PUBLIC AFFAIRS FOUNDATION
Partnership for Better Governance

ISSUE BRIEF

Issue : 1

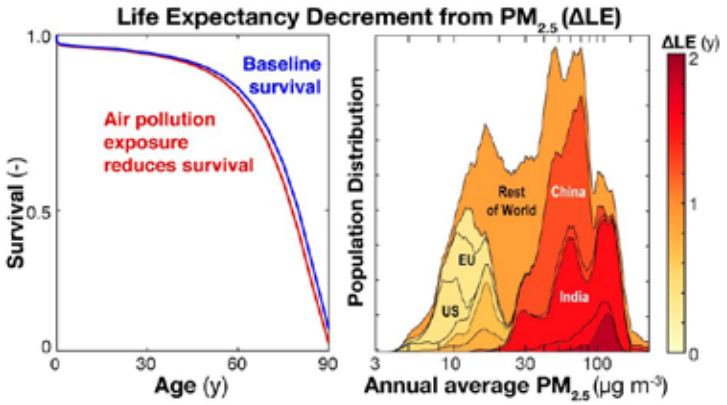
April 2022

Air pollution A global problem requiring local fixes

Nitesh Goyal, B.Com.Sri Ram College, New Delhi
Intern, Public Affairs Foundation

Context

One out of every six deaths that takes place in India can be attributable to air pollution. In 2019, air pollution was responsible for killing 1.67 million people which is equivalent to 17.8% of the total mortalities. More than three-fourths of the population in India is forced to inhale the pollution levels of air that are far above the safe limit of National Ambient Air Quality Standards. It has been estimated that this will cut short the average life expectancy of a child born in India by at least 1.5 years. Air pollution stands at No.2 when it comes to the risk factors of diseases in India thus accounting for 10% of the disease burden. The performance of India at the international level is also not encouraging. According to the World Air Quality Report 2020, India stands at No.3 in terms of world country/region ranking. Delhi topped the list when it comes to the World Capital City ranking. Transportation, biomass burning, electricity generation, waste burning and seasonal agricultural burning are the major constituents of air pollution in India. It is estimated that 20-40% of Delhi's air pollution is attributed to farm fires from neighbouring states of Indo-Gangetic plains thus turning the capital city into a gas chamber during the months of October to December resulting in strangulating the masses making it difficult to breathe. The following graph depicts the quantification of the global impact of $PM_{2.5}$ on life expectancy.



Source- *https://pubs.acs.org/doi/10.1021/acs.estlett.8b00360*

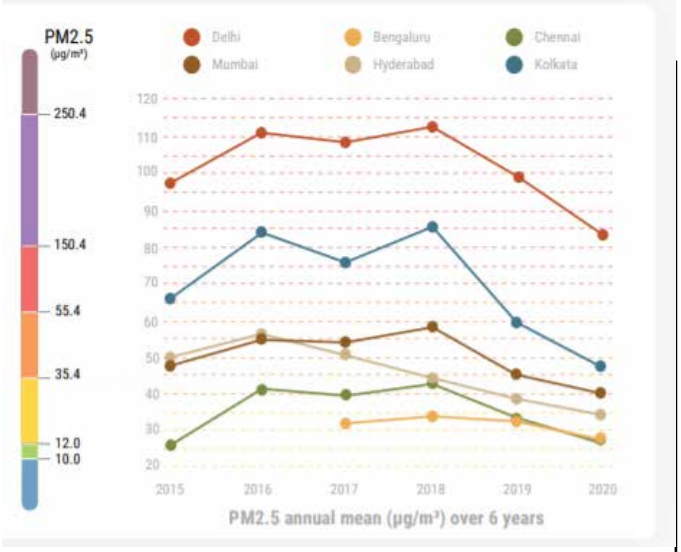
According to the IQAir Visual's World Air Quality Report 2019, 21 of the top 30 cities worst affected by air pollution are in India with 6 in the top 10. Ghaziabad topped the list of the most polluted cities of the world in 2019. While analysing the ramifications of air pollution, the economic consequences are often ignored which can be seen in terms of loss due to debilitation of the precious manpower of our country. The total output lost due to premature deaths and morbidity as a result of air pollution accounted for $36.8 billion i.e., 1.36% of India's GDP. This enormous burden of death and disease added on by the adverse economic consequence from the loss of output could serve as a deterrent in India's aspiration to become a $5 trillion economy by 2024. Therefore, there is a dire need to address this issue with utmost priority.

PUBLIC AFFAIRS FOUNDATION
Partnership for Better Governance

ISSUE BRIEF

Issue : 1

April 2022



Government's Response

The government has taken various initiatives to mitigate air pollution in the country, the recent one being the National Clean Air Programme (NCAP) . A national-level target of 20-30 percent reduction of $PM_{2.5}$ and PM_{10} concentration by 2024 has been set with 2017 as the base year. It is a mid-term five-year plan, with 2019 as the first year and an initial funding of Rs.300 crore which was implemented in 132 non-attainment cities (the cities which do not meet the national ambient air quality standards for consecutive five years). City-specific action plans are being formulated guided by a comprehensive scientific-based approach. Under it, a number of monitoring stations in the country were to be increased including rural monitoring stations, technology support, emphasis on awareness and capacity building initiatives, trained manpower and regular inspection drives were to be included. A coordinated effort between the various levels of government and civil society was one of its tenets.

Evaluation of Government's Actions

Despite the concerted efforts by the government in bringing out NCAP, the results after two years of its implementation are not much welcoming. Most of the cities under this scheme have either marginally improved or increased their levels of air pollution. As per the *'Three years of the National Clean Air Programme: A status check' by NCAP Tracker*, Varanasi recorded the largest reduction of 52% and 54% in $PM_{2.5}$ and PM_{10} levels. Navi Mumbai's increase in $PM_{2.5}$ levels to 53 µ/m3 from 39, does not augur well for the future of the financial capital. Discouragingly, none of the 132 cities, attained the national annual safe limits of 40 µ/m3 for $PM_{2.5}$ and 60 µ/m3 for PM_{10}. Sadly, the top 10 most polluted cities in 2021 are the same which were in 2019.

Gaps in Government's Policy Response

Thus, NCAP did not bring out the results as was expected out of it. There are certain inadequacies engrossed in it thus limiting its effectiveness to realise the potential output. An analysis of NCAP brings to fore the following gaps-

- **Absence of a Legal Mandate**- The scheme is more advisory without any legal backing as it specifies no action against non-implementation, which ultimately limits its potency and efficacy.
- **Unstructured and Vague Targets**- The plan just provides a final target of reduction in 20-30% after five years, but the sectoral and city-wise targets are missing in the entire scheme thus making it difficult to assign accountability on the part of specific cities and sectors.
- **Meagre Funding**- There is no clarity on the source of funding and the set-aside amount of Rs.300 crore for two years is not compatible with the requirements.
- **Insufficient targets**- India's current standard of 40 µ/m3 for annual $PM_{2.5}$ is far less than the recommended National Ambient Air Quality Standards(NAAQS) of 5 µ/m3as recently revised by the World Health Organisation(WHO). A reduction of 20-30%

in air pollution by 2024 will still leave many cities of our country to be below the safety limits.

- **Neglect of Rural Pollution**- The scheme focuses just on the cities' air pollution without paying any attention to rural pollution thus assuming that rural areas are pollution-free which is a bogus presumption as can be seen in the case of Delhi where stubble burning in the nearby rural areas of Indo-Gangetic plains are responsible for much of the air pollution burden thus reducing even the cities' efficiency to combat it.
- **Non-Utilisation of allotted funds**- An analysis by NCAP also looked at the utilisation of funds by respective states and UTs and found that Chandigarh utilised the most (81%) whereas Jammu and Kashmir the least (1.48 percent). Maharashtra just utilised 7.92%. Thus, some of the states are not even fully utilising even the meagre funds allotted to them.
- **Inadequate Monitoring System**- Throwing light on the Continuous Ambient Air Quality Monitoring System(CAAQMS) monitors, it was found that Mumbai added 12 monitors in the three years, Pune installed 8 monitors in 2021 only as compared to just one in the previous year's whereas Navi Mumbai got four monitors. All other cities did not report an addition in the monitoring system thus diminishing the very purpose for which NCAP was implemented.

Suggested Recommendations

The steps taken by the government are welcoming steps in the domain of environmental protection but these are not sufficient seeing the level of air pollution in India. Thus, the policy and other implementation gaps need to be plugged in to secure a better future for the present and the future generations.

Suggested Recommendations-

- **Legal backing** - This scheme must be listed under an Act to make it legally mandatory for cities and states for timely implementation of the plan, the failure of which should be dealt with strict punitive actions.
- **Financing** - Sources of financing should be clearly defined. Innovative steps as opined by some experts such as 'polluter pay' based taxation mechanism can be deployed.
- **Specified Targets** - Governments at the local level should chalk out their own specific plans under the tutelage of state governments and thus accountability should be fixed. This will help to identify the regions lacking in the targets.
- **Autonomy to local governments** - The local governments should be made more responsible for the implementation of the plans as they are the ones involved with the problems at the grassroots level. Thus, enough funds, capacity-building programs, and autonomy should be provided to them.
- **Augmenting Awareness among masses**- As the general public is one of the key stakeholders in the

entire functioning, only the efforts by the government side will not yield results until people are not much aware of the gravity of the issue and the urgency to combat it. Effective public communication and outreach of important information with regard to air pollutants, exposure and health impacts in easily and effectively understandable ways should be ensured.

- **Integrating Nature and Development**- When we see development in terms of roads, buildings, etc, we often seclude it from nature. With the increasing rate of industrialisation and urbanisation, humans are parting from nature in terms of forests and trees which is based on a false assumption of the alienable nature of development and nature. The examples of New York (USA) and Paris (France) are good enough to falsify this assumption. In both these cities, air pollution has improved a lot as a result of the allocation of more funds to the green environment along with the developmental projects.

- **Automation in monitoring air quality**- The example of Seoul, South Korea is apt in this case. Here, 5G-enabled autonomous robots scan industrial complexes to monitor air quality, while a satellite monitoring system offers real-time air quality data.

- **Improving Public Transport**- Much of the air pollution is contributed by the increasing number of vehicles on the road which can be addressed by improving the public transportation system by making it more affordable and convenient.

Conclusion

Air pollution mitigation cannot remain just a policy intent. Strong leadership and actions at the city level is the need of the hour and can prove a powerful weapon in delivering benefits and improvements for public health in India. The success of Beijing in reducing $PM_{2.5}$ levels by one-third is a shining example of how one of the most polluted cities of the world where at one time the pollution levels were 30 times higher than levels deemed safe by the WHO, can perform too good as a result of the concerted efforts by the government combined with a strong multi-tiered accountability system, under which various levels of government could be held legally accountable for avoiding their responsibilities. The introduction of aggressive afforestation and reforestation programs, the planting of more than 35 billion trees across 12 provinces, and investments of over $100 billion in such programs have retained China's most influential policy in significantly reducing $PM_{2.5}$ levels.

We would like to thank Shri K. Jayraj, IAS (Retd) for providing feedback and guidance.

Conceptualised & Designed by

PUBLIC AFFAIRS FOUNDATION
Partnership for Better Governance