

## Through prolonged haze, policy maze

15 December 2016, New Delhi, Down to Earth



*As cities around the world continue to see smog-ridden days and unabated carbon emission, Down To Earth looks into the scale of the problem and solutions at hand.*



The national capital region of India continues to gasp for clean air even since the haze descended on October 30. The smog that emerged due to a combination of factors like burning of firecrackers, paddy burning, and emission from power plants could not be dispersed due to a drop in wind speed, an increase in humidity, and low temperature. On November 5 and 6, PM<sub>2.5</sub> levels in Delhi reached 837 micrograms per cubic metre ( $\mu\text{g}/\text{m}^3$ ), much higher than the safe limit—60  $\mu\text{g}/\text{m}^3$ .



To put things into perspective, PM 2.5 concentration level hovers between at 90 and 120 $\mu\text{g}/\text{m}^3$ , people with respiratory issues start feeling discomfort. At 120-250 $\mu\text{g}/\text{m}^3$ , categorised as "very poor", the risk of developing respiratory illness on prolonged exposure increases. Like the recent episode of extreme pollution, almost every winter in the last two decades caught Delhi unaware with a spike in levels of pollution.

While Down To Earth tracked the 20-year-long fight to clean Delhi's air, its study shows how several smaller cities turned out to be more polluted than the national capital. Going by the daily Air Quality Index (AQI) that the Central Pollution Control Board (CPCB) releases for 32 cities, Kanpur, Lucknow and Faridabad had witnessed worse air quality

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than Delhi on different days in the first two weeks of November 2016. Varanasi and Allahabad also sprung a surprise as they didn't observe even a single day of "good" air quality in more than 220 days when measurements were taken.

Sharing a border with the state of Punjab in India, the Pakistani city of Lahore is also a victim of severe air pollution. It has seen a permanent haze hanging over the city during winter for the last five years. The poor air quality in the city is attributed to increased vehicular and industrial emissions, especially from the coal-based industries in East Punjab, closer to the border with India.

### **Is China exporting pollution to the US?**

Neighbouring China witnesses 76 deaths per 100,000 people every year and it is also the world's deadliest country for outdoor air pollution, according to the World Health Organization (WHO).

Particulate matter in China causes 17 per cent of all deaths and two congenital disabilities a minute. Winter-time pollution has remained a nagging concern for a country where coal still dominates the energy mix. Coal is, in fact, responsible for about 40 per cent of the PM 2.5 in China's atmosphere.

While Donald Trump can disregard global warming as China's creation, he must be really concerned about the country exporting pollution to the US. Chinese manufacturers, who are accused of killing the US industry and jobs, are now held responsible for pollution in the US. But how? Particulate matter, heavy metals and other poisons emitted by Chinese factories move across the East China Sea contributing 40 per cent of Tokyo's air pollution. These pollutants travel all the way to the US in about four days.

According to a NASA study, 25-30 per cent of California's air pollution originates in China.

While the US regulatory regime punishes local companies with enormous costs and forces them to ensure air quality improvements, cleaner emissions are offset by pollution from China crossing the Pacific.

### **Alarmingly high air pollution in EU cities**

In the year 2016, many European cities, too, witnessed a spike in air pollution levels. In the first week of December, Paris experienced three polluted days in a row in what is considered the worst bout of air pollution for at least ten years. Low wind speed failed to disperse the smog that blanketed Paris and veiled the Eiffel Tower. The pollution was the result of a combination of vehicular emission and emission from domestic wood fires. For more than a week, the French capital recorded PM10 more than 80  $\mu\text{g}/\text{m}^3$ , reaching 146  $\mu\text{g}/\text{m}^3$  on December 1.

London was worse off in 2016. It is one of the most polluted cities in the UK with nitrogen dioxide (NO<sub>2</sub>) level continuously breaching the EU standards. In fact, air pollution has been linked to nearly 9,500 premature deaths in the city every year. If we consider the UK, over 90 per cent of the population lives in areas with average PM2.5 level is above the WHO's air quality limits of 10  $\mu\text{g}/\text{m}^3$ . Meanwhile, a High Court judge has asked the government to submit an improved air quality action plan by July 2017.



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### **Global actions**

The Central Pollution Control Board (CPCB) in India recommended a slew of measures to be taken for moderate, poor, very poor, severe, and emergency categories of air quality in India. In its submission made to the Supreme Court on December 2, the CPCB suggested enforcement of pollution control measures in thermal power plants through PCB monitoring, mechanised sweeping on roads, and water sprinkling on unpaved roads. It also called for ensuring that only trucks registered after 2005 are allowed entry into the national capital and vigilance to stop plying of visibly polluting vehicles is enhanced.

Meanwhile, the Centre for Science and Environment (CSE) has called for an emergency action to tackle the emergency situation. According to the CSE, vehicle restraint measures, including odd-even scheme and parking restrictions, must be implemented immediately. It has long been advocating stepping up of inter-state coordination to address smoke plumes from farm fires in Punjab and Haryana.

India, especially Delhi, has lessons to learn from Paris. The French capital took prompt actions when it was hit by the worst air pollution in a decade which can threaten public health. Paris not only resorted to vehicle rationing to restrict a number of vehicles on the road but also imposed driving restrictions in Lyon. Public transit was made free. It was the fourth ban in 20 years, and for the first time, Paris took such a move on consecutive days. Paris police also reduced speed limits, banned outdoor and indoor fires and even put restrictions on indoor heating.

Like Paris, other capital cities also resolved to act against vehicle emission and implement a ban on diesel-powered cars and trucks. By 2025, four major cities—Paris, Mexico City, Madrid, and Athens—are expected to enforce a ban on the use of all diesel-powered vehicles to improve air quality. To clamp down on diesel-related pollution, the mayors of the cities expressed their commitment to do "everything in their power to incentivise the use of electric, hydrogen, and hybrid vehicles".

### **London**

The city, which has been haunted by the memories of the Great Smog of 1952 that killed 4,000 people within a week, is going to get an increased budget to improve air quality. Mayor Sadiq Khan has promised to double the funding to £875 million over the next five years. If approved, £312 million will be spent on cleaning up Transport for London's 9,300-strong bus fleet. About £65 million will be used to incentivise taxi drivers to switch from the oldest black cabs (over ten years old) to new ones with zero-emission capability.

### **China's plan to cleanse air of toxicity**

China's Five-Year Plan (2016-2020) on environmental improvements talks about significant reduction of major pollutants, effective control of environmental risks, supply-side structural reform and improvement in energy efficiency by 2020. The plan also lays down the target of reducing the share of coal in total energy consumption to 58 per cent or lower by 2020.

According to the plan, coal use in Beijing, Tianjin, Hebei and regions along the Pearl River Delta should drop by 10 per cent from 2016-2020. These areas have been asked to draw up a plan for environmental protection by the end of 2017.

*(The views expressed are strictly those of Down to Earth.)*

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