Press Note: iFOREST's Smog Tales Campaign reveals that Amravati has better air quality management systems, yet pollution remains high

'Smog Tales: Know your city and what you breathe' is an air pollution awareness campaign by environmental research organisation iFOREST. The ongoing information campaign brings attention to the air pollution crisis affecting India's smaller cities and urges collective action. Season 1 of the campaign, launched in 2024, covered rapidly growing cities in Northern India such as Patna, Guwahati, Meerut, Baddi, and Chandigarh. In Season 2 this year, the campaign shifts focus to Maharashtra's burgeoning urban centres—Thane, Amravati, Nagpur, Aurangabad, and Bhiwandi.

With the arrival of winter and large-scale construction and urban expansion, our analysis highlights severe air pollution levels in Amravati.

Key Findings:

1) High Levels of Particulate Matter

- The annual average $PM_{2.5}$ concentration (2024) at Shivneri Colony CAAQMS was 35.25 µg/m³, within the CPCB standard of 40 µg/m³. However, PM_{10} concentration was 82.07 µg/m³, which is 1.37 times higher than the CPCB standard of 60 µg/m³.
- The annual average $PM_{2.5}$ concentration (2024) at Shri Shivaji Science College CAAQMS was 38.5 µg/m³, also within the CPCB limit of 40 µg/m³, while the PM_{10} concentration reached 90.63 µg/m³, 1.51 times higher than the standard of 60 µg/m³.

2) Peak Pollution Hours

- $PM_{2.5}$ and PM_{10}: In winter, concentrations peaked between 9–11 AM and 8–11 PM.
- Ozone: Levels were highest between 1–4 PM.
- NO_2: Higher concentrations were observed between 8–11 PM.

3) Seasonal Trends and Sources

- The average concentration during winter months for $PM_{2.5}$ was 54.03 µg/m³, and for PM_{10} was 122.49 µg/m³—1.35 times and 2.04 times higher, respectively, than the CPCB annual standards.
- The $PM_{2.5}/PM_{10}$ ratio (0.46) indicates mixed pollution sources, including traffic, dust, and other emissions.

- Monsoon months showed a significant drop in pollutant levels, reflecting strong seasonal variation (69% reduction compared to annual average PM levels).

4) Data Trends and Quality

- Currently, Amravati has three Manual and two CAAQMS monitoring stations. However, as per CPCB norms, the city requires six stations—three CAAQMS and three Manual.
- Amravati lacked air quality monitoring from 2018 to 2023—even after being designated a non-attainment city under the National Clean Air Programme in 2019—leaving usable data only from 2024, and making long-term trend analysis impossible.

PANELIST VIEWS

Dr. Harish Phuleria | Associate Professor | Environmental Science & Engineering Dept, IIT Bombay

- **Reliable data is the foundation for action:** Amravati lacks robust pre-2023 air-quality monitoring data, especially on emissions from informal industries. Strengthening low-cost, regularly calibrated monitoring is essential for credible diagnosis and policymaking.
- **Informal and diffused waste burning is a major overlooked source:** Security guards and caretakers frequently burn easily available waste, contributing significantly to winter pollution across the Indo-Gangetic Plains. Improving solid-waste collection and enforcing anti-burning norms are critical short-term measures.
- **Fuel adulteration is driving disproportionate emissions:** Higher-than-standard fuel density indicates adulteration, which substantially increases exhaust emissions and undermines vehicle standards.
- **Construction dust and weak local management worsen particulate pollution:** PM10 levels rise due to construction activities and re-suspended dust. Solutions include paving roads, stabilising loose soil, and expanding green cover.
- **Solutions lie in behaviour, governance, and long-term planning:** From cutting waste at the source by making sensible purchase choices to demanding accountability from elected representatives, public participation and strict enforcement—similar to helmet rules—are vital for lasting air-quality improvements.

Shri Kishor Rithe | Founder, Satpuda Foundation Member, Mahrashtra State Board for Wildlife

- **Current monitoring gives a misleading picture:** Amravati has only two monitors, both in elite areas, capturing mostly PM10. This fails to represent pollution in densely populated and high-emission zones, making the assessment biased and incomplete.
- **More monitors in real hotspots are urgently needed:** Stations must be installed at central locations like Rajkamal Square, Jaistambh Chowk, and the MIDC industrial belt to reflect true emissions from vehicular activity, biomass use, waste burning, and industry.
- **Garbage burning is a major pollution driver:** Despite regular waste collection, much of the city's waste ends up being dumped and burnt—especially around the Amba stream—sending smoke back into the city. Municipal enforcement of High Court orders and investment in recycling are critical.

- **Biomass use and its gendered impact remain significant:** Households in slum areas continue to rely on firewood, exposing women—who collect and cook with it—to severe health impacts.
- **Citizens are aware, but governance gaps persist:** Amravati's public is environmentally conscious, but effective air-quality improvement requires stronger municipal action, better enforcement, and comprehensive monitoring systems.

Shri Mohan Atalkar | Special Correspondent | Daily Loksatta

- **Amravati's socio-economic profile shapes its pollution challenges:** With a population of nine lakh—mostly middle- and low-income families—air pollution is closely linked to everyday behaviours and limited resources.
- **Environmental awareness remains low:** Both citizens and journalists lack adequate understanding of pollution sources and how daily practices contribute to poor air quality, underscoring the need for year-round awareness and capacity building.
- **Vehicle emissions are rising due to weak public transport:** Only 15 public buses operate in the city, leading to two-wheeler dominance and traffic congestion—reflecting ineffective municipal planning and the urgent need to strengthen public transport.
- **Construction-related dust is a growing threat:** As Amravati rapidly develops, large-scale construction is generating substantial dust, which significantly adds to the city's pollution load.
- **Governance and enforcement gaps persist:** Critical measures—including dust-mitigation norms and other legally mandated environmental safeguards—are not being implemented, and stronger journalistic scrutiny is needed to hold the municipal corporation accountable.