

The polluted air we breathe

In 2006, Al Gore broke down the complicated issue of climate change in “An Inconvenient Truth” to make it understandable to the public. In a similar manner, a month back, “Under the Dome” – a documentary on air pollution in China – highlighted the known linkages between pollutants and human health. Even though the documentary is in Chinese, the message is global. It is especially relevant for Indian cities where air pollution is going from bad to worse, and where there is a lack of understanding of where this pollution is coming from and what we must do about it.

According to the World Health Organization, 25-30 cities in the top 100 most polluted cities in the world are from India. The Global Burden of Disease assessments for 2010 estimated that 6,27,000 premature deaths in



SARATH GUTTIKUNDA

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India can be attributed to outdoor air pollution. Of the pollution-related risks, a substantial increase was observed in the cases of ischemic heart disease (which can lead to heart attacks), cerebro-vascular disease (which can lead to strokes), chronic obstructive pulmonary diseases, lower respiratory infections, and cancers (in trachea, lungs, and bronchitis). These estimates do not include acute impacts such as asthma attacks, eye irritations and other respiratory ailments. We still do not know and have not quantified the long-term health impacts of air pollution on vulnerable populations such as children and the elderly. The pollutant with the most impact on health is Particulate Matter. Particulate Matter with an aerodynamic diameter of less than 2.5 micron-meter is especially harmful as they are small enough to settle inside our lungs and cause long-term health problems. Other pollutants are Sulfur dioxide, Nitrogen oxides, Carbon monoxide, and ozone.

According to the 2011 census, by 2030, with a majority of the population classified as urban, the expected growth and demand in industrial, transportation, and domestic sectors will consequently result in an increase in problems of air pollution, which will spread from the big cities to secondary and tertiary cities. In the early 2000s, Delhi mandated a policy to convert auto-rickshaws, taxis and buses from diesel to Compressed Natural Gas. The benefits from this switch lasted for 3-4 years, but as the number of vehicles kept increasing, pollution levels from the transport sector were once again high. Such a large-scale conversion or any such intervention to target air pollution was not attempted again in any other city.

Inadequate urban planning

Air pollution is a complicated issue and is most often a symptom of inadequate urban planning. Lack of power supply leads to the use of diesel generator sets; lack of buses to support the public transport demand leads to higher use of personal vehicles; lack of infrastructure to promote walking and cycling leads to more motorised transport; lack of road maintenance and traffic management by allowing on-road parking leads to congestion; lack of a sufficient waste management system leads to garbage being left behind and often burnt in residential areas; and lack of paved or covered roads leads to re-suspension of dust when vehicles are passing by. The fact that air pollution is an externality from multiple sectors means that it needs to be addressed by multiple ministries that are willing to coordinate with one another. Technical solutions alone, like introducing CNG or changing standards for vehicles and industries, will not be sufficient to control air pollution in Indian cities. We need a change in the institutional setup in ways that will allow department and ministries to work together.

As citizens, it is our right to know the quality of air that we breathe, the severity of pollution in the air, and where this pollution is coming from. There are multiple sources and there is little that one can do as an individual that would make an impact on reducing emissions. Only when the government takes the lead to address this seriously, by mandating policies in the context of wider social and economic development, will we have any real change towards improving the quality of air. This will not be easy as it is a complicated issue, but we need to start somewhere. Getting a sense of how bad the air is through regular monitoring, and allowing citizens to demand action, is the first step. And we must take that step.

(Sarath Guttikunda is the Director of an independent research group, UrbanEmissions.Info and an Adjunct Associate Professor at the Indian Institute of Technology Bombay.)