

Cleaning the Air in Indian Cities

Thematic Event

WSDS 2018

Background

Air pollution is a key concern in a developing economy like India. Despite some efforts by the Government of India, more than 75% of Indian cities violate the prescribed standards of air quality. The main air pollutants are particulate matter, oxides of nitrogen, carbon monoxide, hydrocarbons ozone, and sulphur di-oxide, which impact human health and other receptors in different ways. While many of these are directly related to respiratory disorders, some of them have shown evidence of linkages with cardio-vascular diseases and cancer. Research studies have also indicated significant impacts over agriculture due to high ozone concentrations in rural India. Delhi being the capital has remained in limelight due to its alarmingly polluted air in the last few years, while there are several other regions which are equally or more polluted in the country. Raipur, Ranchi, Allahabad, Bareilly etc. are among the top 10 most polluted Indian cities dealing with high particulate matter pollution.

There is multiplicity of sources which contribute to pool of emissions which eventually deteriorate the quality of air in India. While on one hand, the poverty driven issues of energy access lead to the use of biomass based fuels for cooking purpose, on the other hand, growing aspirations enhanced by limitations in public transport have led to unprecedented growth in number of vehicles in the cities. Growing power demands and dependence on coal also contribute significantly to emissions along with industrial pollution. Improper management of municipal and agricultural waste is also a key issue which eventually leads to emissions of pollutants, as significant quantities of these wastes are burnt openly for volume reduction and heating purposes. Other than the emission sources, meteorology also plays its role in defining the air pollutant concentrations in different regions and seasons in India.

There are numbers of action plans formulated by the central and state governments to control air pollution in Indian cities in the past decade. The initial actions started in Delhi in late nineties, while air quality management plans for seventeen highly polluted cities were formulated in the year 2006-07, which at that time were not meeting the National ambient air quality standards. After that, Comprehensive Environment Pollution Index (CEPI) was formulated to characterize the environmental quality of an industrial area or cluster. Based on CEPI, critically polluted industrial clusters were identified and action plans were formulated for the identified industrial clusters. Air quality management plans were also proposed for six cities (i.e. Delhi, Bangalore, Pune, Kanpur, Chennai and Mumbai) on the basis of source apportionment studies out in the year 2011. Recently, in Delhi, the MoEFCC came up with a 42-point action plan in 2015 and a graded action plan was notified for control of pollution in different categories of air pollution. Lately, there has been discussions on notification of the comprehensive action plan for control of air pollution in Delhi-NCR. Despite drafting of so many mitigation plans, the air quality scenario has not improved over the years, at most places in India, especially in Delhi. It is in this scenario, it becomes very important to understand the factors impeding the attainment of air quality standards in the cities to identify measures for effective and optimal control of pollution.

The proposed action

While there are many global efforts in assessing the issue, in India, there are limited initiatives to identify the possible measures to control air quality in urban centers in India. This initiative aims to develop a policy brief on assessing the overall air quality scenario in India, and aims to analyse the whole issue in terms of key drivers, such as rapid urbanization, transportation, industrialization, power generation, and agricultural activities, that subsequently lead to air pollution at different scales in India. These drivers lead to generation of pressures on the air quality through release of pollutants. The brief will assess the contribution of different sources of emission and pollutant concentrations at urban and national scales and the impact on human health and other important receptors. Finally, the document also plans to discuss the key measures required for improvement of air quality in urban centres of India. We plan to discuss the policy brief in a thematic event in WSDS 2018 wherein sectoral experts, academicians, NGOs and key representatives of government will be invited for deliberations.

Thematic Event

The findings of the draft policy brief will be deliberated in a thematic event on air pollution in the World Sustainable Development Summit being organized by TERI during 15-17th February 2018. The event specifically aims to conduct high level discussions at the city level on the air quality issues and related mechanisms for control. The event also aims to identify and prioritize interventions in different sectors to reduce their contributions in the ambient pollutant concentrations. The event also looks forward to discuss the integrated role of science, policy, business and civil society for addressing air pollution concerns and indicate a pathway for emission reduction from different sectors.

The broad objectives are as follows:

Objective 1: To understand the air quality status in Indian cities. Which are the factors contributing to the problem of air pollution in urban centers of the country? Which are the key strategies that can work in reducing pollution in Indian cities?

Objective 2: What learnings can be taken from the past experience of Indian cities in tackling the problem of air quality?

Objective 3: What factors impede the focus on mitigation strategies for emissions from different sectors and how do we jointly address them?

Objective 4: What should be the immediate role of science, policy, business, financial institutions and advocacy groups and what will drive their collaborated action?

Thematic event will be held for two hours and there would be two session for one hour each. The first session will focus on higher level discussions on issues and approaches followed by different cities for tackling air pollution. The Lieutenant Governor (Delhi), Country Director (The World Bank), Chairman (Uttar Pradesh Pollution Control Board), Municipal Commissioner (Ahmedabad, Nagpur), and Chairman (KSPCB, Karnatka) are being invited for the inaugural session wherein discussions will

carried out on their experiences about air quality management in their cities. In the second session, experts from various institutions such as IIT-Delhi, The World Bank, CPCB, SIAM etc. will be invited to discuss the policy brief prepared by the TERI project team. Mitigation strategies listed in the brief and others will be deliberated in context of air quality management in urban centers of India. The event will bring together policy makers; air pollution experts; NGOs, corporate and the media to discuss strategies for air quality management. Based on the discussions, a clear set of proposed interventions, which can have maximum impact on improving air quality in urban centers in India, will be worked out.