

CONCEPT NOTE

Cities' Dialogue Air Pollution Abatement and Role of City Administration

Released in the year 2018, the World Health Organisation's (WHO) global ranking of pollution confirms that 14 out of the 20 most polluted cities in the world are in India and all of them fall in the Indo-Gangetic Plain (1). Uttar Pradesh has the highest number of cities that have been included in the WHO list. This is an unprecedented and alarming situation for public health as air pollution has a serious human health impact. A study published in The Lancet Journal on the public health impact of air pollution, which assesses the adverse health impacts from exposure to particulate matter, reveals, that the deaths caused by air pollution are three times more than HIV, TB and malaria put together.

Particularly in the states of Bihar, Uttar Pradesh and Jharkhand, the state governments understand the adverse effects of toxic air on human health and social development. In recent times, several positive measures have been taken to combat air pollution in cities like Lucknow, Patna and Ranchi but still, the air quality in these cities has not shown any significant improvement. For instance, Bihar and Uttar Pradesh have ordered the closure of polluting brick kilns in the states; public transport has been running on CNG in Lucknow for the past four years; e-rickshaw have been promoted in Ranchi as the last-mile connectivity. However, these initiatives have not made a major impact in lowering the PM levels. As per the CPCB air quality monitoring data, the levels of PM₁₀ between 2013 and 2016 increased by 111% and 119% in Lucknow and Ranchi respectively while it grew by 119% in Patna between 2014 and 2016 (2). Therefore, it is important to recognize that the problem of pollution in these cities is complex and hence, an integrated approach with well-coordinated actions can only deliver a tangible and visible outcome on the ground. That is why a comprehensive solution to address rising air pollution is the need of the hour.

In order to ensure breathable clean air for every citizen and to safeguard public health, each city with deteriorating air quality or with air quality projected to be deteriorating needs a Clean Air Action Plan (CAAP). The plan, which will not only integrate measures on small, medium and long-term basis but will also provide well-defined institutional mechanisms for improving air quality, should have a legal backing so that it can ensure compliance in contrast to other plans and regulations in which there is a shortage of these. Also, the CAAP should focus on pollution reduction targets, a strict timeline and a strong legal provision. Since a strong and robust air monitoring is also essential, the clean air action plan should also include a provision to improve air quality monitoring and proper access to data. The monitoring of data helps in understanding the trend, identifying the episodic events and planning emergency mitigation measures.

Also, air pollutants show a typical trans-boundary phenomenon with no regards to the national or geographical boundary. They travel hundreds of thousands of kilometres and cause an adverse impact on the health and livelihood of the region far removed from its point of emission. For instance, last year, the smog over Delhi and its adjoining areas in the National Capital Region (NCR) after Diwali is one such example, where the main cause of the deadly smog, as confirmed by satellite imageries released from NASA, was stubble burning in the neighbouring states of Haryana, Punjab and Western Uttar Pradesh. Therefore, a regional approach in the Clean Air Action Plan for designing and implementing long-term mitigation strategies is also crucial. Well-coordinated inter-government mitigation strategies will not only regulate the transboundary sources of pollution but will also cap the pilferage of violators.

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(1) <http://www.who.int/airpollution/data/cities/en/>
(2) CPCB Manual Data

Further, the sudden increase in air pollution and short-term exposure, which is especially in the winter months, is also a serious aspect of air pollution. A sudden 50-100 µg/m³ increase in the concentrations of particulate matter increased the emergency hospital admission, increased health complications in individual already suffers from respiratory or other diseases. And in this perspective, the resilience of cities to decrease exposure and lower the sudden increase in pollutant level is crucial. To an extent, the city resilience can be directly and easily addressed by simple urban designs and short-term investments (3). For example, the amount of air pollution generated by urban transport depends on the length; speed and number of motorized trips and the type of vehicles and small investments on pedestrian and non-motorized way and other infrastructure can significantly decrease emission from the transport sector. In fact with existing urban design features like smoother traffic flows and proper transportation route will improve local air quality markedly. Re-suspension of road dust which contributes 20% -25% of the total PM10 concentration in these cities can be easily addressed by increasing green cover,

investing eco-roads etc. And it is also good that these small investments can be done easily and it is also effective in air pollution control.

Further, several new urban schemes like Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Housing for All (Urban) Scheme and the Smart Cities Mission (SCM) will also be impactful to prepare cities against air pollution and transforming toward sustainability. The AMRUT focuses on improvement of the quality of life through the provision of sustainable basic services while Smart Cities Mission adopts an ICT -driven area-based development approach for providing a clean and sustainable environment through the adoption of 'smart solutions'. It addresses issues pertaining to the provision of basic services including city planning, development of physical and social infrastructure, promotion of Electric Vehicles and non-motorized transport etc.

The following regional and city-specific approaches with the modification of urban spatial structures and distribution pattern of land will have a positive impact on air quality, and options for improvement.

Set in this context, the conference is being organized to discuss the approaches that can increase the urban resilience of cities and will also deliberate the need to formulate Integrated Clean Air Action Plan.

About CEED

Centre for Environment and Energy Development (CEED), an environment and energy expert group involved in creating a sustainable solution to maintain a healthy, rich and diverse environment. CEED primarily works towards clean energy, clean air, clean water and zero waste solutions by creating an enabling environment and policy framework to scale up investments in low carbon development, climate mitigation and adaptation. CEED engages with government, industries, leaders, think-tanks, stakeholders and public to create environmentally responsible and socially just solutions.

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(3) A city's resilience to air pollution is the capacity of a city to tackle air pollution issues through urban planning