

QR CODE



India's Air Pollution: The Horrendous Situation

Parul Chawla 

India's capital Delhi, with nearly 19 million residents, was described as a "gas chamber" as it faced a major air quality crisis this year.¹ The notorious pollution led to a declaration of public health emergency in the city. It also led to traffic accidents, closed schools, flight cancellations and ignited protests.

Frequent unhealthy levels of pollution from sources ranging from vehicle emission, agricultural practices like burning crop stubble, burning of biomass like wood, dung for cooking and heating, burning of coal, dust storms, forest fires, poor waste management, affect most of the country. As most of these practices are more prevalent in rural areas, the particulate layer that blankets dozens of cities, mainly the metro regions originates in these locations.

The hilly and mountainous inland regions of the country also act as reservoirs that trap the unpleasant and toxic air over vast belts of the country, sometimes making the air too dangerous to breathe. In land-locked regions, pollution does not dissipate timely. The polluted air then gently moves over major cities where it commingles with traffic exhaust, factory emissions, and construction dust making it more hazardous.

The indoor pollution caused due to use of stoves is too toxic for children. According to a World Health Organisation report, for households in India that used wood and dung for cooking, the mothers are more likely to deliver underweight babies in and children are more prone to asthma and infections. In 2015, about 75 percent of deaths linked to air pollution in India, some 1.1 million people, occurred in rural areas.

A lot many cities from India have seen a sudden rise in the rankings on WHO's list of most polluted cities. The problem has been prevalent since decades but has been measured and reported lately. About 98% of cities in low- and middle-income countries with more than 100 thousand inhabitants do not meet norms set

out in the World Health Organization's (WHO) air quality guidelines. In the year 2012, approximately 1.5 million people died from the effects of air pollution in India. As per the World health statistics 2016, nearly 7 million deaths in 2012 across the globe occurred due to air pollution making it the world's largest single environmental health risk.

As per a fact sheet by University of Chicago, Air quality in Delhi, is among the deadliest in the country with pollution concentrations reducing life expectancy by more than 10 years for the typical resident.²

Exposure to high levels of pollutants affects is a major risk factor for cardiac disorders, stroke, chronic obstructive pulmonary disease, emphysema and lung cancer, and increases the risks for acute respiratory infections and exacerbates asthma. The rise in the level of air pollution also worsens the underlying disease condition, making a direct increase in need for medication and emergency visits to hospital.

As per a research conducted by Reddy et al, the annual population-weighted mean exposure to ambient particulate matter in India was 89.9 $\mu\text{g}/\text{m}^3$ in 2017 with around 76.8% of the population exposed to annual population-weighted mean $\text{PM}_{2.5}$ greater than 40 $\mu\text{g}/\text{m}^3$, a limit recommended by the National Ambient Air Quality Standards in India.³ Also, 1.24 million deaths in India in 2017 were attributable to air pollution and in the same year, India contributed 18.1% of the global population but had 26.2% of the global air pollution DALYs (disability-adjusted life-years) in 2017. It was also estimated that if the air pollution level in India were less than the minimum causing health loss, the average life expectancy in 2017 would have been higher by 1.7 years.³ Although, India has disproportionately high mortality and disease burden due to air pollution, the anti-pollution laws in India aren't enforced well.

There is a need to implement both short-term and



© Parul Chawla. This is an open access article distributed under the terms of the Creative Commons Attribution License CC-BY-NC 4.0, which permits unrestricted use, distribution and reproduction in any medium, provided the use is not commercial and the original author and source are cited.

long-term comprehensive and effective multi-sectorial policies and mechanisms that are adequate to face the magnitude of air pollution in the country and are able to reduce the high levels of air pollution that pose a major threat to the development of India. This would help in reducing the substantial avoidable deaths and disease burden from this major environmental risk. Controlling air pollution will require coordination across cities and provincial boundaries. There is a need to propose measures that would provide the largest reduction in exposure to air pollution and result in improvements of people's health. These might include switching to pollution free energy sources, reducing road traffic, avoiding use of cook stoves, creating vehicle free zones and cycle paths, planting more trees, proper waste disposal, use of vehicles with BS-VI technology and curtailing other practices of particulate emissions. Since the sources of air pollution are diverse, a coordinated effort is required with the involvement of different ministries along with the involvement of

policy makers, stake holders, media and the public. Once the drive against air pollution gains a momentum, further reinforcement would be required to enhance the planning and implementation of air pollution control efforts across Indian states in a sustainable manner. The time is to bring in a revolution against air pollution, not only to benefit human health, but for also laying a wider beneficial impact on the entire ecosystem of this so called 'green planet'.

REFERENCES

1. <http://www.bbc.com/news/world-asia-india-43067685> [Last accessed on 31st October,2019]
2. https://aqli.epic.uchicago.edu/wp-content/uploads/2019/03/EPIC_India_FactSheet_Vo6-nobleeds.pdf [Last accessed on 31st October,2019]
3. Reddy KS, Roberts JH. Mitigating air pollution: planetary health awaits a cosmopolitan moment. *The Lancet Planetary Health* 2019;3(1): e2-e3.

Cite this article as:

Chawla P. India's Air Pollution: The Horrendous Situation. *Int Healthcare Res J.* 2019;3(8):248-249. <https://doi.org/10.26440/IHRJ/0308.11252>

AUTHOR AFFILIATIONS AND CORRESPONDING ADDRESS:

Editorial Coordinator, IHRJ
Masters in Systems Biology and Bioinformatics
Pharmacovigilance Specialist (ORCID ID: <https://orcid.org/0000-0003-4532-3172>)

e-mail id for correspondence: [parulchawla27\[at\]gmail\[dot\]com](mailto:parulchawla27[at]gmail[dot]com)