

**“Breathing fresh air into the NCR’s pollution control”**



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Experts frame environmental concerns in technical terms — pollutants, their monitoring and penalties — whereas air pollution in cities is driven by urban form and transport infrastructure; solutions depend on the stage of development. The National Green Tribunal (NGT) had begun the process of taking a new look at an old problem by asking the Government to list its causes. For example, there is a report that the NGT directed the Ministry of Environment, Forest and Climate Change to modify the National Clean Air Programme (NCAP) which proposes 20%-30% reduction of air pollution by 2024. But the NCAP with its collaborative and participatory approach, monitoring, targets, emergency measures and own role for international organisations has still to make an impact.

Just a day ago, on December 2, the Supreme Court of India asked pertinent questions: despite the compliance reports, why are the results on the ground negligible and what is the Government for Air Quality Management in the National Capital Region doing? At a hearing where the Court gave the Centre and Delhi government 24 hours to come out with suggestions to control air pollution, the Solicitor General's response was that the Commission's power structure needed reworking, in which an empowered Court asked

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Just a day ago, on December 2, the Supreme Court of India asked pertinent questions: despite the compliance reports, why are the results on the ground negligible and what is the Commission for Air Quality Management in the National Capital Region doing? At a hearing where the Court gave the Centre and Delhi government 24 hours to come out with suggestions to control air pollution, the Solicitor General’s response was that the Commission’s power structure needed reworking, to which an exasperated Court asked for ‘creativity’. This exchange raises the fundamental question about the role of the Commission, what it should be doing — and not just what it has done — as it has not been responding to interdependent causes driven by complex urban problems. Urban transformation is a social process (people, services, lifestyles) rather than a physical problem (congestion, technology, regulation). Therefore, the focus of the Commission has to be on how cities are organised, which in turn requires collaboration between multiple stakeholders. The challenge is to move away from solutions that merely require coordination between discrete administrative units, and enforcement taking the matter to the courts.

### **Lessons from Beijing**

The UN Environment Programme’s review of Beijing’s control of air pollution provides useful lessons for policymakers. The population size of both cities, Beijing and Delhi, is comparable. Delhi also shares with Beijing, and other cities, the three stages in dealing with urban air pollution as a long-term task. It starts with end-of-pipe air pollution control gradually moving to integrated measures targeting primary pollutants (SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>10</sub>, and CO), with the Government playing the main role. Later, secondary pollutants, or particulate matter leading to smog, primarily PM<sub>2.5</sub>, become the main focus for control with a regional coordination mechanism. The similarity ends there.

The review by the UN points to a management system characterised by systematic planning, strong monitoring capacity, local standards, specific enforcement mechanism and public awareness. First, the key result area is a new model of network operation and quality control to provide early warning to effectively reduce the level of pollution under adverse

weather conditions. In case of forecasted heavy pollution, warnings are issued at least 24 hours in advance through the media, in addition to daily air quality reports and forecasts. The technical system combines high-resolution satellite remote sensing and laser radar, an integrated network combining 'air-land' data for quality monitoring with greater analytical capacity and over 1,000 PM2.5 sensors throughout the city to accurately identify high-emission areas and periods.

### **Approach to urbanisation**

Second, in Beijing what really made a difference was not shutting down polluting units, restricting car ownership and travel, and improved fuel standards but the approach to urbanisation. 'Smart cities' such as New York, London and Beijing provide more space for public transport and mixed land use spatial planning minimising travel. The problems of Beijing and Delhi, as transit centres with no peak-hour traffic, require additional measures. Beijing's 7th Ring Road to ease congestion is 1,000 kilometres long, and even before buildings came up, the metro link was operational. Beijing already has more than 550 km of metro, more than one-and-half times that of the Delhi Metro; the plans are to have 1,000 km of metro rail. The bus transport system has 30,000 low floor buses, more than eight times the number with the Delhi Transport Corporation. In China, 72% of travel is completed by public transport compared with 37% in Japan, 17% in Europe and 10% in the U.S.

### **Vehicle policy**

Third, when it comes to air pollution, particulate matter is the most difficult to control, leads to smog and serious health issues, and is largely caused by vehicle emissions. Traffic has been identified as a distinct and growing challenge. Systematic study on PM2.5 source apportionment in Beijing has found that local emissions constituted two-thirds of this, of which vehicle emissions were nearly half the main source. Regional transport contributes to pollution on heavily polluted days. On-road diesel vehicles formed the largest part of mobile sources, and the policy focus gradually changed from gasoline vehicle emissions to heavy-duty diesel vehicle emissions. Phasing out older vehicles made the most significant contribution. Beijing plans to

have 48 lakh charging points by 2022 to push the use of electric vehicles. Delhi has nearly two times the number of registered vehicles than Beijing, increasing at a faster pace and source apportionment is still being debated.

Fourth, innovative implementation steps were instituted in Beijing. Local regulation targeted controlling both the concentration and total emission amount leading to transforming and upgrading the industrial structure production processes and equipment. Economic incentives were tailored to the specific problem, with attractive levels of subsidies to high-polluting enterprises to close their production and differentiated fees charged according to the concentration of waste gas emissions for those who chose to remain in production. Enforcement at the municipal and State levels is coordinated, with each level having different responsibilities and a mechanism for cooperation. Municipal environmental enforcement teams do specific inspections and hotspot grid supervision based on a detailed emission inventory for each source, passing on serious cases to the State level.

Lastly, independent evaluations review the air quality management system, conduct quantitative assessments of the pollution reduction effects in selected areas, analyse new challenges, and provide recommendations for enabling further improvement in air quality and building public support. The problem in the NCR is not the peculiar mix of administrative levels. It is their common approach to air pollution with cosmetic steps, unverified claims, statistical compliance and shifting responsibility which the powerful Commission has failed to override with a joint plan to modify trends.

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