Press Note: iFOREST's Smog Tales Campaign reveals Thane's air quality needs an urgent fix

'Smog Tales: Know your city and what you breathe' is an air pollution campaign by environment research organisation, iFOREST. The ongoing information campaign puts the spotlight on air pollution plaguing India's smaller cities, urging collective action. Season 1 of the campaign launched in 2024 and covered rapidly growing cities in Northern India such as Patna, Guwahati, Meerut, Baddi and Chandigarh. In Season 2 this year, we put the focus on Maharashtra's burgeoning cities—Thane, Amravati, Nagpur, Aurangabad, and Bhiwandi.

With the arrival of winter and large-scale construction and city expansion, our analysis underscores severe air pollution in Thane.

Key Findings:

1) **High Levels of Particulate Matter**

- In Kasarvadavali the annual $PM_{2.5}$ level (42.3 µg/m³) for 2024 exceeded the CPCB standard by 1.1 times, and (96.8 µg/m³) was found to be 1.6 times above the CPCB standard.
- In Upvan Fort The annual $PM_{2.5}$ concentration (39 µg/m³) for 2024 was within the CPCB limit of 40 µg/m³, while (79.2 µg/m³) was about 1.3 times higher than the standard of 60 µg/m³.

2) **Peak Pollution Hours**

- PM2.5 and PM10: In winters, PM levels peaked during 9-11 AM and 10-12PM.
- Ozone: Concentrations were highest between 1-4 PM.
- NO_2: Observed higher levels during 5PM -10PM

4) **Seasonal Trends and Sources**

- Average concentration during winter months for $PM_{2.5}$ was found to be 65.18 µg/m³ and for PM10 at 133.39 µg/m³. This average winter concentration is around 1.6 times and 2.22 times higher than the CPCB annual standards for $PM_{2.5}$ and PM10 respectively.
- PM2.5/PM10 ratio (0.48) suggests a mix of road dust, vehicle emissions, or waste burning.

- Monsoon months showed significant drops in pollutant levels, reflecting seasonal variations (% reduction compared to annual average PM values.

5) **Data Trends and Quality**

- A comparison of 2023 and 2024 annual average data showed increase in $PM_{2.5}$ and PM_{10} by 11% and 31%, respectively, for Kasaravadavali monitoring stations
- Dip in PM10 concentration by 41% was observed at Upvan Fort monitoring station (from 2023 to 2024), however,$PM_{2.5}$ concentration saw increase by 22%
- Consistent monitoring data only available from 2023 onward, limiting long-term trend assessment.
- Both Upvan fort and Kasaradavali stations saw decrease in SO2 levels (30% and 21%, respectively); however, there was an increase in NO2 levels (33% and 73%, respectively).
- Currently there are 3 manual and 2 CAAQMS monitoring stations in Thane. However, as per CPCB standards, Thane requires 8 stations—5CAAQMS and 3 manual.
- Thane lacked air quality monitoring from 2018 to 2023—even after Thane became one of the non-attainment cities under the National Clean Air Program in 2019—leaving usable data only from 2023 and no way to track long-term pollution trends.

PANELIST VIEWS

Ms. Manisha Pradhan | Chief Environment Officer | Thane Municipal Corporation

- Thane's monitoring network now includes 3 manual stations, 2 new continuous stations (2023–24), and 25 low-cost sensors installed as per High Court orders.
- The city follows a Clean Air Action Plan certified by the Pollution Control Board, and the panelist disagrees with the view that it is weak.
- The plan covers 7 urban local bodies, forming the wider urban agglomeration for coordinated action.

- Environmental assessments show that vehicles are the major source of pollution, driving investments in public transport.
- 80% of the city's clean-air budget goes to EV buses, and 20% to other measures like labs and crematorium upgrades.
- Thane has 123 e-buses already on the road with strong public uptake, and it is mandatory to procure 303 buses.
- 30 crematoriums have been converted from firewood to gas, significantly reducing emissions.
- The city is working with bakeries to shift from wood-fired ovens to clean cooking gas, in coordination with Bakery Associations, FDA and ASAR.
- Construction activity and vehicular emissions remain the dominant contributors to Thane's air pollution.
- A city-level coordination committee is mandatory, ensuring all departments work together on clean air actions.

Mr. Chinuu Katwara| Founder | Kushiyaan Foundation

- Firecracker pollution reduced this year due to the promotion of green crackers, and fewer Ganpati visarjans also helped in cutting pollution — but much more needs to be done.
- Thane has natural advantages: nearly 50% of its pollution dissipates because of the city's coastal surroundings.
- The Municipal Corporation has made visible efforts, but gaps remain in waste and recycling systems.
- Limited recycling and too few MRF centres lead to plastic being dumped and burned — a major contributor to local pollution.
- Plastic mixed with wet waste generates methane; strengthening plastic waste management is essential.
- Waste pickers can be empowered to collect segregated plastic and work more closely with TMC, with volunteer support from colleges.
- Citizens are aware and care deeply about Thane, but they need stronger systems and more opportunities to participate in solutions.
- Construction activity carries environmental costs borne not just by citizens but also by the municipal corporation.
- The goal is to build collaborative systems — connecting youth, waste workers, industry, and TMC — to tackle plastic pollution and support climate action across the city.

Mr. Aniruddh Varale | Thane Field Officer | Maharashtra Pollution Control Board

- Transport and construction are the primary sources of pollution in Thane.
- The issue isn't lack of action — TMC enforces strict dust-mitigation norms, including box-type enclosures at construction sites.
- Despite rapid construction, pollution levels remain relatively low due to strong compliance measures.
- All construction units are required to fully enclose sites to prevent dust from spreading.
- Our norms require large sites (20,000 sq m and above) to install online dust-monitoring systems visible at the site.
- Units that violate compliance norms are strictly penalised. This strict approach toward defaulters is essential to improve air quality.

Sree Kumar | Program Director | Clean Air Action | WRI

- The Mumbai region is being positioned as a major infrastructure and economic growth hub, with GDP expected to rise sharply by 2047.
- Thane is at the centre of this surge, with major upcoming projects: a new port, a ring road, 76 km of tunnels, and expanded metro connectivity.
- Such rapid growth must be matched by strong environmental management, and Thane must take ambitious steps to safeguard its air quality and reduce vehicular emissions across Thane and neighbouring regions.
- The city needs a science-based auditing framework and evidence-backed compliance system for construction, enabling builders to meet clear environmental standards.
- Thane's experience — where 60% of bakeries have begun transitioning away from firewood — offers transition lessons to emulate. Financial support from TMC and MPCB can accelerate Thane's own transition.
- A strong public transport system will ensure that every resident can access electric buses or metro stations within 5 minutes of walk from any destination. This also require coordinated technical planning, infrastructure expansion and citizen awareness.
- Thane must rationalise mobility patterns to manage growth sustainably and keep emissions under control.