Press Release

iFOREST and Assam Pollution Control Board release Guwahati's first hotspot-based Clean Air Action Plan

Guwahati, 17 December 2025: Guwahati has been grappling with chronic air pollution since 2017, with particulate matter levels frequently exceeding national standards and steadily worsening due to rapid urbanisation, rising vehicle numbers, construction activity, waste burning and industrial growth. To address this, iFOREST, in partnership with the Assam Pollution Control Board (APCB), today launched Guwahati's first comprehensive hotspot-based Clean Air Action Plan—built on detailed ward-level mapping to identify where pollution concentrates and how it can be reduced.

As the fastest-growing city in Northeast India, Guwahati's bowl-like topography—bounded by the Khasi hills and the Brahmaputra—limits pollutant dispersion, compounding emissions from transport, dust, cooking, waste burning and industry. Long-term data shows a rising trend in PM_{10} and $PM_{2.5}$ between 2017 and 2022.

Mr. Chandra Bhushan, CEO, iFOREST said, "Air pollution carries a real economic cost—between 3 and 5 percent of our GDP—because it harms both our health and our economy. At its core, air pollution is smoke and dust: smoke from what we burn, and dust from what we mobilise. While there is discussion nationally about revising air quality standards, our first priority must be to meet the standards we already have. The Guwahati Clean Air Plan is designed to do exactly that, in a comprehensive way."

Prof. Arup Kumar Misra, Chairman, Assam Pollution Control Board said, "In Guwahati, we never knew what air pollution was. But today, no rains for months, a long dry season, flyovers under construction, over 10,000 vehicles, high winds, and the resuspension of dust are the big challenges we face. If people do not cooperate, it is next to impossible to control pollution in Assam. The Guwahati Clean Air Plan is a sincere effort, with iFOREST providing technical support, and we remain open to dialogue."

Musician, composer, and Goodwill Ambassador to the air pollution plan, said, "Conversations like this need to move from the educated spaces to the people who have no access to such conversation."

Where pollution concentrates

Satellite-derived Aerosol Optical Depth (AOD) analysis reveals distinct seasonal pollution hotspots across the city. During summer, hotspots are concentrated along the silted Brahmaputra riverbanks and floodplains, dust-prone riverbed zones, construction-heavy wards, and major traffic corridors where road dust resuspension is high.

In winter, hotspots expand across the central and eastern parts of Guwahati as poorer atmospheric dispersion combines with combustion-driven emissions from residential heating, waste burning, commercial cooking and traffic congestion.

High-density commercial corridors such as Fancy Bazar, Ganeshguri, Beltola, Zoo Road Tiniali, Maligaon and Lokhra show consistently elevated pollution due to clustered restaurants, tea stalls and informal food vendors.

Major markets and transport hubs—including Paltan Bazar, Bhangagarh, Uzan Bazar, Six Mile, Azara and Jalukbari—record high $PM_{2.5}$ and PM_{10} levels linked to continuous cooking activity and traffic congestion. Prevailing south-westerly winds further transport pollutants toward the northeast, intensifying hotspot formation.

What drives Guwahati's air pollution

The study identifies a wide set of dominant emission sources, linked to daily activities:

- **Open waste burning** remains one of the most visible and highly polluting sources. Although Guwahati generates an estimated 884 TPD of municipal waste per day, existing infrastructure processes only about 35 percent leaving a gap of 333 TPD that remains unprocessed and is directly linked to open dumping and burning.

  Field surveys estimate that nearly 61 tonnes of waste are burned daily, emitting around 122 tonnes of $PM_{2.5}$ and 22 tonnes of black carbon annually. The city's landfill also emits over 5,600 tonnes of methane per year, making it a major hazard.

- **Residential cooking and winter heating** contribute significantly to neighbourhood-level pollution. Despite high LPG coverage (96%), fuel stacking persists, especially in slum and hilly settlements where biomass, charcoal and kerosene are widely used. Residential cooking alone contributes an estimated 3,900 tonnes of $PM_{2.5}$ annually. Winter heating, largely absent from current clean air plans, adds substantially to seasonal $PM_{2.5}$ and black carbon emissions.

- **Commercial cooking** in markets and informal food clusters contributes concentrated evening pollution. Coal and charcoal use, combined with open burning of food and packaging waste, leads to elevated $PM_{2.5}$, PM_{10} and carbon monoxide levels.
- **Transport emissions** are driven by rapid growth in private vehicles, which account for about 85 percent of the fleet, limited public transport capacity, ageing vehicles, congestion on major corridors, and weak Pollution Under Control (PUC) enforcement.
- **Diesel generator sets** are widely used during power outages, emitting $PM_{2.5}$, PM_{10} and nitrogen oxides, particularly in commercial, residential zones, industrial zones, and mobiles towers.
- **Industrial activity**, including brick kilns, stone crushers, cement plants and boilers, relies heavily on coal and older technologies. Total PM_{10} emissions from Kamrup Metropolitan area industries are estimated at about 1,940 tonnes per year, compounded by pollution drifting in from the nearby Byrnihat industrial cluster.

Key recommendations

The Guwahati Clean Air Plan calls for targeted, phased interventions focused on identified hotspots, including:

- Zero-open waste burning through improved collection, decentralised processing, community led activities, and strict enforcement
- Accelerating clean fuel transitions for households and commercial cooking, including clean heating solutions.
- Strengthening transport management through better PUC enforcement, improved public transportation (Small EV buses), improved road infrastructure and better signage.
- Implementing mechanised road sweeping, construction dust controls and post-flood silt management.
- Phasing out polluting industrial fuels and technologies, installation of Continuous Emission Monitoring Stations on RED category industries despite the size, Low-cost sensor monitoring and automated system to discontinue power supply with increase in pollution levels and cleaner fuel infrastructure.
- Strengthen community-level environmental awareness to improve household waste segregation and eliminate open burning. With segregation currently at just 16%, targeted information campaigns are needed.

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