementing a combination of:

- rapid, inclusive and climate-informed development and targeted adaptation interventions to cope with the short-term impacts of climate change; and
- pro-poor mitigation policies to limit long-term impacts and create an environment that allows for global prosperity and the sustainable eradication of poverty.

"The report demonstrates that ending poverty and fighting climate change cannot be done in isolation—the two will be much more easily achieved if they are addressed together," said Stephane Hallegatte, a senior economist at the World Bank who led the team that prepared the report. Among the report's specific recommendations are to improve health care systems and access; help households at all income levels gain access to financial instruments for risk management; and provide social protections to help support poor people affected by disasters or environmental and economic shocks.

Noting that "there is still too often a disconnect between bank research and its own practices," the head of Oxfam International's Washington office, Nicolas Mombrial, on Monday urged the global financial institution "to heed its own warnings and support equitable, low carbon development" and "promote community resilience to climate change through its policies and programs."

Furthermore, he said, the report adds further credence to the call for an ambitious agreement to come out of the upcoming COP21 climate talks in Paris. "Any climate deal must commit countries to making their greenhouse gas cuts more aggressive and help vulnerable countries to adapt to climate impacts," Mombrial said. "It must also promote clean growth by dramatically increasing public finance, building on the yearly $100 billion already promised by 2020." "This report further highlights what Oxfam has been warning for many years: climate change is exacerbating inequality and hurting poor people first and worst," Mombrial concluded. "To effectively solve the climate crisis we must simultaneously tackle the root causes of poverty and hunger globally."

Delhi's toxic air at Diwali increases risks of heart attack for citizens

Date:11th November, 2015 Source: International Business

The upsurge in the poor quality of air in Delhi on Tuesday, on the eve of Diwali, can be consequential for people who have respiratory and heart problems, increasing chances of heart attacks, if researchers are to be believed. According to a recent study conducted by researchers in Utah in the US, poor-air-quality days can lead to an increased chance of heart attack for patients with heart diseases. "Our research indicated that during poor-air-quality days, namely those with high levels of PM2.5, patients with heart disease are at a higher risk of suffering from a STEMI heart attack," said Kent Meredith, MD, cardiologist and researcher at the Intermountain Medical Centre Heart Institute.

Delhi's air pollution problem already poses health risks to citizens who can expect a reduced life expectancy by 3.2 years. On Diwali eve, with firecrackers exploding everywhere, Delhi saw an upsurge in the level of suspended particulate matter. Areas in Delhi such as Anand Vihar crossed the safety limit of 100 micrograms per cubic metre by more than seven times, standing at 721 micrograms per cubic metre of suspended particulate matter i.e. PM 10, while PM levels ranged between 2.5-10 in residential areas like Mandir Marg, Punjabi Bagh, RK Puram, Pusa Road, Civil Lines, etc, the evening before the festival of lights. According to the US study which examined 16,000 patients who had suffered three kinds of heart attacks – STEMI, non-STEMI and unstable angina -- from 1993 to 2014, it was found that on bad-air-quality days, more cases of STEMI, the most severe kind of heart attack, had a greater chance of occurring. "The study suggests that during many yellow-air-quality days, and all red-air-quality days, people with known coronary artery diseases may be safer if they limit their exposure to particulate matter in the air by exercising indoors, limiting their time outdoors, avoiding stressful activities, and remaining compliant with medications," said Dr Meredith.

In other words, the alarm bells are ringing for residents of the national capital with coronary problems. In Delhi, the System of Air Quality and Weather Forecasting and Research (SAFAR) project in-charge Gurfan Beig had said: "In all likelihood, air quality during Diwali this year is going to be inferior to that of Diwali-2014 owing to cooler temperature and downward shift of the inversion layer."The evening readings of the Delhi Pollution Control Committee and SAFAR stations on Tuesday categorised the air quality in Delhi between "poor" and "very poor". The toxic air in Delhi is also the source of increasing cases of acute respiratory diseases, with the National Health Profile reporting 3.5 million cases the previous year.

Post-2020 climate fund key to Paris talks success: Prakash Javadekar

Date:11th November, 2015 Source: NDTV

NEW DELHI: With the world expected to sign a global climate deal in Paris next month, India on Tuesday said that the crucial issue of post-2020 finance would be fundamental to the success of the climate summit in the French capital. Rich nations are supposed to contribute to the Green Climate Fund (GCF) - a multilateral fund to help poor and developing countries fight climate change - but the issue is stuck around the nature of contributions and beneficiaries.
Articulating India's point of view on this critical issue where developed and developing countries are not on the same page at present, environment minister Prakash Javadekar said, "The crucial question of post-2020 finance, to our understanding, is fundamental to the success of Paris and has been recognized to be so, even by the (French) President Francois Hollande.

"We do not want to see a change in the very paradigm in which finance has been talked about in the Convention. The commitment to provide finance by developed countries is based on their historical responsibilities and not only on their economic capacities". He was making his intervention at the closing plenary session of pre-conference of parties (COP) in Paris. The entire issue of climate finance has, of late, become tricky as rich nations push for emerging economies like India, Brazil and South Africa to also contribute to the GCF so that the money can be shared with poorer countries. Javadekar clearly said that any attempts to enlarge the donor base by `countries in a position to do so' or `countries willing to do so', will not be appropriate from India's perspective. He said, "To us, the enlarging of donor base and shrinking of recipient base will amount to tinkering with the basic rubric of the Convention and that is, clearly , not what we intend to do". "To us, Paris will be a good beginning, for enhancing our actions under the convention, and there will be life after Paris," the minister said.

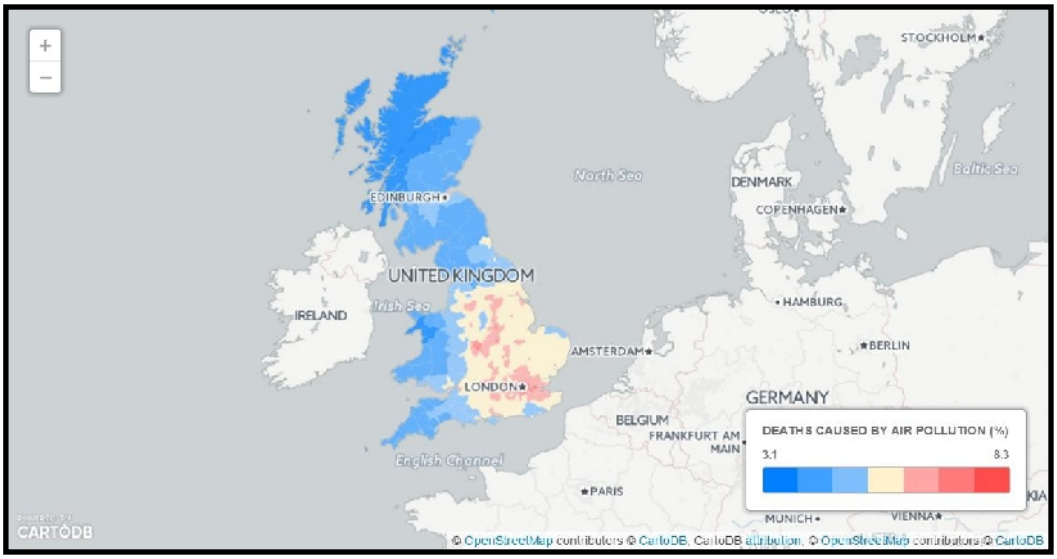
Mapped: Where is air pollution killing the most people?

Date: 13th November 2015 Source: Telegraph

Air pollution breaches EU safety limits in several parts of the country - but where is it causing the most deaths?Over 28,000 people die from air pollution in the UK every year, according to government statistics. Air quality is a significant issue in the UK, with 38 of Britain's 43 air quality zones exceeding EU safety limits for nitrogen dioxide, and London being the worst European capital for the pollutant.
While most air pollution deaths predictably occur in London, there are shocking differences between local areas. In the five local areas surrounding Wembley Stadium, for example, people experience very different levels of air quality - with the north and east of the stadium having significantly better air quality than areas south and west. London's air kills almost one in 10The capital city is, unsurprisingly, the UK's pollution

hotspot - which is the cause of significant health issues. Westminster and Kensington and Chelsea are the worst areas in the country, with 8.3 per cent of all deaths attributed to air pollution. These are among the most expensive area to live in the UK, with average Kensington and Chelsea house prices in excess of £1m.

Manchester urban utopia- Manchester has better air quality than Birmingham, despite the population of its metropolitan area being twice the size of Birmingham's. The city of Manchester has better air quality than Nottingham, Leicester and Luton - all of which are much smaller cities. The population of Manchester is more spread out than these other English cities - allowing the prevention of dangerous concentrations of air pollution. England has the UK's dirtiest airWith a staggering 25,002 deaths due to air pollution, England is suffering the most from dirty air in the UK. It has the worst air quality of any part of the UK. Within England, the north and Cornwall have the lowest levels of pollution. The air quality in parts of Cornwall is almost as good as the the Scottish Highlands, which enjoys the UK's cleanest air. Northern Ireland is the country with the best air quality, closely followed by Scotland



Fighting pollution a winter priority

Date:14th November, 2015 Source: Shanghai Daily

A woman cycles along a street in Beijing yesterday as the capital is shrouded in heavy smog. Heavy air pollution in Beijing and its neighboring regions will continue through Monday, the environment ministry said. Central and southern parts of the Beijing-Tianjin-Hebei region will see light to moderate pollution on Tuesday and Wednesday, with light pollution forecast for northern areas.— CFP

EMERGENCY measures to prevent air pollution, such as shutting down factories and construction sites, will be implemented this winter even before the regular warning system is triggered, the city's top environment official said yesterday. Shanghai uses a four-tiered, color-coded alert system based on air quality index readings. The lowest, or blue, warning is issued when the AQI is forecast to be between 201 and 300 over the following 24 hours. If such a reading is expected to last for 48 hours, the alarm is raised to yellow, or level 2."We have already made plans to suspend the operation of some heavy polluting factories and construction sites before the alarm system is triggered,"said Zhang Quan, chief of Shanghai Environmental Protection Bureau. The government has set a target to reduce the average density of PM2.5 particles ?the tiny pollutants that penetrate deep into the lungs ?to 40-45 micrograms per cubic meter by 2017. The mean density in the first nine months of this year was 50 micrograms per cubic meter, the environment bureau said earlier.As December is traditionally one of the worst months for air pollution, authorities in Shanghai are keen to tackle potential problems before they arise. As well as the preemptive measures, the bureau has devised a series of moves to respond to worsening conditions, it said.In the event

of a blue alert being raised, industrial plants and building sites will be put on alert, while under a yellow alarm, some such sites will be ordered to suspend operations, while vehicles carrying construction materials will be banned from the roads.A level 3, or orange, alarm is issued when the AQI is predicted to be between 301 and 450 over the next 24 hours, while a level 4, or red, alarm is triggered when the AQI is forecast to be over 450.Under an orange alarm, oil, chemical, steel and cement firms will be ordered to suspend operations, while if a red alarm is raised, all kindergartens, primary and middle schools will be told to close, and half of all official vehicles will be taken off the roads.Large-scale outdoor activities will also be canceled in the event of a top-level warning, and all construction work will be halted.The environment bureau said that over the next five years it plans to close 2,000 heavy polluting chemical and oil firms, and initiate 5,000 industrial restructuring projects.In the same period, more work will be done to improve the environment of suburban slum neighborhoods, while 26,000 waterways will be cleaned.

1.2 Million killed so far by air pollution in China this year

Date: 14th November, 2015 Source: EconoTimes

No matter what happens in the global push for clean air this year, China will continue on its quest to build 500 coal-fired plants designed to create electricity. The vast majority of these plants are going to be built without modern "scrubbers" to clean out the toxic ash and other major pollutants that can be removed by reactive metals. So let's get down to the truth about the China's release of its greenhouse gas emissions for this year. The US Chamber of Congress quotes the New York Times this year is saying that China has been burning seventeen percent more coal this year, all total, than they disclosed earlier this year according to recently released data. To put that in a global perspective that's more pollutants, in just the seventeen percent increase that we just found out about alone, than all the carbon dioxide output of the largest industrial country in the EU, Germany. And just to bring that into a larger context, China also intends to add another one thousand smaller coal-fired plants which it has on the drawing boards for preconstruction review in 2016. Very few of them plan to use Platinum or Palladium for scrubbing.

What all of this means to the world is that China's coal burning capacity alone accounts for twenty percent of the entire world's CO2 emissions and this number could jump to thirty percent next year. Couple this with India's demand for cheap electrical power driven by burning coal to create some 500,000 megawatts of coming electrical demand, and we have a recipe for a global disaster. Lisa Friedman in Scientific American states quite simply that "China has been on a coal binge for the past 15 years" and is in the process of on-boarding 16 giant coal-powered plants very shortly. For us to get a better handle on the magnitude of this pending disaster, in World War II the nuclear bombs dropped on Hiroshima and Nagasaki combined killed an estimated 220,000 people. If China stays at this pace of polluting the planet, they will kill this amount of people every month.

As a member of the mining, refining and bullion recycling industry for many years, I have seen the changes in the production in our industry to Green Gold, making sure no forced labor is used in the production of gold ore, or the careful recycling of reagents used to reduce silver to prevent the damage it could pose to the earth. The catalyst usage that I watch is most often a mix of precious metals. Platinum is the most active catalyst and is widely used, but is not suitable for all applications and there are many types of scrubbers but as a metals dealer I usually watch this type of pollution control device as it uses metals I deal with on a daily basis. All of this pollution control seems rather futile as I look upon the enormity of this destruction. The bodies are being stacked up, one on top of another just to save a few pennies as the very few once again make fortunes from the masses. Will the "Government of the People" decide to use pollution scrubbers to

reduce the pollution or will the carnage persist. And yes, the bigger question that must be answered; can the world survive the Chinese onslaught? As I look at the new changes in the Chinese policy on "public birthing" I have come to the realization of a stunning truth. The Government will now allow the people to have female children as well as additional males to repopulate the working stock for those that will be killed off by the current pollution levels which WHO, World Health Organization, places at 50 times above the "Extremely Hazardous Levels". The truly larger problem will be the falling birth rates due directly to the mercury levels not just in the air but finally building up in the blood streams of the working population. This will lower the birth rate and drop productivity and it tells me that the Green Initiative put forward by the Chinese Government is dead. So while you're slapping that Free Willy sticker on your car bumper, lift your head up for a moment and look to the labels on the products you own. If it's made in China, the earth and its' magnificent oceans are paying a terrible cost. Pete Thomas is a senior vice president at the Zaner Precious Metal Division. As a licensed floor broker he was a filling broker in the silver pit back in the days when silver ran to $55 an ounce. He currently manages a global cash desk which handles Refiners, Recyclers, Mining Operations and Coin & Bullion companies. He is constantly in demand for his insightful opinions drawn from his 35 years of metals trade to such news companies and magazines publishers as EconoTimes, Bloomberg News, The Guardian, Hard Assets, Kitco and Futures magazine.

Madrid Restricts Parking for First Time to Curb Pollution

Date:14th November, 2015 Source: TEMPO.CO

TEMPO.CO, Madrid - Madrid put restrictions on parking for non-residents in the city center for the first time on Friday and enforced reduced traffic speeds for a second day in a move to control air pollution which has cloaked the city with brown smog. The Spanish capital is relatively late to impose restrictions on traffic compared to other European cities. London introduced a congestion charge over a decade ago and has designated a low emission zone banning heavy diesel vehicles while Paris has pedestrianized some of its thoroughfares. The Madrid council put on extra buses on Friday and asked people to leave their cars at home due to high levels of nitrogen dioxide, a poisonous gas released by diesel engines and linked to respiratory problems like asthma. "It means a longer commuting time but everyone has to pull together to improve the situation," said 39-year-old architect Arantxa Echevarria who came into work by bus rather than car on Friday. Madrid's metropolitan area has over 3 million cars in circulation, around one for every two people, plus nearly another million of trucks, vans and motorcycles. A stretch of unseasonably sunny and clear weather and lack of rain has aggravated the poor air quality. Nitrogen dioxide is the only pollutant for which Madrid regularly exceeds European Union warning levels. Madrid was ranked one of the worst European cities for implementing measures on urban transport to improve air quality in a recent survey by environmental campaigners. Zurich came top out of 23 while Madrid came 20th.

Pollution levels up in city on Deepavali day

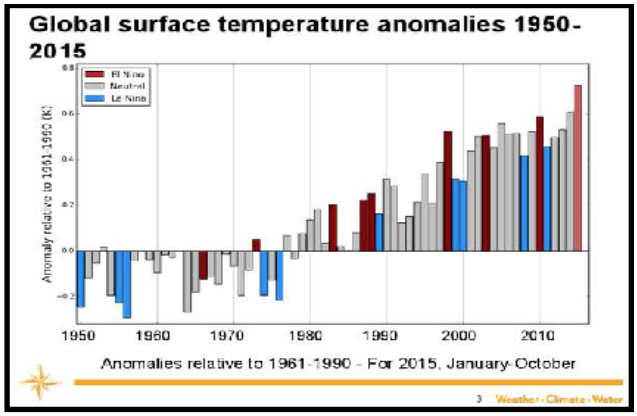
Date:15th November, 2015 Source: The Hindu

Air pollution monitored at three locations. Some of the air pollution parameters studied on Deepavali day were higher compared to normal days, according to Tamil Nadu Pollution Control Board. Two days- The board had studied air and noise pollution levels in the city on November 5 and 10. While air pollution was monitored at three locations, noise pollution was studied at two locations. PSG College of Arts and Science (sensitive zone), Ponnaiahrajapuram

(residential zone) and Collectorate (mixed zone) were the areas identified for studying air pollution.
According to the studies on November 10, suspended particulate materials were 134 at PSG College, 188 at Collectorate and 259 at Ponnaiahrajapuram as against the normal average of 100. It was raining in many places on Deepavali day. Also, several varieties of fancy fireworks were burst on the day. These would have resulted in atmosphere pollution, according to an official of the board. Noise pollution levels were studied at near Saibaba Temple junction and at Ponnaiahrajapuarm. Decibel level- The decibel level was 74.5 at Ponnaiahrajapuram and 66.3 near the Saibaba Temple junction and these levels were higher than the normal levels, added the official.

Bad News For The Planet, Says The World Meteorological Organization

Date: 25th November, 2015 Source: Climate Progress



The World Meteorological Organization (WMO) reports that 2015 will set (or already has set) a variety of worrisome climate records due to manmade carbon pollution:

- 2011-2015 "have been the warmest five-year period on record, with many extreme weather events – especially heatwaves – influenced by climate change."
- 2015 is set to be the hottest year on record by far, with the highest ocean surface temperatures ever monitored.
- It's "probable" that total global warming since the industrial revolution will cross the 1°C (1.8°F).
- The 3-month average of Northern Hemisphere CO2 levels "crossed the 400 parts per million barrier for the first time."

"This is all bad news for the planet," noted WMO Secretary-General Michel Jarraud. In particular, crossing the 1°C (1.8°F) means we are halfway to the 2°C (3.6°F) threshold that world's top scientists and governments have identified as the defense line past which climate impacts become very dangerous and then catastrophic. Last week, NASA data made clear that 2015 was going to crush the record for hottest year. On top of the underlying human-caused warming trend is the short-term warming caused by a very strong El Niño. As the top chart shows, global temperature records tend to be set in El Niño years, and those records just get higher and higher over time because of carbon pollution. Indeed, last month was not merely the hottest October — by far — in the 135-year temperature record of NASA. It was the highest divergence from the mean temperature ever recorded in the 1,600-month temperature record of NASA. NOAA reported that October 2015 bear the previous record set in October 2011 by a whopping 0.31°F (0.17°C).As this NOAA chart shows, the warming since January is so high that it is now a certainty 2015 will smash the record for hottest year set just last year: Finally, the WMO notes that all this warming is having an affect on our weather: "Scientific assessments have found that many extreme events in the 2011-15 period, especially those relating to extreme high temperatures, have had their probabilities substantially increased as a result of anthropogenic climate change – by a factor of 10 or more in some cases – with more than half the events scientifically assessed showing an anthropogenic climate change signal of some description in their risk."

DECEMBER 2015

Beijing's smog: When a scale of zero to 500 doesn't go high enough

Date: 02nd December, 2015 Source: LA Times

In the space of an afternoon, Beijing vanished. For days, the city was crisp and clear. Wind whipped down its ancient alleys and sprawling, 12-lane thoroughfares; an electric blue sky reflected in the glass walls of its postmodern office buildings. But by evening, all was gone, engulfed in a gauzy-white miasma. Buildings rose into hazy oblivion, and the sun became a dull yellow orb, like a flashlight shining from under a blanket. That was Friday, when levels of PM2.5 — particularly noxious particulate matter, small enough to enter the bloodstream through the lungs — reached 429 micrograms per cubic meter, 17 times the World Health Organization's recommended limit. By Monday, schools were closed; drivers were using their headlights at noon. As China's political and cultural capital, Beijing's heady dynamism attracts a diverse population of ambitious, passionate people. There are quiet streets lined with persimmon trees, and leafy parks where the elderly practice tai chi. Travel opportunities are abundant; the art scene is terrific; residents are, on the whole, remarkably good-humored, hospitable and astute.

There are, of course, downsides. The Internet is censored, the food unsafe, and the political system a wellspring of injustice, from petty corruption to sweeping crackdowns on dissent. To live happily requires mental acrobatics, beginning with a focus on the bright spots: There are those blue-sky days. Livelihoods are improving. More people are traveling abroad. And then, something happens that knocks everyone off balance. The pollution siege, which lasted through Tuesday, was one of those things. This has happened before, although this was one of the worst. Beijing residents have learned to take precautions. Some, if they can afford it, equip their homes and offices with expensive air purifiers. Some don 3M carpenters' masks before going outside.

But on truly bad days, the smog cuts through everything, hitting the tongue with an acute, chemical twang. The city becomes unrecognizable. Colors lose their hue. Office buildings look derelict, their finer features failing to cut through the haze. While there are pedestrians who wear face masks, most grin and bear it. Mothers bike their children to school with hollow eyes; drivers smoke cigarettes and tap their ashes through open windows. Speak with any of them and the conversation immediately turns to the smog — the tingle in the backs of everyone's throats; the sadness, even embarrassment that they live in a city that is "unsuitable for human habitation," as a state-backed think tank wrote in 2014.

Then, there's the black humor — as soon as the smog descends, so do the memes. These last few days, Internet users sent around stills from zombie apocalypse movies; photoshopped images of alien monsters superimposed into smoggy urban landscapes; and a series of monochrome, gray photographs with Beijing's major landmarks — the Temple of Heaven, the Rem Koolhaas-designed CCTV building — outlined in black marker. On Sunday, President Xi Jinping traveled to the international climate change conference in Paris. In advance of his arrival, China's environment minister, Chen Jining, announced that the country "has achieved the pollution-reduction targets for major pollutants outlined in its 12th Five-Year Plan, six months ahead of schedule," according to the state-run China Daily.

Meanwhile, Beijing got worse. By Monday, the Air Quality Index, a widely recognized measure of air pollution, hit 587 on the usual scale of zero to 500, registering as "beyond index" on monitors throughout the city. (The United Nations' recommended maximum level is 25.) The government issued an "orange weather alert," temporarily suspending some factories and ordering schools to keep children indoors. The problem's scope is difficult to fathom. This week's smog spread across a land mass of 204,634 square miles, according to the Ministry of Environmental Protection — about 25% larger than the state of California. For years, the government blocked reporting on the smog, until a similar stretch of record-breaking pollution in 2013 — dubbed the Airpocalypse by Internet users — resulted in a surge of public

complaints (and a run on air purifiers). In 2014, premier Li Keqiang said in a speech that the government would "declare war'' on smog. Authorities began releasing air pollution data with unprecedented transparency. They shut down coal-fired plants in central Beijing. This April, Greenpeace released a detailed report noting that air pollution in Beijing and 359 other Chinese cities had "modestly improved in the last 12 months."

Where is the world's most polluted city?

Date:02nd December 02, 2015 Source: The Guardian

Outdoor air pollution kills 3.3 million people, mostly in cities, every year. That's more than HIV, malaria and influenza combined – yet the sparse coverage of official data means many cities are not even monitored. Every day, hundreds of millions of people step outside into an environment that has become unsafe for human survival. Outdoor air pollution kills 3.3 million people every year, mostly in cities; more than HIV, malaria and influenza combined. But the search for this insidious mass killer reveals something astonishing. As the governments of more than 190 nations gather in Paris to discuss a possible new global agreement on climate change, not only don't we know where it kills the most, in many places we aren't even looking.

As November's cold winds sweep down from Mongolia, the coal burning season begins in northern China. At the time of publication, Chinese maps on the World Air Quality Index website were awash with red, purple and maroon flags, indicating dangerous levels of fine particulate matter (PM2.5) – the world's primary air pollutant.

It is thought that as many as 1.6 million Chinese are killed by breathing bad air every year. Beijing, in particular, is synonymous with the problem. Last weekend, the US embassy there reported the level of PM2.5 at 391 micrograms per cubic metre (µg/m3) and China's environmental protection agency recommended residents stay indoors. And yet, the most definitive database of PM2.5 pollution, produced by the World Health Organisation (WHO) earlier this year, places only one Chinese city, Lanzhou, in the worst 50. The top of this list is dominated by the ultra-miasmic cities of India and Pakistan and shaded at the top by Delhi. On an average day, the residents of the Indian capital breathe air fouled by fine particles at a concentration of 153µg/m3. This is close to three times the Beijing mean and 15 times the WHO guideline of 10µg/m3.

In Delhi, the fumes from 8 million cars, small-scale diesel electricity generators and surrounding coal plants have damaged the lung function of half the city's 4.4 million children so severely that they will never fully recover. There is no escaping this chemical haze. Doctors have begun prescribing that patients simply leave the city. This year, Delhi's chief minister spent time in a rehabilitation clinic in the country's south, allowing his lungs to recover. Hospitals don't record air pollution as a cause of death. It manifests through an increase in already prevalent human heart and lung diseases. Therefore its impact can only be assessed by taking samples directly from the air.

The WHO data has lead many, including the Guardian, to name Delhi as the "world's most polluted city". But the basis for this is flimsy. The WHO takes information from monitoring stations in more than 1,600 cities on every populated continent. This sounds comprehensive but, according to at least one count, covers less than a third of cities of over 100,000 people. Not all very polluted cities are big, although it helps.

The database is based on voluntary monitoring by governments. A spokeswoman for the WHO said the UN organisation cannot compare or rank cities because many do not have the resources or political will to set up a monitoring system. Gary Fuller, an air pollution expert at Kings College London, said continent-sized blank spots made it impossible to know where people were suffering the most.

"When we compare air pollution in cities, we only look at those with measurements," he said. "This focuses our attention on big cities and the developed world. Initial attempts to measure air pollution from satellites have revealed more areas of the world with dense populations and high air pollution." Of the 1,622 cities covered in the WHO data, 510 are in two countries – the US and Canada. Just 16 are in Africa (half of these in relatively wealthy South Africa and Egypt). That's 0.75% of the monitoring for 15% of the world's population, an increasing number of whom live in high-risk cities. Latin America's 604 million people are among the most heavily urbanised on earth. Their air is monitored in 109 cities. Across the Middle East, data is collected in just 24 cities.

India to ban old trucks as cities choke on dirty air

Date:03rd December, 2015 Source: Reuters

India will force all commercial trucks more than 15 years old off the road from April and is reviewing how it checks vehicle emissions, a senior transport official said, as the government tries to curb soaring urban air pollution. The World Health Organization said last year that India had 13 of the 20 most polluted cities on the planet, including the worst offender, New Delhi.

Fumes spewed by a multiplying fleet of commercial vehicles, many of them old and badly maintained, are one of the biggest contributors to air pollution nationally: the Centre for Science and Environment (CSE) think-tank estimates their share of vehicular emissions at 60 percent. "We are to make 15 years the end of the life for all commercial vehicles," Vijay Chhibber, the top bureaucrat in the transport ministry, told Reuters, saying the order, not previously reported, would be made public within 10 days and the ban enforced next April.

"It (air pollution) will get worse every year unless we do something." Hauliers complained such a move would unfairly single them out, while experts said the ban was only a part of the solution. "Taxes on cars and parking charges should be raised to curtail usage, and public transport should be expanded," said Vivek Chattopadhyay, a pollution expert at the CSE. "Emissions are not just related to age."

Smog has blanketed the Indian capital this week as a global climate summit began in Paris, a reminder of how hard it will be for India to achieve economic growth and prosperity without pollution getting worse. Despite growing recognition of the problem, weak coordination and enforcement have hobbled action to clean India's cities and tackle a health crisis that causes more than 600,000 premature deaths annually.

"INHALER AROUND THE CLOCK"- It was not clear how enforcement of the proposed ban would work, given faltering efforts to bar smoke-belching vehicles from the streets of New Delhi. "There is dust, pollution in the air and I have grave difficulty breathing," said 48-year-old asthmatic Abdul Razik Kamal, who sells tea from a roadside stall near one of New Delhi's main entry points for commercial trucks. "There are many more cars in Delhi today than there were a few years ago and I have to use the inhaler around the clock." China has declared a "war on pollution", with Beijing pledging billions to clean up its act, close coal-fired power plants and cut new car registrations. India said last week it would bring forward the date by which vehicles must comply with tighter emissions standards by three years to 2019, although the country is still behind emission norms followed in Europe and China. New car sales are booming, hitting close to 200,000 in October, their fastest monthly rate of growth in three years, as more urban

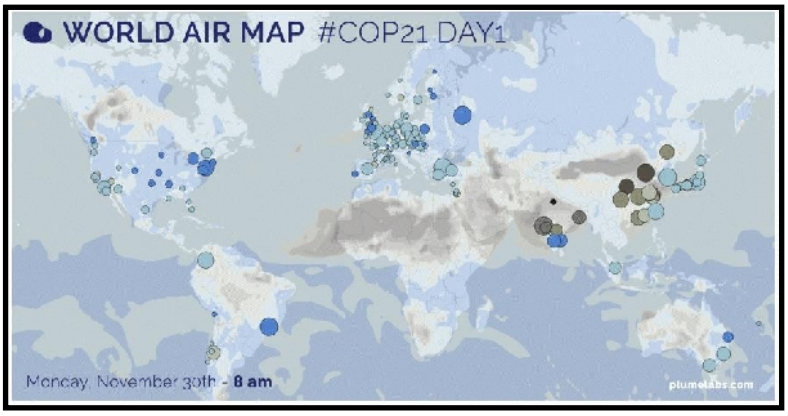
Indians can afford to drive. The transport ministry also wants to overhaul emission tests on private cars to ensure the measures are age- and vehicle-specific, as in the West.

CHOKING CAPITAL- In New Delhi, where an expanding metro system has failed to slow the spread of private vehicles, 1,400 extra cars hit the streets every day. The U.S. embassy's monitoring station has recorded an air quality index in excess of 400 this week, a level that is hazardous even to healthy people. Pollution typically worsens in the winter months as the cooling of temperatures combines with pollution to cover the city, home to 16 million people, in smog.

Authorities have launched monthly car-free days in some areas. They have also levied a "green" tax to encourage the 52,000 commercial vehicles that enter the city daily to take alternative routes. Delhi-based haulier Jigyasu Wadhwa, whose company runs a fleet of 200 vehicles, said the government was wrong to cast all older trucks as culprits when many newer, badly maintained vehicles were far more polluting and never penalized. "Generalising the impact 15-year-old vehicles have on the environment is stupid," he said. "The government needs to ensure people get their vehicles maintained, whatever the age."

Should you go outside today? Live map of world air pollution launched

Date: 03rd December, 2015 Source: The Sydney Morning herald



A start-up company has used the Paris climate change talks to launch a live map of air pollution around the world which it says will help people protect their health and policy makers clear the air. A website and mobile phone app lets you check hour-by-hour on whether exercising and eating outdoors or taking a baby outside is a good idea.

Plume Labs' world air map estimates hourly air pollution levels in over 200 metropolitan areas around the world using half a million pieces of data from 11,000 measurement stations. Pale circles on the map show low pollution levels; black spots are the worst. Amid the delicate negotiations in Paris, some political sensitivity may attach to the measurements. "Worse than China" may have become the worldwide shame benchmark for air pollution. Not that any of the delegates would say that out loud in Paris.

More diplomatically, US President Barack Obama said the conference needed to do more than "simply" reach an agreement on "rolling back the pollution we put into the skies", emphasising the need to reduce poverty and preserve the planet simultaneously. Chinese President Xi Jinping said any agreement should take into account differences between nations: "Countries should be allowed to seek their own solutions, according to the national interest."

When he said that at the start of the conference on Monday,
Beijing was choking on the worst air pollution of 2015. NASA satellite images showed Beijing engulfed by a yellow-grey pollution haze while Plume Labs' map had northern China as a mass of black spots where cold-fired power plants had been in overdrive due to a cold snap. The unofficial air quality index measured at the US embassy in Beijing showed 666 for small particulate matter on Monday. In the US an index over 100 is considered unhealthy, and anything over 300 would trigger an emergency health warning.

Small particulate matter (less than 2.5 micrometres) is particularly hazardous to health because it can embed deep in the lungs and even enter the bloodstream directly from there. The Chinese authorities issued an alert advising people to stay indoors. Construction was halted at some sites and some factories were ordered to close, news reports said.

The head of the European Union Chamber of Commerce in Beijing, Joerg Wuttke, posted the "view" from his office window: When Plume Labs' small particulate reading for Paris topped that of Beijing in March, the French government responded by cutting half the cars from the road, according to Plume. As the summit grinds on, the latest readings say current air pollution in Paris is again far worse than in Beijing where the air is deemed "fresh". Paris citizens are warned to use caution exercising or eating outdoors, while for Beijing the advice is to "go for it". For Sydney the air pollution is registering as moderate and "go for it" applies.

Is It Worse to Exercise in Air Pollution Or Not to Exercise at All?

Date: 03rd December , 2015 Source: The Wall Street Journal

What is the greater evil for your health: Exercising in polluted air or not exercising at all? If you live in a polluted city and check air quality readings as a daily ritual, you likely recognize the conundrum. The monitors, which often color-code the likely impact on your health — from green for good to brown for bad — also come with a warning against physical exertion when atmospheric conditions reach unhealthy levels. The elderly and children, as well as those with pre-existing heart and lung conditions, are cautioned not to exercise outdoors and if things get really bad, everyone is advised to keep activities levels low, even inside. “You are breathing more deeply and more often when you exercise, and often through your mouth, so the air doesn’t pass through the nasal passages and doesn’t get filtered as much,” said Cedric X. Bryant, chief science officer at the American Council on Exercise, a nonprofit based in California. Polluted air can contain high levels of nitrogen oxides, sulfur dioxides and ozone.

“To compound the issue, a lot of these gases settle on the outside of particulate matter, from diesel and petrol fumes, which can lodge in your lungs, so you are breathing in a mini bomb,” said Keith Prowse, medical adviser for the British Lung Foundation, a U.K.-based nonprofit. Those fine and ultra-fine particles can cause inflammation in the lining of the lungs that can lead to chronic obstructive pulmonary disease, which causes permanent damage. The more of them you take in, the more dangerous for your respiratory health in the long term, says Dr. Prowse. He advises waiting until the conditions improve before going outside for a long walk, run or game of soccer for example, or to workout indoors instead. But what if the air-quality readings are consistently in the unhealthy to hazardous range as they are for parts of the year in Delhi and Beijing, and you don’t belong to a gym or have space for a treadmill at home? Is it worse for your health in
the long-run not to exercise at all?

“It’s a bit of a dilemma, because exercise offers a great deal of benefits,” said Dr. Bryant of the American Council on Exercise. The World Health Organization estimates that 3.2 million deaths annually can be linked to the effects of physical inactivity and that one in four adults globally is not active enough. “The sad thing is that there hasn’t been enough high-quality research to really document the risk benefit ratio,” of exercising in polluted air, Dr. Bryant said.

One study carried out by researchers from the Netherlands looked at whether the health benefits of cycling outweigh the risks from air pollution and traffic accidents. The research, published in 2010 in Environmental Health Perspectives, a journal published by the U.S. Department of Health and Human Sciences, found that for short trips, going by bicycle instead of in a car resulted in nine times more gains in life-expectancy than the losses in life years due to increased inhalation of air pollution and from traffic accidents.
The air quality in the Netherlands however might not be as poor as that in some cities. Another study published in the journal Medicine and Science in Sports and Exercise found long-term aerobic exercise could help mice protect themselves from the damaging effects of diesel exhaust particles on their lungs. "Our results indicate a need for human studies that evaluate the pulmonary responses to aerobic exercise chronically performed in polluted areas," they said.

Until there is more research on the subject, Dr. Bryant says the recommendation is to limit exercise to activity that can be done indoors or to do it at times of day when the air quality is slightly better, and avoid areas near roads, especially at rush hour. Even masks worn while exercising outdoors don't provide much protection, because they don't stop the most-harmful tiny particulate matter, says Dr. Prowse of the British Lung Foundation.

Some lung doctors though recommend wearing disposable N95 respirator masks, which provide greater filtration than surgical face masks. But "even a properly fitted N95 respirator does not completely eliminate the risk of illness or death," warns the U.S. Food and Drug Administration.

One doctor who specializes in treating patients in Delhi, one of the world's most-polluted cities, puts it bluntly."Forget exercising," said Vivek Nangia, director of the pulmonology department at Fortis Flt. Lt. Rajan Dhall Hospital. "With pollution levels this high, one shouldn't be moving outside at all."

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10 Cities Win C40 Award for Leading the Fight Against Climate Change

Date: 03rd December, 2015 Source: Eco watch

Today, the C40 Cities Climate Leadership Group (C40) announced the winners of the third-annual C40 Cities Awards, recognizing 10 global cities for their leadership in tackling climate change across key sectors. The awards ceremony was held Thursday night in Paris during the COP21 climate negotiations. Winning cities, including Boston, Johannesburg, Rotterdam and Nanjing each demonstrated exceptional innovation and ambition to build low carbon and climate resilient urban communities. Winners were recognized for a diverse set of world-class policies, projects or programs, including Vancouver's Greenest City Action Plan, which sets a roadmap for it to become the greenest city in the world by 2020, and Wuhan's ecological restoration of one of the city's largest landfill sites.

Felipe Calderón, former president of Mexico and chair of the Global Commission on the Economy and Climate serves as chair of the C40 Cities Awards Jury Panel, who selected the winners from among 33 finalists announced in October, 2015.

"As leaders from around the world meet in Paris to agree binding emission targets, the efforts of these 10 Award-winning cities remind us that innovation drives results, and concrete solutions and actions—that improve the health, well-being and economic opportunities of urban citizens—can be implemented right now," C40 Chair Mayor of Rio de Janeiro Eduardo Paes said. "I thank our esteemed Jury Panel and

commend my fellow mayors for their leadership and commitment to tackle climate change. By taking local action, we are having a global impact." C40 received more than 200 applications from 94 cities for the 2015 Awards; these were reviewed in partnership with sustainability think tank and consultancy Sustainia. Of the 10 awards categories, four are open to C40 Cities and those that are part of the Compact of Mayors, a global coalition of mayors and city officials committed to reduce local greenhouse gas emissions, enhance resilience to climate change and track their progress transparently.

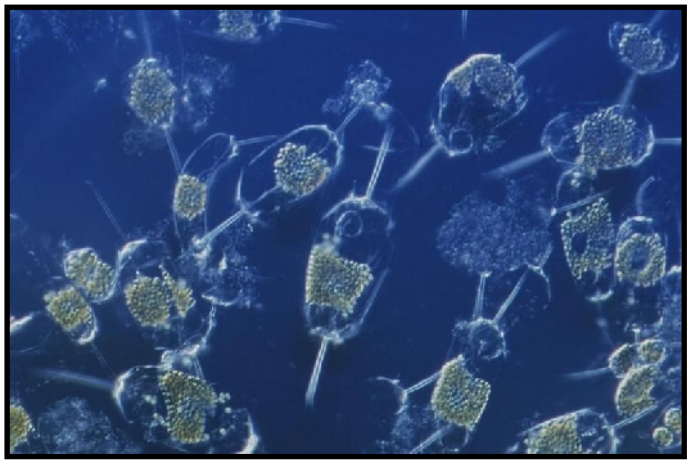
"The C40 Cities Awards recognizes mayors who are doing the hard work of taking action on climate change—and delivering results," said C40 President and UN Secretary General Special Envoy for Cities and Climate Change Michael R. Bloomberg. "The solutions highlighted through the Awards offer models for other cities to follow, and it is great to see the number of applications increase each year—a sure sign that our progress is accelerating. Cities are leading by example, and tonight's winners are at the forefront of that work."

This year's winners in the 10 award categories are:

- Boston (Smart Cities & Smart Community Engagement)
- Cape Town (Adaptation Implementation)
- Johannesburg (Finance & Economic Development)
- Nanjing (Transportation)
- New York (Building Energy Efficiency)
- Rotterdam (Adaptation Planning & Assessment)
- Stockholm (Sustainable Communities)
- Vancouver (Carbon Measurement & Planning)
- Washington, DC (Green Energy)
- Wuhan (Solid Waste)

Global warming steals Oxygen from Earth, could lead to heavy destruction

Date:03rd December, 2015 Source: The Tecare



According to a new research, global warming could steal our planet's oxygen. With the increasing temperature due to global warming, microscopic sea plants, phytoplankton will not be able to do photosynthesis and release oxygen in the atmosphere which will result in a drop in oxygen levels, warn researchers Global Warming has struck the world and we have already started seeing some of the adverse effects like unpredictable weather patterns, drought, melting ice, rising sea level, etc. However, there's something more alarming that might make our Earth inhabitable and unsustainable. According to a new research, global warming could steal our planet's oxygen. With the increasing temperature due to global warming, microscopic sea plants, phytoplankton will not be able to do photosynthesis and release oxygen in the atmosphere which will result in a drop in oxygen levels, warn researchers. Scientists from the Britain's University Leicester said that this possible consequence of global warming is more dangerous than all since, it will strike us very soon and we humans cannot do anything against it apart from just avoiding it by controlling the global warming now. Phytoplanktons contribute two-third of the Earth's oxygen through photosynthesis, a process through which plants make their food with the help of carbon dioxide from the atmosphere in the presence of sunlight and releases oxygen in the atmosphere as the byproduct. Now scientists claim that if nothing is done to stop the global warming now which has resulted in 1-degree celsius average global temperature rise

then by 2100 the average global temperature would get a hike of 6-degree celsius.After such a horrendous rise in temperature, phytoplankton would loose the ability to do photosynthesis which will result in the global dip in oxygen levels making earth inhabitable place to live. Oxygen level will drop not only on land but in water too which will kill most the species on Earth and scientists believe that we might not live to see the next apocalypse. However, the study was based on mathematical model and several natural factors were not taken into account in the study which might have lead to a different outcome. But the study has warned people of the another possible outcome of global warming which is far more dangerous than others. The study appeared in the journal Bulletin of Mathematical Biology.

World's richest 10% produce 50% of CO2: Report

Date: 03rd December, 2015 Source: The Times of India

LONDON: The richest 10 % of people produce half of the Earth's carbon emissions, while the poorest half-most threatened by droughts and super stroms linked to climate change--contribute a mere 10%, British charity Oxfam said in a study released on Wednesday.

The richest 10% have, on average, carbon footprints 11 times that of the poorest 3.5 billion people on the planet, the campaign group said in its report. One of the biggest obstacles facing negotiators from 195 countries, attending the Paris climate meet, is how to find the billions of dollars needed by developing nations to enable them to stop using fossil fuels and adapt to the weather shocks. "Climate change and economic inequality are inextricably linked and pose one of the greatest challenges of the 21st century ," Tim Gore, Oxfam's head of food and climate policy , said. Emissions are rising fastest in developing countries, Oxfam said. Yet emissions relating to goods and services consumed by the richest citizens in China, India, Brazil and South Africa are way behind those of their counterparts in the wealthiest countries of the Organisation for Economic Co-operation and Development, it said. Oxfam found that India's richest 10% use on average just one quarter of the carbon used by the poorest half of the population of the US.It also said total emissions of China's poorest 600 million people are one third of the total emissions of US's richest 10%, some 30 million people. Tuvalu faces threat from rising sea - The PM of Tuvalu, the world's fourth smallest nation, has appealed for help from EU leaders to stop it disappearing from Earth. Enele Spoaga arrived in Brussels on Monday to call on EU leaders for support. The islands, home to just 10,000, is under threat from rising sea levels as it is just 4m above sea level. He called on Europe to reduce greenhouse gas emissions to keep warming down to 1.5°C. He said: "We need to save Tuvalu to save the world."

Climate summit: India stresses on financial support to developing countries to shift to green energy

Date:03rd December 03, 2015 Source: The Economics Times

PARIS: On the back of reports in the western media terming it as 'obstructionist' at the on-going climate summit, India on Wednesday strongly put forward its point and made it clear that the country wants a "legally binding" agreement that enables financial support from the countries which have developed on the basis of cheap energy to those which have to meet their energy demand through more expensive 'zero carbon' sources. India also made it clear that it won't shy away from extending financial support the way China promised as part of the South-South cooperation.The country at the same time made it clear that such post-2020 financial contribution

from India will not be part of the climate finance under the Green Climate Fund (GCF) -- an international mechanism where the rich countries are expected to annually contribute US $ 100 billion from 2020 onwards to help poor and developing countries fight challenges of climate change. Articulating India's point, key negotiator Ajay Mathur said, "We are completely in favour of the agreement that helps create the kind of legal binding that is necessary for such an agreement to be actually implemented by countries -- that is far more important than the countries just signing on it."

On the sticky financial issue which is seen by the rich world as something which may even be looked into outside the agreement, Mathur clearly said, "We look forward to an agreement that enables financial support from the countries that have developed on the back of cheap energy to those which have to meet their energy demand by more expensive but low carbon zero carbon energy.

We believe technology is going to play a major role in this and therefore access to technology and enabling collaboration are going to be amazingly important for us". Referring to the country's stand on stocktaking of what all the countries have promised through their respective climate action plans - called Intended Nationally Determined Contributions (INDCs), Mathur said, "We would like the countries as they put forward their INDCs to look at them periodically -- the global stocktaking process in the agreement is something we like so the world as a whole can periodically see what is it that they are all doing and where is the world going because of their actions.

"As a result of these global stocktakes for which the ownership should be with the countries, they should then look at their next set of INDCs to be more challenging and more ambitious than what they have put in now. So, we are looking at what I think always is called progression principle (no backsliding principle) that each one of us delivers more in each cycles of commitment that we take." He further elaborated that the country would also like that all countries periodically provide information of their actions. "We have started with it and will continue with the process what that is called the biennial update report. There are guidelines which says how it is done and how it is discussed at the global forum," said Mathur. On the question of periodicity of the review, he said it was a matter of negotiation and it was very difficult at this juncture to spell it out.

2400 Coal-Fired Power Plants Planned Despite Climate-Friendly Pledges

Date: 04th December, 2015 Source: Living On Earth

Coal-fired power plants have provided cheap energy for over a hundred years, and despite coal-burning's high emissions, about 2,400 are planned globally. A new study calculates that emissions from global energy generation must reach zero before the middle of the century to keep climate change below a two-degree Celsius temperature rise. Niklas Hohne of the New Climate Institute discusses the study with Living on Earth's Helen Palmer and explains why building these plants is inconsistent with emissions control commitments countries have given.

CURWOOD: Fossil fuels are in the crosshairs of any agreement reached here in Paris, and none more so than coal because of its high levels of global warming and local pollution. And though just about every nation has made carbon-cutting pledges, many new coal-fired power plants are in the planning stage.

A new analysis just released at the climate summit details exactly how inconsistent these plans are – it comes from Germany's New Climate Institute, that tracks power plant emissions. Living on Earth's Helen Palmer spoke with the author Niklas Höhne to find out the details.

PALMER: Niklas Höhne, tell me briefly what you found.

HÖENE: We looked at datasets that say how many coal-fired plants are currently being planned and currently being built, and checked whether the emissions that would come from these coal-fired plants, how they relate to what is necessary to keep climate change under control to meet the internationally agreed goal of not more climate change than two degrees. We find that more than 2,400 coal-fired plants are in the pipeline globally, and that is in a stark contrast to what would need to happen to keep temperature rise below two degrees. We looked at all the scenarios that try to reach this goal of two degrees, and they consistently find that the electricity sector globally has to reduce its emissions to zero by 2050, and that basically means global phaseout of emissions from coal-fired plants by the middle of the century. That's in 35 years. An average lifetime of a coal-fired power plant in 40 years, so anything that's built today will still be running by the middle of the century. If we are serious about the two degree goal, no single coal-fired power plant should be built today.

PALMER: How does that relate to global emissions and to other emitting factors?
HÖENE: So global emissions today are around 50 gigatonnes. The US emits in total around five gigatonnes. In order to be on the pathway towards two degrees, global emissions have to go down from 50 to around 42 gigatonnes in 2030. And if you just calculate all of the emissions from existing and these newly built power plants, you get together 12 gigatonnes. So, one third of the allowed emissions in 2030 will come only from coal-fired power plants, and that would mean no room for any other emissions — transport, buildings, agriculture and so on.

PALMER: If by any chance they were built, what would that mean the global temperature would go up by?
HÖENE: We calculated if all countries would do what they have already proposed in their national plans, we would go up to a temperature increase of 3.6 degrees, but adding all of these coal-fired power plants, it would even be above that, so we would more go in a direction of four degrees than two degrees which is the agreed goal.

PALMER: So these are obviously numbers that doesn't add up.
HÖENE: [LAUGHS] Exactly, so the conclusion from all of this is that governments should be active right now to review their plans of building coal-fired power plants.

PALMER: So, which countries are planning to build all these power plants?
HÖENE: Quite a lot of countries are building coal-fired plants. China is leading. China is very big and has a lot of demand for new electricity, so that's why it has plans for new coal-fired power plants. Second largest is India. But then come a few other countries like Turkey, like Japan, and then a little bit later comes the US, where also 3.5 gigawatts of coal capacity are planned.

PALMER: Well, obviously, countries like India and to a limited extent China are still developing. I mean, India's argument is that they need these power plants, because they need, basically, to bring power to their people.
HÖENE: That is very very valid argument, and understandable from the Indian point of view. India’s per capita emissions are a fraction of those European or even smaller compared to the US per capita emissions. But, having the global view, also in India there should not be a future power plants, so the element is here at the international negotiations that the other countries help India to develop in a way that is less emission intensive, help them with the technology for renewable energy, help them with energy efficiency, help them with better electricity grids, so that the electricity from existing coal-fired power plants can move to the other areas where there's no electricity.

PALMER: What do you put it down to, that there is this disconnect between what they say they're going to do and what they plan for their power?
HÖENE: Not everybody has a global view. There may be investors that see there's a demand for electricity, and the cheapest way to get it is a coal-fired power plant. For them, the time horizon is not 40 years, for them the time horizon is the payback period and that may be much much quicker. So for them, economically, it may still be viable to build that coal-fired power plant, but for the society as a whole, the country India or the global society, it does not make sense. And that's something that needs to be solved when it comes to climate change. Why this is so severe today is that renewable energy right now has changed dramatically in the past years, and has now become much, much cheaper, and predictions for renewable energy are much, much higher than we thought five or ten years ago. And that's inconsistent with the long time horizons for coal-fired powered plants.

CURWOOD: Niklas Höhne of the New Climate Institute spoke with Living on Earth's Helen Palmer.

Regulators OK weaker version of air pollution program for Southern California

Date:05th December, 2015 Source: LA Times

Southern California air quality regulators turned aside tough new pollution control measures on Friday in favor of an industry-backed alternative plan that will make slower progress toward cleaning smog from the nation's most polluted region.

The South Coast Air Quality Management District board voted 7-5 in favor of a plan that industry groups argued would allow them to curtail emissions more gradually and with fewer costs. The measure would reduce the cap on smog-forming emissions from the region's largest facilities, including refineries, power plants and factories, from 26.5 tons of nitrogen oxides a day today to 14.5 tons by 2022.

Air district staff had proposed a steeper, faster plan that would have cut the cap on nitrogen oxides by an additional two tons a per day to a level of 12.5 tons over the same period. "Those two tons of pollution may not mean much on paper, but out here it translates to more emergency room visits, more respiratory illnesses, and our community can't take much more of that," said Allen Hernandez, a Sierra Club organizer in the smoggy Inland Empire.

Air quality board chairman William A. Burke said the adopted measures were a compromise but better than taking no action. Oil interests fought hard to weaken the staff proposal, arguing that it would force refineries and other facilities to spend billions upgrading pollution controls. To achieve the reductions, regulators are relying on a decades-old cap-and-trade program that establishes a limit on emissions and allocates each facility pollution credits. Operations whose emissions are cleaner than what is required can sell their credits to those whose emissions exceed the limits.

Under the program, air quality regulators gradually reduce the number of credits available, forcing all industries to reduce their pollution over time. At issue Friday was how fast the air quality board would reduce the number of credits — and by how much.

The air district's staff had recommended 14 tons in reductions by 2022, at a faster pace, and environmental groups had advocated for even steeper cuts. By adopting a slower and more modest 12-ton cut, the board's action is expected to further delay the installation of emissions controls at oil refineries and other big pollution sources.

The decision followed hours of emotional testimony at a public hearing in Diamond Bar. Environmentalists and community groups urged to board to adopt agency staff's proposal and take swift action to clean the air and ease asthma and other smog-triggered health problems across a four-county region of 17 million people.
Air district staff warned that the industry-supported measure was not supported by the agency's analysis and may not be legally defensible in California, which requires that any cap-and-trade programs achieve the same pollution reductions that could be reached with direct limits on emissions, an approach followed elsewhere in the state.

"The governing board decided to just disregard the law in California and adopt a really weak smog regulation," said Adrian Martinez, a lawyer for the environmental law nonprofit Earthjustice. "It placed the interests of the oil industry over people's health."

The decision is a serious setback to the South Coast air district's attempt to overhaul its long-criticized Regional Clean Air Incentives Market, or RECLAIM, adopted in 1993 as one of the nation's earliest cap-and-trade programs. The nitrogen oxides it regulates are gases that disperse through the region to contribute to the formation of ozone and other lung-damaging air pollutants.

The program was targeted for an overhaul because it has not achieved the level of emissions reductions promised. For years, an oversupply of credits has made it easier for oil refineries and other big industries to buy rights to emit smog-forming pollution than to spend money on better controls. As a result, Southern California refineries have lagged in installing pollution-scrubbing equipment that is commonplace in the Bay Area and other regions where emissions are regulated directly. Nitrogen oxide emissions from the 275 facilities regulated under the program have remained flat in recent years, even as the region has missed federal deadlines to clean the air. The cuts in emissions credits adopted Friday would apply to 56 of the region's largest air pollution sources and would fall most heavily on the region's six major oil refineries in El Segundo, Torrance, Carson and Wilmington.

In a prepared statement, Western States Petroleum Assn. President Catherine Reheis-Boyd welcomed the decision, saying "we are pleased the South Coast Air Quality Management District board listened carefully to the concerns." The measures, more than two years in the making, are the South Coast air district's most significant effort to curb smog in a decade. Officials said they are essential for Southern California to reduce air pollution to meet federal health standards for ozone and fine particulate matter.

Delhi Government's Anti-Pollution Norms Act of One-Upmanship: Government

Date:05th December, 2015 Source: NDTV

NEW DELHI: The Centre on Friday accused the Delhi government of doing an act of "one-upmanship" by declaring that vehicles should have Euro VI emission standards from 2017 as part of its steps to curb pollution levels in the national capital. Taking a swipe at Chief Minister Arvind Kejriwal-led AAP government, Union Environment Minister Prakash Javadekar said such a measure can only be implemented if it does some 'jaadu' (magic) to launch Euro VI compliant vehicles by the stated date.

"I think this is one-upmanship. The central government has already notified to postpone to Euro VI migration by 2021 because ultimately it is the car manufacturers who also need to be ready with the cars compliant to this norm."

"...today we have vehicles complying to Euro IV or III. You can't have it (Euro VI)...it is the national government's fuel and therefore, Delhi government does not have it's own fuel. If they have some factory and good idea to convert by some 'jaadu' to Euro VI--all the best," he told NDTV when asked if such a declaration by the state government amountedto an act of political one-upmanship.

He, however, refrained from commenting on the larger decision of the state government that private vehicles bearing odd and even registration numbers will be allowed to ply only on alternate days starting January 1. "I have not got all details of the announcement exactly...but if it is scientific we have to see. This (critical pollution levels in Delhi) is an extraordinary situation and we must respond with extraordinary solutions." "Therefore, the central government has taken 'Sabka Saath, Sabka Vikaas," he said.

High time govt warned public about perils of pollution: Experts

Date:06th December, 2015 Source: Indian Express

During the drafting process, experts had discussed the need for issuing advisories or an alert system, but these ideas never took any concrete shape, said sources. In a recent directive, the National Green Tribunal (NGT) sought a public health advisory on pollution from the Delhi government, to warn people about deteriorating air quality in the capital and suggest ways to deal with it. Scientists and environmental experts have highlighted the need for such advisories for years. They have repeatedly pointed out that an exercise to measure poor air quality, without educating people about the health risks associated with breathing it in, was a futile one. "What is the point of providing data about air quality without an alert system that helps educate people about the necessary steps they should take? How does a layman translate the data into something that affects him," asked Dr T K Joshi, director of the Centre for Occupational and Environmental Medicine at the Maulana Azad Medical College (MAMC). Dr Joshi and several other experts were part of the central government's committee to draft the National Air Quality Index (AQI), which was introduced over a year ago. During the drafting process, experts had discussed the need for issuing advisories or an alert system, but these ideas never took any concrete shape, said sources.

Most global cities struggling with high pollution levels — including Mexico, Beijing, London and Los Angeles — have an effective smog alert system to augment their air quality data. California was one of the first states to implement such a system in the 1980s after the first alarms were raised about deteriorating air quality in Los Angeles.

Sam Delson, deputy director of California's Office of Environmental Health Hazard Assessment (OEHHA), said most vulnerable groups like children, the elderly and people with asthma and other chronic diseases, "can benefit significantly from avoiding exposure on particularly smoggy days," from such advisories. Such advisories are "a basic public health strategy for confronting air pollution," said Dr Howard Frumkin, Dean at the School of Public Health and professor of Environmental Health Sciences at the University of Washington. "Air quality monitoring is important, but if the information generated doesn't reach those who need to know and motivate protective action, then monitoring does little good," he said.

According to Dr Joshua Apte, assistant professor at the University of Texas, such advisories would be beneficial for Delhi, due to the rapid real-time changes in air quality. "Pollution levels in Delhi can vary on

an hour-to-hour or day-to-day basis. Health advisories can communicate the risks of pollution in a way the public can easily understand,"he said. There is an "absolute" need for public health advisories, said Dr Bhargav Krishna, research fellow in Environmental Health at the Public Health Foundation of India. "Episodic high air pollution levels have been shown to exacerbate pre-existing respiratory and cardiac conditions. With pollution levels as high as Delhi has experienced over the past few days, exposure can be harmful even for those who don't have pre-existing conditions," he said.

The need of the hour seems to be an effective smog alert system, which would be particularly beneficial to children."Given the level of particulates in Delhi this month, the outdoor activities of children should definitely have been restricted. Children have bigger lungs in proportion to their body size, and hence inhale more amount of air," said Dr Joshi. He advised people living near main roads or traffic intersections to avoid keeping their windows open during peak traffic hours.

Tough to enforce Delhi's road rationing policy

Date:07th December, 2015 Source: Daily Pioneer

At one level, it was heartening to see the Delhi High Court's description last week of the national capital as a "gas chamber", on account of its alarming air pollution, compel the Government to sit up, pay attention, and in this case, hold an emergency meeting and, a day later, announce a new road rationing strategy: That private cars will ply in the city on alternate days depending on whether their car plates end in odd or even numbers. While there is no doubt that desperate times call for desperate measures, one cannot but be somewhat sceptical of the efficacy of the Government's new plan. The details of how the plan will be implemented in Delhi are still unclear but it is safe to say that several logistical issues will have to be considered before the policy comes into effect from January 1 as has been proposed. In the short term, it seems like the plan is to have the traffic police (who will have to be trained first) to manually monitor car movement. This would have worked if the vast majority of the public would follow the rules, leaving the traffic police to only watch out for a handful of errant car owners. However, this is not a realistic assumption. The only practical solution is to, like Beijing, install automated traffic surveillance camera systems — which again is a long and complicated process, and cannot be done overnight. There are also other related issues that the Government will have to manage like fake car plates, which will proliferate as Delhi commuters try to work their way around the rules. In fact, even if the plan is a success in terms of enforcement, it will not be fool-proof — those who can afford it, will just buy a second car to work around the law. This is what has happened in Mexico City where the Hoy No Circula plan, which goes back to the 1980s, is strictly followed but has still not resulted in an improvement in air quality because commuters just bought more cars instead of taking the bus or sharing a cab.

This brings us to the issue of public transport which has to be at core of any meaningful effort to reduce vehicular pollution. To be fair, Delhi has a fairly decent public transport system, especially when compared to other large Indian cities, but there is still a long way to go before it can put up a serious fight against private transport (and this is without even going into socio-cultural and behavioural issues). For example, the low-floor buses greatly improved Delhi's overall bus service but unpredictable schedules make them an unpopular option; similarly, the Delhi Metro has been a huge success but if only it had better end-point connectivity, it could have reached out to a larger cross-section of city residents. In other words, until public transport emerges as a realistic alternative to private transport, offering convenient, affordable and on-schedule services, merely penalising private car owners will not make much of a difference. This also applies to other similar measures that are being talked about these days such as significantly increasing parking fees, shutting down parking at malls, imposing taxes on car users. These are all negative measures that will only bring results if positive measures are also taken up in earnest — such as scaling up public transport and investing in clean technology for private transport.

Many Ignore Beijing Smog Warnings Despite First Pollution 'Red Alert'

Date: 08th December, 2015 Source: NDTV

BEIJING: A blanket of humid, still air resulting in smog that is expected to shroud Beijing for at least three days triggered the capital's first ever pollution "red alert" today as many residents ignored warnings to limit their time outdoors. By early morning, hundreds of people, including toddlers, had packed Tiananmen Square to watch the flag-raising ceremony, according to photos by state news agency Xinhua. State radio said some people were ignoring vehicle use restrictions, which today banned vehicles with odd numbers at the end of the licence plate getting on the roads, though the roads were noticably quieter.

Environment Minister Chen Jining called a special meeting on Monday night to urge more supervision in Beijing and its surrounding cities including Tianjin as he increased the number of environmental inspection teams to 12, according to ThePaper.cn, a state-backed news website.Although smog has always been a public health concern in Beijing, the government's response system has come under extra scrutiny in the past week because it came under heavy criticism for not issuing a red alert during an episode of heavy smog which exceeded hazardous levels. Chinese researchers have identified pollution as a major source of unrest around the country. Greenpeace called the red alert "a welcome sign of a different attitude from the Beijing government". "From repudiating PM2.5 (particulate matter with a diameter of 2.5 micrometers) to today's issuance of a red alert, in just a few years, this is a near-revolutionary change in thinking", Hu Xijin, the editor-in-chief of the influential state-run Global Times tabloid, wrote on his microblog today. The Beijing City Emergency Office said "still weather, reduced cold temperatures and an increase in humidity" prompted the red alert, according to Xinhua. A red alert means that 30 percent of vehicles will be taken off the roads, heavy vehicles will be banned, most schools will be advised to cancel classes, businesses are recommended to implement flexible working hours and all "large-scale, outdoor activities" should be stopped. Despite this, many residents tried to circumvent the rules. State radio showed a picture on its official microblog of a policeman removing paper stuck to a vehicle's licence plate to obscure its final digit. By late morning today, the US embassy's monitoring station recorded an air quality index of 250, which puts air pollution levels in the "unhealthy" region. Those who did struggle to the office posted pictures on social media of themselves wearing industrial-strength face masks. "I feel like I'm engaged in chemical warfare," wrote one commuter.

Still, the ruling Communist Party's official People's Daily, without a hint of irony, praised China's contribution to fighting climate change in a commentary today, written to coincide with the Paris climate talks. "People everywhere are looking forward to China's continuous progress on the road to green development, acting as a model for the world to tackle the challenge of climate change."

Delhi air just got worse, healthy can also fall sick

Date: 08th December, 2015 Source: India Today

Even as Delhi debated over the 'even-odd' car strategy on Monday, foul air choked the capital's residents. Air quality readings across various places in the city showed PM 10, 19 times and PM 2.5 almost eight times above the prescribed limit. This has the potential to affect healthy people and seriously impact those with existing respiratory ailments. The sudden spike in pollutants across the capital was attributed by the meteorological

department (IMD) to calm winds and an increase in humidity in the air.

Maximum temperature was recorded at 25.9 degrees Celsius, two notches above the season's average. The minimum temperature settled at 11 degrees, two notches above normal. Humidity in the air oscillated between 95 and 53 per cent. "Visibility extended a bit over a kilometre, but it would start coming down once the temperature drops,' the MeT department said. The real time readings of Delhi Pollution Control Committee (DPCC) monitoring stations had PM 10 and PM 2.5 at 1903 and 452 microgram per cubic meter in Anand Vihar, east Delhi, as recorded at around 9 pm.

PM 10 was at 753 microgram per cubic meter in RK Puram, south of the city, at the same time. In Punjabi Bagh, west Delhi, PM 10 and PM 2.5 were at 459 micrograms per cubic meter and 255 micrograms per cubic meter respectively. These are, collectively, the three most polluted locations in the city. Permissible levels of PM (Particulate Matter) 10 and PM 2.5 are 100 and 60 microgram per cubic meter respectively. These particles, which are the major pollutants responsible for polluting the national capital's air, can harm the respiratory system as these particles tend to embed themselves deep inside the lungs. These particles are products of vehicle emissions, burning of waste, industrial plumes. PM 2.5, especially, is considered by the World Health Organisation (WHO) as a cancer causing agent. Anumita Roychowdhury, Executive Director, Research and Advocacy at Centre for Science and Environment, said, "Due to lack of proper winds, inversion conditions have already begun. This is when hot air is unable to rise above a certain level and dispersion of pollutants gets blocked." "In October 2015, we registered only three per cent of the total days with 'severe' air pollution level. The same rose up to 73 per cent in November. What worries us is that December might surpass these numbers as the winter sets in," she added.

National air quality index of CPCB also had 'severe' readings recorded from the areas of Punjabi Bagh, Mandir Marg and R K Puram stations, where PM 2.5 was the most prominent pollutant. System of Air Quality and Weather Due to lack of winds, inversion conditions have already begun. This is when hot air is unable to rise above a certain level and dispersion of pollutants gets blocked. - Anumita Roychowdhury, Centre for Science and Environment Forecasting And Research (SAFAR) stations in Delhi University, IGI Airport, Dhirpur had air in the 'severe' category as well, bordering around 450 in most cases. Interestingly, Beijing, China's Capital city, also issued its first red alert of the year on air pollution on Monday. It happened as the city of over 22 million people was enveloped by a thick smog, which is being stated to be the worst in recent months. "Beijing has upgraded its alert for air pollution from orange to red, the most serious level today. It will last from 7am on Tuesday to 12pm on Thursday,' state-run Xinhua news agency reported. Neighbouring provinces of Hebei, Henan and Shandong, as well as parts of eastern Jiangsu province, were also severely affected. The notice, issued after days of heavy smog last week, also places traffic restrictions on certain types of vehicles in the city. Schools have been asked to keep children inside classrooms as much as possible and not to allow sports or outdoor activities to ensure limited exposure to heavy smog. Save your kids, leave Delhi: Doctors

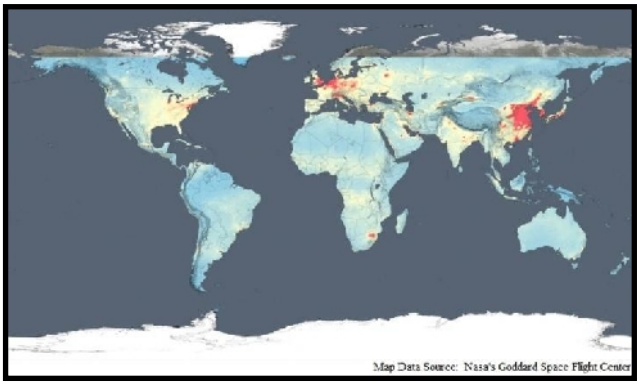
Leave Delhi, right now, if you want to save your children from fatal lungs disorders, severe respiratory problems, nausea, throat infection, pressure and fatigue - this is the suggestion from Delhi-based doctors Delhi's air is getting polluted by the day. "If you want your kids to grow up into a normal, healthy person, then Delhi is not the place where he or she should be brought up. Around 22 lakh school children in the national capital are growing up with irreversible lung damage," Dr Sanjay Jain, ENT Specialist from SCI International Hospital said.

Delhi's children have more upper respiratory illnesses, such as sinusitis, running or stuffy nose, sneezing, sore throat and common cold with fever and two times more lower respiratory diseases like frequent dry cough, sputum-producing cough, wheezing breath, breathlessness on exertion, chest pain or tightness and disturbed sleep (due to breathing problems) than children from less polluted cities. "Air pollution has come up as one of the major health challenges of modern Indian cities. With increasing respiratory problems and morbidities, it is now important to raise levels of knowledge about pollutants -

outdoor as well as indoor -and the health hazards caused by these," Dr Raj Kumar, Head Of Department, Department of Respiratory Allergy & Applied Immunology, Vallabhbhai Patel Chest Institute said. Children's health is most acutely affected by exposure to air pollution. Therefore, potential adverse effects of air pollution on fetus, infants and children should be the main cause of concern while setting up standards for an air pollutants as well as during the revision of existing standards. "People with a history of respiratory tract infections should stay more careful. This is the worst possible time of the year for them. High level of precautionary measures should be taken. People should cover their faces while travelling. Even staying indoors is not safe as suspended air particles tend to enter through windows," Dr JC Suri, Professor and Head of Pulmonary Medicine at Safdarjung hospital told Mail Today.

Nitrogen Dioxide Rising in India, Nasa Air Quality Maps Show

Date:15th December, 2015 Source: Gadgets 360



The emission of the nitrogen dioxide pollutant has gone up significantly in the South Asia region, including India, during the 2005-2014 period, severely affecting air quality in the process, Nasa satellite maps show. Nitrogen dioxide (NO2) is a yellow-brown gas that is a common emission from cars, power plants and industrial activity. The US and Europe are among the largest emitters of nitrogen dioxide but both regions also showed the most dramatic reductions between 2005 and 2014, the maps showed. "The main story in South Asia is increasing NO2 levels from 2005 to 2014 associated with booming economies and ambitious infrastructure development, such as new coal-burning power plants in the Chhattisgarh region of India," Nasa said in a statement.

"One of the largest increases occurred over Jamnagar (India), the site of the largest petrochemical complex in the world," it added. "Dhaka (Bangladesh) had the largest increase (79 percent) of any world city," the statement noted. Using new, high-resolution global satellite maps of air quality indicators, Nasa scientists tracked air pollution trends over the last decade in various regions and 195 cities around the globe. "These changes in air quality patterns are not random," said lead researcher Bryan Duncan, atmospheric scientist at Nasa's Goddard Space Flight Center in Greenbelt, Maryland.

"When governments step in and say we are going to build something here or we are going to regulate this pollutant, you see the impact in the data," Duncan noted. Duncan and his team examined observations made from 2005 to 2014 by the Dutch-Finnish ozone monitoring instrument aboard Nasa's Aura satellite. One of the atmospheric gases the instrument detects is nitrogen dioxide. Nitrogen dioxide can quickly transform into ground-level ozone, a major respiratory pollutant in urban smog. NO2 hotspots, used as an indicator of general air quality, occur over most major cities in developed and developing nations. The science team analyzed year-to-year trends in nitrogen dioxide levels around the world. They found that China, the world's growing manufacturing hub, saw an increase of 20 to 50 percent in nitrogen dioxide, much of it occurring over the North China Plain.

Three major Chinese metropolitan areas - Beijing, Shanghai, and the Pearl River Delta - saw nitrogen dioxide reductions of as much as 40 percent. The findings were presented on Monday at the American Geophysical Union meeting in San Francisco, US and published in the Journal of Geophysical Research.

Air pollution is growing in India, China rapidly: NASA

Date:16th December, 2015 Source: Post Jagran

Washington: India, China and the Middle East, with their fast-growing economies and expanding industry, have seen growing air pollution, according to NASA scientists who tracked the trends over the last decade in various regions and 195 cities around the globe.According to the findings, US, Europe and Japan have improved air quality owing to emission control regulations. "These changes in air quality patterns aren't random", said Bryan Duncan, an atmospheric scientist at NASA's Goddard Space Flight Centre in US, who led the research.

Using new, high-resolution global satellite maps of air quality indicators, NASA scientists tracked air pollution trends over the last decade in various regions and 195 cities around the globe. Duncan and his team examined observations made from 2005 to 2014 by the Dutch-Finnish Ozone Monitoring Instrument aboard NASA's Aura satellite. One of the atmospheric gases the instrument detects is nitrogen dioxide, a yellow-brown gas that is a common emission from cars, power plants and industrial activity. Nitrogen dioxide (NO2) can quickly transform into ground-level ozone, a major respiratory pollutant in urban smog.Nitrogen dioxide hotspots, used as an indicator of general air quality, occur over most major cities in developed and developing nations. The science team analysed year-to-year trends in nitrogen dioxide levels around the world.

To clear air, Supreme Court bans sales of big diesel cars in Delhi

Date: 16th December, 2015 Source: Reuters

The Supreme Court has ordered a temporary ban on the sale of large diesel cars in New Delhi to combat toxic smog in the city, prompting concern in the auto sector as some carmakers say they may reconsider investment plans in the country. According to an order passed on Wednesday, the registration of sport-utility vehicles and other diesel cars with an engine capacity of 2,000 cc or more is banned in Delhi and the surrounding region with immediate effect until March 31. Delhi's crackdown on diesel cars has unsettled the industry, its salesmen and investors, who warn the ban and uncertainty around it could derail a tentative recovery in Indian sales and leave dealers with forecourts packed with unsold cars.

Environmental campaigners and the lawyer who brought the case to the Supreme Court, however, say they want to see the order extended beyond the capital to other smog-choked cities. Daimler AG's Mercedes-Benz, for whom the Delhi region represents almost a quarter of sales in the country, told Reuters the diesel ban and the uncertainty around it would "severely impact" growth plans and future investment in India. "We also have to consider the loss of jobs that this will result (in) at the dealerships, at the vendors producing diesel engines," a spokesman said in an emailed statement, adding its own workers would be affected.

TRUCK CHARGE DOUBLED- The court - which said the order would not hit India's "common man" - stopped short of banning the smaller cars that clog India's roads. But it did also prohibit trucks from passing through the city to reach other states and banned all trucks over 10 years old from the capital.

An existing charge imposed on trucks making deliveries to Delhi itself was doubled to up to 2,600 rupees ($39). Other measures include a demand for all taxis in Delhi, mainly those operated by Uber and local rival Ola, to replace diesel with natural gas, as well as a broad, immediate ban on burning solid waste. In January, the judges will also consider an application to levy a green tax on all diesel cars sold in the country. Environmentalists have cheered Wednesday's moves, but analysts questioned the detail of the ban. "The (higher truck) levy will just go back to whoever is hiring the trucks. So eventually the consumer ends up paying the levy and inhaling the gas fumes," said Deepesh Rathore, director at consultant Emerging Markets Automotive Advisors.

CLEANING UP- India's National Green Tribunal, an environmental court, last week ordered a ban on the registration of all diesel vehicles for nearly four weeks to help clean up the air in Delhi, one of the world's most polluted cities.

That triggered a share price fall among automakers which have invested heavily in diesel technology in India. The drop steepened after the Supreme Court's order. Mahindra & Mahindra, India's top utility-vehicle maker, was one of the biggest losers with shares down 5.5 percent. It said the ban would affect roughly 2 percent of its total monthly sales. Rivals such as Tata Motors and Toyota Motor Corp, the world's top-selling carmaker, also have popular large cars. Greater Delhi contributes 8 percent of Toyota's sales and 80 percent of vehicles sold in this region are diesel. India's auto industry body called for a comprehensive plan, which should include a policy to remove and scrap old vehicles.

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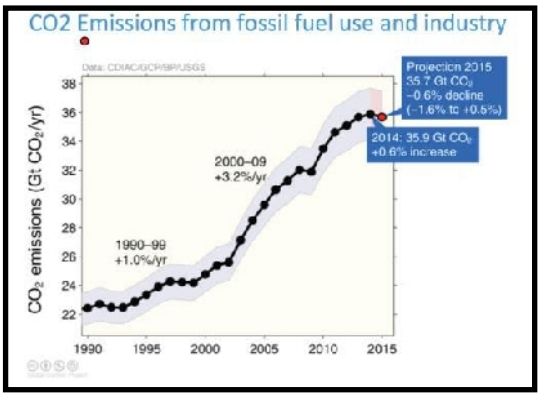
5 Climate And Clean Energy Charts From 2015 You Need To See

Date:17th December, 2015 Source: Think Progress



This was a big year in climate science and solutions. We learned a number of truly astounding things, which generally makes for great charts. Clean energy progress- My candidate for the top solutions chart of the year comes from a November DOE report, "Revolution…Now The Future Arrives for Five Clean Energy Technologies." It shows the stunning progress core clean energy technologies have made in the last several years as accelerated deployment created economies of scale and brought technologies rapidly down the learning curve.

Given that the opponents of climate action are generally shifting from a failed attack on climate science to a demonstrably false attack on the availability of climate solutions, this chart should be front and center in the response. We also learned this year that, just as the solar photovoltaics crossed a key price point several years ago — which initiated explosive growth in PV nationally and globally — "Electric Car Batteries Just Hit A Key Price Point," which means electric vehicles are likely to continue their recent exponential growth.

A true emissions plateau?

The runner up for top "good news" chart comes from a Global Carbon Project journal article released earlier this month, "Reaching peak emissions." The GCP concludes, "Rapid growth in global CO2 emissions from fossil fuels and industry ceased in the past two years, despite continued economic growth. Decreased coal use in China was largely responsible, coupled with slower global growth in petroleum and faster growth in renewables."

Chinese coal consumption has begun a downward spiral, with a more than 4 percent drop expected this

year alone (see here). China has been scaling back coal use by power plants as well as by some of China's biggest industrial coal consumers: cement, steel, and iron.

When you combine China's accelerated action with the successful Paris Agreement and the ongoing cleantech revolution, it seems clear that 2014-2015 marks an inflection point in the CO2 emissions trend line — and could even represent a true plateau. If so, then you can expect to see a version of this chart in the "top charts of the year" for a while to come.

CO2's direct impact on cognition- There were plenty of worrisome scientific reports this year, but none more unexpected and more potentially impactful than the landmark public health finding from the Harvard School of Public Health that carbon dioxide (CO2) has a direct and negative impact on human cognition and decision-making.

Significantly, these impacts have been observed at CO2 levels that most Americans — and their children — are routinely exposed to today inside classrooms, offices, homes, planes, and cars. They found that, on average, a typical participant's cognitive scores dropped 21 percent with a 400 ppm increase in CO2. Here are their astonishing findings for four of the nine cognitive functions scored in a double-blind test of the impact of elevated CO2 levels:

The researchers explain, "The largest effects were seen for Crisis Response, Information Usage, and Strategy, all of which are indicators of higher level cognitive function and decision-making."

The key point is that outdoor CO2 levels are the baseline for indoor levels, which are typically 200 to 300 ppm higher in well ventilated buildings, but far higher than that in poorly ventilated buildings. We are at 400 parts per million (ppm) of CO2 today outdoors globally — and tens of ppm higher in many major cities. We are rising at a rate of 2+ ppm a year, a rate that is accelerating.

Significantly, we do not know the threshold at which CO2 levels begin to measurably impact human cognition, but it appears to be well below 1000 ppm. Even after Paris, we are still on a path to 675 ppm, which is too high for both the climate change impacts and the direct human cognition impacts. Given the importance of this story, I will be reporting on it a great deal in 2016.

Climate change: Temperature rose by 2 degree Celsius in Northeast India

Date:18th December, 2015 Source: Zee News

New Delhi: Even as the world has been abuzz on the topic of climate change and its effects, a study suggests that several Indian states, including the northeastern states will be adversely affected by it. Development of the North Eastern Region (DoNER) Minister Jitendra Singh, while addressing the Lok Sabha on Thursday said that the northeastern states of India have witnessed a rise of two degree Celsius temperature severely affecting the environment as well as health of the people.

The study was conducted by the Indian Network of Climate Change Assessment (INCCA) in 2010 to asses the impact of climate change on four key sectors of Indian agriculture, water, natural ecosystems and biodiversity. As per the study, the northeastern region will see a rise in temperatures by 1.8 to 2.1 degrees Celsius and an increase in the mean annual rainfall by 0.3 to 3 percent in the 2030s. This means that the increase in temperatures may result in reduction in rice production as well as may affect the nutritional health of the people.

The study assessed four climate sensitive regions of India -sensitive Himalayan region, the Western Ghats, the coastal area and the North-East region. In June 2008, the government formulated the National Action Plan on Climate Change (NAPCC) to deal with climate change related issues. A thematic scheme on 'Climate Change Action Programme (CCAP)' with an outlay of Rs 290 crores was launched during the 12th

Five Year Plan to address the issues related to climate change.

Meanwhile, a scientist on Friday claimed that climate change is going to "positively" impact rice and tea crops in northeast. According to Chandan Mahanta of the IIT-Guwahati, a modelling study carried out by the institute showed that in the next 15 years (till 2030), rice and tea can actually have an advantage from climate change.

Climate change may lead to spread of malaria, crop loss: Govt

Date:18th December, 2015 Source: Economics times

NEW DELHI: A study to assess the impacts of climate change has projected the spread of malaria to newer areas, government today said. The study also projects a variable rate of change in agricultural production including losses in some crops and change in the composition of forest and net primary productivity, Environment Minister Prakash Javadekar said in a written reply in Lok Sabha. The study titled 'Climate change and India: a 4x4 assessment - a sectoral and regional analysis for 2030s' was published in 2010 by the Ministry of Environment and Forests.

"The study projects a variable rate of change in agricultural production including losses in some crops and changes in the composition of the forest and net primary productivity. Extreme precipitation events are likely to increase in all regions.

"Water yield is project to increase in the Himalayan region whereas it is likely to be variable across other three regions. Malaria is project to spread to new areas and threats of its transmission is likely to increase in duration," the study said.
It also assessed impacts of climate change on four key sectors of Indian economy - agriculture, water, forest and human health in four climate sensitive regions of India - Himalayan region, Western Ghats, the coastal region and the Northeast region.

Replying to another question, Javadekar said during the recently concluded G-20 Summit in Turkey, India said that it intends to meet its vast and growing energy needs in a sustainable manner. India has targeted additional 175 GW of renewable energy by 2022, cut back subsidies on fossil fuel and imposed carbon cess on coal. It also aims that around 40 per cent of its energy shall come from non-fossil fuel based energy sources by 2030.

"India has further advocated measures like increase research and development in clean and renewable energy and reduce cost of it to make it affordable and accessible for all," Javadekar said. "Increase financial support and technology transfer to increase access and transition to clean energy, focus on research efforts on clean coal technology, develop proliferation resistant nuclear energy technology, promote integrated global gas market amongst others," he added.

Replying to another question, Javadekar said technology transfer and financial assistance are the key issues which India has been raising in the Conference of Parties (CoP) to United Nations Framework Convention for Climate Change (UNFCCC) and other multilateral fora. He added that "India has accessed financial assistance of USD 289 million from Global Environment Facility (GEF) and USD 4.90 million from Adaptation Fund Board (AFB) of UNFCCC apart from bilateral projects."

The Minister said that to combat impacts of climate change, the government is promotingtechnologies and practices such as sustainable land management, climate resilient agriculture, water efficiency, clean coal technologies, super critical technologies for coal-based power plants, replacement of all incandescent lamps with light emitting diode (LED) bulbs, amongst others. Javadekar said that India is party to UNFCCC and its Kyoto Protocol but does not have any binding mitigation obligations under both.

However, "India had voluntarily adopted a goal of reducing its emission intensity of its GDP by 20-25 per cent over 2005 levels by 2020 while it has also submitted its Intended Nationally Determined Contributions (INDCs) towards addressing climate change which aims at reduction of emission intensity of its GDP by 33-35 per cent over 2005 levels by 2030," he said.

Replying to another question, Javadekar said that the UNFCCC, the international agreement with the objective of stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system, is not a legally binding convention while India is a party to it.

Notably, around 196 nations adopted a landmark global agreement recently at the Conference of Parties (Cop21) in Paris to curb greenhouse gases. Javadekar had earlier said that the Paris Agreement is a legally binding agreement that covers all countries, developed and developing, with the aim to strengthen the global response to the threat of climate change.

Beijing's 2nd smog red alert of the month goes into effect

Date: 19th December , 2015 Source: Bonner County

BEIJING (AP) — Beijing was enveloped in eye-watering, throat-irritating smog on Saturday as the second red alert of the month went into effect in the Chinese capital, forcing many cars off the roads and restricting factory production. A wave of smog settled over the notoriously polluted city of 22.5 million overnight and is forecast to last into Tuesday because of a lack of strong winds. Smog red alerts, the most serious in a four-tier warning system, are triggered when high pollution levels are forecast to last more than 72 hours. Levels of PM2.5, the tiniest and deadliest airborne particles, rose to as high as 331 in some parts of Beijing on Saturday and are predicted to top 500 in the coming days — more than 20 times the level considered safe by the World Health Organization.

As a result of the red alert, schools were ordered closed and half the city's cars forced off the roads each day. Barbecue grills and other outdoor smoke sources have been banned and factory production restricted. While some balked at the inconveniences, most Beijingers appeared to support the measures after a lengthy stretch when the government was seen as largely ignoring the smog problem.

"I think (the government) is doing a better job than before," Beijing resident Ma Yunan said. "In previous times, the government would not issue red alerts even when the haze was very serious. Now they are

publishing alerts beforehand for us to get ourselves prepared and the alerts are accompanied with some measures." Although the smog warning system was launched two years ago, Beijing had not issued a red alert until Dec. 7, drawing accusations that it was ignoring serious bouts of smog to avoid the economic costs. The smog in Beijing is largely blamed on coal burning power plants, industrial pollution and the booming number of vehicles. The city's geography worsens the problem because mountains on three sides trap smog, and cold winter air presses down on it to keep it from clearing.

While waiting for promised plans to cut coal pollution to take effect, residents of Beijing and other polluted cities in northern China adapt by wearing face masks and equipping their homes with air filters. China, the world's biggest carbon emitter, plans to reduce hazardous emissions from coal-fired power plants by 50 percent over the next five years, and says its overall emissions will peak by about 2030 before starting to decline. Scientific studies attribute 1.4 million premature deaths per year to China's smog, or almost 4,000 per day.

Vehicular emissions may rise 19 times by 2020

Date: 19th December, 2015 Source: Times of India

AGRA: An eight-year study, from 2008-2015, conducted by IIT-Roorkee, University of Minnesota, US, and University of Surrey, UK, has shown that emissions from vehicles in Delhi have increased up to three times between 1991 and 2011; these could rise by up to 19 times by 2020. Researchers said the study has now been accepted for publication by the international science journal "Atmospheric Environment". Private vehicles' (two-wheelers and cars) emissions-carbon dioxide, hydro carbons, PM10 (particulate matter), carbon monoxide, nitrogen oxide and toxic substances like butadiene, acetaldehyde, benzene, formaldehyde, total aldehyde, and total poly aromatic hydrocarbons have increased by 2-13 times in 2011 and 2-16 times in 2015 over 1991 levels, the researchers have found.

Two-wheelers were found, at present, to be the dominant source of emissions of what are termed Mobile Source Air Toxics (MSATs)-formaldehyde (37%), hydrocarbons (35%) and acetaldehyde (64%). Private cars were found to be responsible for the majority of the carbon monoxide (34%), benzene (48%), and total aldehyde (40%) emission. Heavy-duty commercial vehicles (HCVs) were found to have emitted nearly 46% of all particulate pollutants in 2015. Diesel cars were responsible for 10% of such pollution in Delhi. The study attempted to record variations in various vehicular pollutants over 20 years, and offered projections for the future. It was conducted by Ajay Nagpure, post doctorate associate at the Centre for Science, Technology, and Environmental Policy, University of Minnesota, B R Gurjar and Vivek Kumar from IIT-Roorkee and Prashant Kumar from University of Surrey. Nagpure told TOI that pollution levels in Delhi had already reached dangerous levels. If action was not taken immediately, it would become render irreversible damage, he warned.

Researchers developed their own model, the Vehicular Air Pollution Inventory (VAPI), for measuring time-series emission analysis (1991-2011) of on-road vehicles. The research included pollution caused by non-exhaust sources like worn-out brake, poor roads or tyres and road dust. PM10 (particulate matter) emissions from tailpipe and non-exhaust sources contribute 16% of the total pollution; road dust is the big chunk of PM10 emissions, at 77% and brake wear (6%) in 2015. The study anticipates that the share of road dust in PM10 pollution would be 79% in 2020.

Nagpure said according to United Nations Environment Programme (UNEP) and World Health Organization, Delhi is the second-most populous city in the world after Tokyo, and the most polluted in the world. Air-pollution deaths have gone up two-fold between 1991 and 2010 in Delhi. MSATs can cause a wide range of serious health effects from birth defects, cancer, damage to kidneys, lungs and nervous system. Estimates from the US Environmental Protection Agency show that on-road vehicles are responsible for about half of all cancers attributed to outdoor air pollution.

Nagpure said that although action is being taken by governments to reduce pollution, much of this is focused on exhaust emissions. But no action is taken to reduce non-exhaust emissions like brake wear, road wear, tire wear and road dust.

The study projected greater pollution from buses. Cars (30-34%) were found to be producing the highest CO2 emissions during 2011 to 2015; there is likelihood that buses could dominate in the years after 2015, the researchers said. Mono-nitrogen oxide emission has also grown significantly, with an annual rate of growth of 14%. Two-wheelers played a dominant role in hydrocarbon emissions from 2011; buses are expected to be the biggest source of this pollutant from 2018 onwards.

Legislation to reduce air pollution urgently needed

Date: 20th December, 2015 Source: Economic Times

As the climate change talks wound up in Paris last week, there seemed to be a dim sense of optimism at the promises made by the developed world. Whether these will be fulfilled, only time will tell. But while much has been made of the lack of responsibility of the western world to its substantial role in adding to the world's emissions, there seems to be little attempt at introspection, especially from India which is home to 13 of the 20 most polluted cities in the world. In the early part of 2014, when the World Health Organization (WHO) reported that Delhi had replaced Beijing as the most polluted city in the world, the reaction of the Central government was predictable. Like one in a bad relationship, first there was denial. This is not true, said some. Readings have been taken at the wrong places, said others.

Then, came the accusations. This is an expat driven paranoia said the hawks, with some even murmuring Central Intelligence Agency (CIA). Eventually, it took over a year for environment minister Prakash Javadekar in early August to admit that there was a problem, and to state that clean air was a human right. One would have imagined that once the issue is admitted, action would follow. Unfortunately, the government's priority still seems to be to invite foreign investors and to do precious little for the weather. As an international journalist said in her column in April: "India is open for business, but if you come, do consider bringing a face mask." How exactly did things become so bad? Almost 20 years ago, the Supreme Court had stepped in to pass strong directions to protect the environment of Delhi. Brick kilns and polluting industries were shifted out and public transport vehicles were directed to shift to CNG from the toxic diesel that had lent a haze over the Capital. These orders were then extended to cover the rest of the country, but as with many directions of the Court, the lack of enforceability by state agencies allowed loopholes to be exploited and implementation to be tardy.

In the meanwhile, India continued to be casual about three major concern areas: the move to cleaner vehicle fuels, the burning of crops and trash in the open, and a ban on polluting vehicles. Vehicle Fuels- At the moment, Bharat-IV norm fuel is available only in 13 major cities and some states across the north of the country, while the fuel that is on offer in the rest of the nation is Bharat-III. The latter is cheaper and so, in a nation with adulteration the norm, transport vehicles are inevitably propelled by severely noxious fuel. The target to have Bharat-IV everywhere is 2017. Consider that Bharat-IV has been in place since 2010, and that China has already been at a level ahead for the last few years, and one realises why the citizen would be worried about governmental apathy.

As each shift to a better standard fuel would cleave the level of contaminants by a tenth, there is clear

urgency for a quick move. While one of the ideas mooted is to leapfrog directly to Bharat-VI norm fuel (which in the normal course would be only by 2025), both the oil corporations and the government seem unsure where to get that fuel at such short notice.

It may be worth their while to glance towards the world's largest refining hub within our very shores — Reliance's Jamnagar unit produces 1.24 million barrels of crude per day, which, as its website proclaims, "can produce gasoline and diesel of any grade".Couple this with its neighbouring SEZ which is the sixth largest in the world producing 5,80,000 barrels per day and one scratches one's head as to why this entire whopping amount of our produce is exported when it would serve polluting India better.

Open Burning- The single largest source of pollution in the country is the burning of biomass, wood and crops in rural areas, which horribly also kills a quarter of a million people annually. With no immediate options available for home fuels, and in order to remove the dry standing crop after a harvest, fire is readily used, unfortunately having many long-term and irreversible effects. Biogas and solar energy (the latter especially in light of prime minister Narendra Modi's initiative at Paris) ought to be introduced at the grassroots to avert the cause of the Asian brown cloud, which interferes with the monsoon as well.

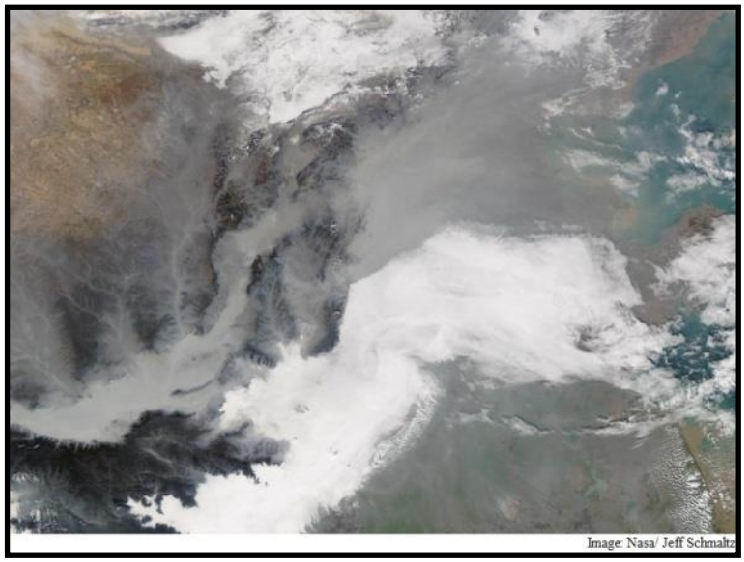
Ban on Polluting Vehicles- The recent imposition by the Supreme Court of a pollution cess on trucks entering the city overlooks two important facts: One, it is not all right to pollute, even at a price. The-polluter-pays principle is wholly inapplicable where the pollution is continuing — it applies only where a fait accompli exists and to disturb the status quo would cause much expense and heartburn.

Two, to avert trucks that pollute to other states outside Delhi is also a complete abdication of a solemn national duty protected by the Constitution. The lives of Delhi citizens are no more important than those elsewhere, and to permit trucks billowing black smoke and hazardous levels of gases into their midst is unacceptable.

It is about time the Central government stopped waiting for the Supreme Court to act, and instead did something about a national issue. Delhi will slowly repeat itself a hundred times in the Kanpurs, Mysores, Patnas and Nagpurs of India, and unless emergency measures are taken at a national level, it will too late for every little town and village. Pollution is now a political issue. And our children are watching.

Earth's Recent History Key to Predicting Global Temperatures: Study

Date:21st December, 2015 Source: Gadgets 360



Nasa scientists have calculated the temperature impact of different climate drivers such as greenhouse gases, ozone concentrations and land use changes based on historical observations over 150 years. To quantify climate change, researchers need to know the Transient Climate Response (TCR) and Equilibrium Climate Sensitivity (ECS) of Earth. Both values are projected global mean surface temperature changes in response to doubled atmospheric carbon dioxide concentrations but on different timescales. There have been many attempts to determine TCR and ECS values based on

the history of temperature changes over the last 150 years and the measurements of important climate drivers, such as carbon dioxide, researchers said.

As part of that calculation, researchers have relied on simplifying assumptions when accounting for the temperature impacts of climate drivers other than carbon dioxide, such as tiny particles in the atmosphere known as aerosols, for example. It is well known that aerosols such as those emitted in volcanic eruptions act to cool Earth, at least temporarily, by reflecting solar radiation away from the planet.

In a similar way, land use changes such as deforestation in northern latitudes result in bare land that increases reflected sunlight. However, assumptions made to account for these drivers are too simplistic and result in incorrect estimates of TCR and ECS, said study co-author Gavin Schmidt, the director of Nasa's Goddard Institute for Space Studies (GISS) in New York.

"The problem with that approach is that it falls way short of capturing the individual regional impacts of each of those variables," he said, adding that only within the last ten years has there been enough available data on aerosols to abandon the simple assumption and instead attempt detailed calculations.

In a Nasa first, researchers at GISS accomplished such a feat as they calculated the temperature impact of each of these variables - greenhouse gases, natural and manmade aerosols, ozone concentrations, and land use changes – based on historical observations from 1850 to 2005 using a massive ensemble of computer simulations. Analysis of the results showed that these climate drivers do not necessarily behave like carbon dioxide, which is uniformly spread throughout the globe and produces a consistent temperature response; rather, each climate driver has a particular set of conditions that affects the temperature response of Earth.

Since earlier studies do not account for what amounts to a net cooling effect for parts of the northern hemisphere, TCR and ECS predictions have been lower than they should be. This means that Earth's climate sensitivity to carbon dioxide - or atmospheric carbon dioxide's capacity to affect temperature change - has been underestimated, researchers said. The study was published in the journal Nature Climate Change.

Air pollution situation in Delhi of an emergency nature: HC

Date:21st December, 2015 Source: The Indian Express

Another exercise the panel has been directed to carry out is to give a weekly chart of the pollutants during the months from October to February for all the years from 2011 to 2015. Air pollution in the national capital is of an "emergency nature", the Delhi High Court on Monday observed and said this situation would not have arisen if the authorities had implemented laws and rules in place to prevent environmental degradation.

A bench of justices Badar Durrez Ahmed and Sanjeev Sachdeva was of the view that while legislations were in place for ensuring maintenance of air quality levels, individuals and departments tasked to enforce the rules, "have not done their work".

It directed officers of all concerned authorities, including Delhi Pollution Control Committee (DPCC), that "all the rules have to be followed to the 't' as the situation today is of an emergency nature". "This situation would not have arisen if all authorities had implemented the rules," the court said.

The court, referred to particulate matter-PM 2.5 and PM 10-and said as per the statutory norms their levels are not to exceed 60 microgram per cubic meter per day and 100 microgram per cubic meter per day, respectively.

However, as per DPCC monitoring stations, their levels are always far in excess of 400/500. It directed DPCC, represented by advocate Sanjeev Ralli, to "analyse data from 2011 onwards and to provide us a monthly average chart of each pollutant."

Another exercise the panel has been directed to carry out is to give a weekly chart of the pollutants during the months from October to February for all the years from 2011 to 2015. DPCC has also been asked to provide the court with details of action taken by it, against any violations, in the last five years. Meanwhile, on the issue of traffic management to reduce the timings of idling vehicles, the court observed that despite its direction for zero tolerance towards violation of rules, especially by people who jump onto other carriageways to get ahead during traffic snarls, police was doing nothing.

"People in Delhi need to be disciplined. Send anyone who changes carriageways to turnaround and go in the opposite direction from which they came, as they do in Mumbai," the bench said while hearing a PIL initiated by it on the issue of increasing air pollution in Delhi.

Delhi Traffic Police, in an affidavit, told the court that it had identified 14 areas in the city which were heavily congested and that, in those places, it had observed zero tolerance for violation of rules.

Pollution Chokes Chinese Cities as Smog Spurs Indoor Warnings

Date: 21st December, 2015 Source: Bloom Berg

Heavy clouds of smog in China's northern and eastern regions are prompting warnings for children and the elderly to stay indoors in metropolitan areas including Beijing and Shanghai. Concentrations of PM2.5 -- particles considered the most dangerous to health -- rose to as high as 176 micrograms per cubic meter at 11 a.m. in Shanghai, indicating "heavy" pollution, according to the Shanghai monitoring center. Levels were at 222 near Beijing's Tiananmen Square, that city's municipal monitoring center said. The World Health Organization recommends daily exposure of no more than 25 micrograms.

This month's frequent and extensive smog has renewed calls for better pollution forecasting and prevention. Beijing has quickened the pace at which it reacts, issuing its second red alert, prompting school closures, traffic restrictions and limits on factory production. The alert, the highest on a four-tier warning scale, was issued last week and runs through tomorrow. Bad Weather- "Pollution issues exist in lots of Chinese cities and they become visible amid bad weather," said Yang Chaofei, vice president of China's Society for Environmental Sciences.

The burning of raw coal and industrial emissions are the major sources of pollution in northern parts of China, the Ministry of Environmental Protection said on Dec. 1. Beijing has a long way to go to clean up its pollution, Yu Jianhua, chief engineer of the Beijing Municipal Environmental Protection Bureau, said on Dec. 17.

In addition to the health warning, Shanghai has also initiated a series of "winter pollution" measures

effective as of 7 a.m. today. The actions call for a halt to construction and demolition work in central areas of the city, according to the municipal government's official microblog.

Rising anger over Delhi's toxic air

Date: 21st December , 2015 Source: Straits Times

NEW DELHI: For 12 hours a day, Mr Raju Misra stands at his snack stall in the world's ultimate pollution blackspot, inhaling toxic fumes and railing against India's politicians for failing to clean up the filthy air.

Anger and alarm are rapidly rising throughout sprawling New Delhi over the air quality that the World Health Organisation (WHO) has ranked the most hazardous on the planet. But life is measurably more dangerous for Mr Misra and the many street vendors and rickshaw drivers who scratch a living at ground zero - a bus terminus in the city's bustling Anand Vihar suburb.

Surrounded by major roads clogged with old trucks, dust-generating construction activities and not far from a coal-fired power station, the area's air routinely tests far worse than the rest of Delhi. "In the morning, you can see the smog and smoke in the air from the pollution," Mr Misra said, struggling to be heard over the buses. "We want the number of cars on the road to be cut. Common people, politicians have to come together to reduce Delhi's pollution," the 60-year-old said from behind his counter.

Delhi has been shrouded in a toxic soup in recent weeks as winter sets in, cutting visibility and pushing PM2.5 levels to more than 10 times over the WHO's recommended safe limit. These fine particles less than 2.5 micrometres in diameter are linked to higher rates of chronic bronchitis, lung cancer and heart disease as they settle into the lungs and can pass into the bloodstream.

Expert Anumita Roychowdhury said the elderly and children are most vulnerable, particularly those from poor families who live in areas of Delhi highly exposed to the particles. "Children take in more air than the rest of us. And studies show the damage to their lungs can be irreversible," Ms Roychowdhury, from the Delhi-based Centre for Science and Environment (CSE) think- tank, said. India's courts are pushing governments to act over the mounting crisis, ordering a moratorium last week in the city on large diesel luxury cars whose fumes are partly blamed for the pollution. "Why should a rich man be travelling in a diesel car and pollute the environment?" Chief Justice T. S. Thakur told the court, which also banned the burning of garbage. The court also barred the thousands of diesel trucks that storm through Delhi every night to avoid tolls on roads around the city en route to the rest of the country. Politicians are belatedly jumping on board, with the Delhi government announcing this month that cars will be allowed on its congested roads only on alternate days next month.

There are already more than 8.5 million vehicles on Delhi's roads with 1,400 new cars being added every day as incomes rise. Experts remain sceptical about how the plan will be enforced given that the police answer to the national government, which shares an acrid relationship with its Delhi counterpart. But federal Environment Minister Prakash Javadekar insisted last week there will be "no fighting" in efforts to clean up the city for all residents.

"This is the principle we are following to achieve a pollution-free Delhi, and we have started working towards this goal," Mr Javadekar told reporters, adding that work on long-awaited bypasses for the trucks

has finally started. CSE director-general Sunita Narain said politicians are under pressure from the courts as well as mounting alarm and criticism of the crisis among broad sections of Delhi society.

"I don't think it's just the middle class or the people who can afford to run away from Delhi (who are concerned). People who can run away from Delhi are running away and putting air purifiers in their homes," she said. "I think there is a deep worry in Delhi today," Ms Narain said.

Should we allow polluted Delhi to slip into coma?

Date:31st December, 2015 Source: New Kerala

New Delhi, Dec. 31: Here are some frightening facts on pollution. Air pollution kills more than 6, 27,000 in India, according to the World Health Organization. India has 13 of the 20 most polluted cities of the world. And our national capital New Delhi has the world's dirtiest air, earning it the dubious distinction of the most polluted city of the world.

In a city of 18 million people, we have 8.5 million vehicles, and still counting. And at least, if not more, 1,500 new vehicles are added to Delhi's roads every day. New Delhi has the highest number of vehicles in the country, more than three other metros -- Mumbai, Kolkata, Chennai -- put together. Delhi accounts for more than 8 percent of the total registered vehicles in the country. In the last decade, vehicle numbers have increased by more than 100 percent. Is it an achievement that we should be proud of? Vehicular emissions cause close to three-quarters of Delhi's air pollution. The WHO found that Delhi had an average of 153 micrograms of the smallest particles, known as PM2.5s, per cubic metre in its air. The international "safe" level for these particles is six micrograms per cubic metre. Is it not a scary scenario? There have been rising incidences of allergies, respiratory problems and birth anomalies, thanks to city's toxic air.

Then why are we making such a hue and cry after the Delhi government came out with an odd-even car formula, that, too, on a trial basis for a fortnight, just because it will inconvenience us? There is no doubt that the proposal will lead to chaos. To begin with, our daily routine will be badly disturbed.

But is it not the time to press the panic button and bite the bullet? We are to be blamed for the mess that we find ourselves to be in. How do we explain that a small family of three or four people having an equal number of cars? It has become status symbol for many to park high-end cars outside their homes as coveted trophies, leaving little space for people to even walk.

Over the years, roads of Delhi, one of the widest in the country, have shrunk with no space for pedestrians and cyclists. The pavements today appear to be extension of road as bikers use them unabashedly. One just can't walk and cycle because it is fraught with dangers. A 2012 road accident data shows a person is either injured or killed in a road accident in Delhi every hour. Today Delhi has become gas chamber. The air has become so polluted that we breathe toxic air when we take a stroll out in park in the morning. So what do we do? Should we not take corrective steps?

When the first car-free day was kicked off from Red Fort to Bhagwan Das Road on October 22 this year, studies found that there was a dramatic 60 percent drop in the amount of dangerous pollutants in comparison to the previous day. There is no doubt that if 30 to 40 percent cars are off Delhi roads, air will be much less pollutant.

Critics say Delhiites will puncture government's good intention by buying another car or cars, as it happened in Mexico, defeating the purpose. Yes, we Delhiites are quite capable of doing that. But how many of us will be able to buy new cars? There is no doubt that car rationing is not the only solution. It will have to be

accompanied with several harsh measures. The government should keep a tab on the people buying cars. Those found having more than two cars should be slapped with a heavy road tax. The monitoring agency should also ask the buyer whether he has parking lot for the vehicle. Those using the second lane of roads as parking lots should be fined.

Counterfeiting of number plates is another problem the authorities will have to grapple with as an English daily recently found out. Scheming people are already out with innovative ideas! It will be very difficult to differentiate between a genuine and a counterfeit number plate. Critics also point to Delhi's inadequate public transport system which will not be able to take the load if 30 or 40 percent private vehicles are off roads. The government has promised to add more than 3,000 vehicles but it will have to procure much more if it wants the system to work. The government will also have to sort out the last mile problems if it wants people to use more public transportation.

The National Green Tribunal should be lauded for suggesting a ban of all vehicles older than 15 years from the streets of Delhi beginning April next year. It will take off at least one-third of the total vehicles from the roads. Authorities should also test vehicles regularly for pollution levels. And those vehicles found emitting pollution more than the limits should be penalized.

Subsidies on diesel should end. Cheaper diesel fuel has led to people buying more diesel vehicles. Diesel car sales accounted just four percent in 2000. Today diesel cars are half of new car sales. According to WHO, diesel emissions have strong link with lung cancer.

There is a desperate need to create public awareness to switch off engines while waiting at traffic signals. An idling vehicle is likely to cause more pollution than the running vehicle.

Buses and minibuses should not be allowed to stop longer than necessary to pick up or put down passengers. Buses should not be allowed to take more than two lanes of the left side of the road to avoid traffic jams. Traffic jams contribute heavily to pollute air.

And lastly, pollution is not the problem of Delhi Government only. The Centre should also pitch in to make the programme a success. Timing of government offices should be staggered and the sarkari babus should work in shifts as it happens in corporate houses. Why everybody in government offices has to report at 9 in the morning and leave around 5 p.m.? If the timings are staggered by two hours beginning 8 a.m. in three shifts, considerable traffic will be off the roads at a particular time to beat congestion.

Delhi's congestion has more than doubled in the last 10 years and the day is not far when the average speed of the vehicle will be five kiometres an hour. Until and unless road congestion is not improved, the war against pollution cannot be won. We have won this war before. When Sheila Dikshit government moved polluting industries out of the city, closed down coal-based power plants and introduced cleaner CNG in public transport vehicles, the air quality improved significantly. But sadly we let the guard down. We can do it again. What we need is a will and self-discipline. We own Delhi and we won't let it choke to die. It should be our New Year resolve.

जहाँ है हरियाली ।
वहाँ है खुशहाली ॥