

Proven solutions rooted in science, not unproven technological fixes, will reduce air pollution

Two new smog towers have been recently inaugurated in Delhi. Bengaluru and Chandigarh also installed smog towers this year. Mumbai's clean air plan indicates a financial requirement of ₹25 crore for installing air filtration units at major traffic intersections in the city. While these efforts indicate that governments are taking cognisance of air pollution, the deployments are often driven by symbolism rather than science.

For example, the Delhi government claims that the newly installed smog tower in Connaught Place could reduce air pollution levels by 80%. But there is no scientific evidence of smog towers or any other outdoor air filtration units improving air quality in cities. The smog tower installed in China's Xi'an and another one installed in Beijing did not prove to be effective and were not scaled up.

Smog towers create an illusion of progress towards clean air while diverting crores of public money away from proven solutions. Moreover, they misdirect policymakers and citizens by deflecting attention from areas that call for urgent action. Therefore, governments looking at investing in outdoor filtration systems should defer their deployment plans.

Further, the data on the effectiveness of the newly installed smog towers should be made available publicly for independent evaluation. Until there is scientific consensus on their effectiveness, every new tower installed is just a violation of taxpayers' money and citizens' trust.

What we can do

Meanwhile, governments must ramp up investments in proven solutions to reduce air pollution. First, policymakers should expand air pollution monitoring in areas with limited or no air quality monitoring and strengthen forecasting capacity across cities.

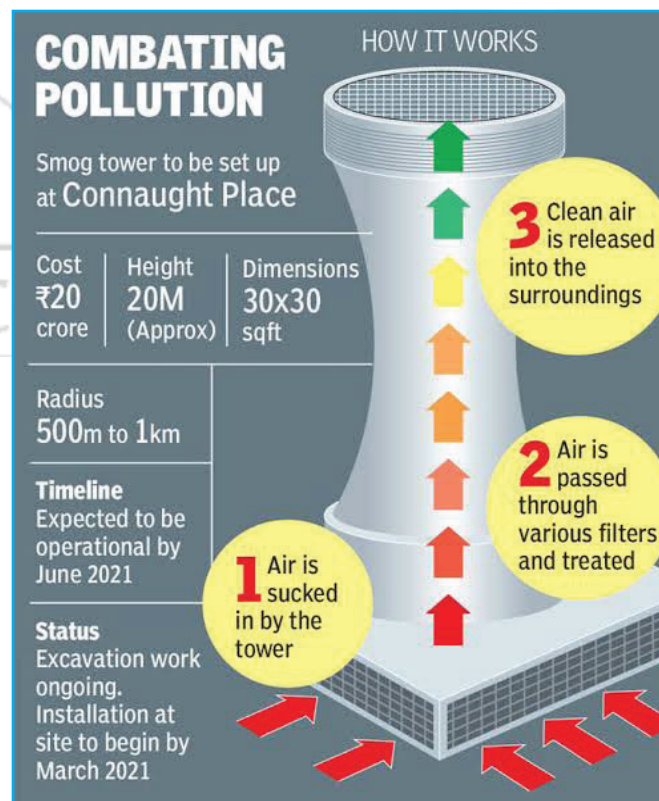
Of the 132 cities in the country that currently don't meet the National Ambient Air Quality Standards, 75 do not have a single real-time monitoring station.

For areas with no monitoring infrastructure, alternatives like low-cost air quality monitors in combination with satellite observations should be explored to plug the existing data gaps. Simultaneously, cities should strengthen their air quality forecasting systems by collaborating with scientific institutions that are transparent about their approach and findings. These forecasts should be used in rolling out preventive measures such as travel restrictions, pausing commercial activities or encouraging working from home, on anticipated high pollution days.

Second, city-level emission inventories must be updated periodically. Until last year, over 75% of our city clean air plans did not contain vital information on emissions from different polluting sources. These data are critical to identify key sources of air pollution and design effective clean air plans as per the local context. While several academic institutions carry out emission inventory and source apportionment studies, these studies should not become a one-time exercise.

Third, targeted efforts must be made to improve air quality for urban slum dwellers who have no access to clean cooking energy. In a recent study, we found that nearly half the urban slum households in six States still rely on biomass and other polluting fuels for their cooking needs. Also, household emissions increase during winter, especially when fuel requirement for non-cooking tasks like space heating increases. This increases exposure to indoor air pollution and poses health risks. Hence, policymakers must focus on providing LPG connections to these households along with ensuring sustained usage of LPG as the primary fuel.

Finally, and most importantly, cities should strengthen their enforcement capacity by investing in people and systems that can keep a round-the-clock watch on both egregious and episodic polluters. India is witnessing a rising democratic demand for clean air. But this cannot be met by unproven technological fixes. Instead, we must vigorously pursue solutions that are rooted in science to bring back blue skies.



Expected Questions (Prelims Exams)

- Q. In which of the following states, smog tower has been installed recently?**
- (a) Delhi
 - (b) Uttarakhand
 - (c) Himachal Pradesh
 - (d) Sikkim

Expected Questions (Mains Exams)

- Q. Discuss the existing technical solutions to improve the air quality in India and critically evaluate the utility of these solutions. (250 Words)**

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Note: - The question of the main examination given for practice is designed keeping in mind the upcoming UPSC main examination. Therefore, to get an answer to this question, you can take the help of this source as well as other sources related to this topic.