

## Press release

# Winter air pollution persists: Delhi the most polluted with 173 Indian cities failing to meet national standards

**New Delhi, 6 March 2025** – The Winter Ambient Air Quality Snapshot of India, published by the [Centre for Research on Energy and Clean Air \(CREA\)](https://energyandcleanair.org), found that **173 out of 238 cities had winter-average PM<sub>2.5</sub> levels exceeding India's National Ambient Air Quality Standards (NAAQS) of 40 µg/m<sup>3</sup>**. Moreover, **none of the 238 cities analyzed met the World Health Organization's (WHO) guideline of 5 µg/m<sup>3</sup>**, emphasizing the scale of air quality challenges. 'Winter' refers to the period from October 1, 2024, to February 28, 2025 (winter 2024-25).

### Most polluted cities in Winter 2024-25

**Delhi was the most polluted city in India during winter 2024-25, with an average PM<sub>2.5</sub> concentration of 159 µg/m<sup>3</sup> throughout the season. During the previous winter (2023-24), Delhi also topped the list with a higher average of 171 µg/m<sup>3</sup>**. Byrnihat followed closely in winter 2024-25, recording a PM<sub>2.5</sub> concentration of 157 µg/m<sup>3</sup>. Other cities among the top 10 most polluted included Hajipur, Ghaziabad, Gurgaon, Noida, Patna, Asansol, Durgapur, and Charkhi Dadri. **The top 10 most polluted cities are located in Bihar, Uttar Pradesh, Haryana, West Bengal, and Assam along with Delhi.**

On a broader state level, **Rajasthan (34 cities), Bihar (24 cities), and West Bengal (7 cities) had all monitored cities exceeding NAAQS**. Similarly, Maharashtra (30 out of 31 cities), Odisha (15 out of 16 cities), and Uttar Pradesh (15 out of 20 cities) had a high proportion of cities with winter PM<sub>2.5</sub> levels above the national standard.

### Most frequently polluted cities

**Over the 151-day winter period, 100 cities featured in the top 10 most polluted cities are listed at least once.** Of these, 44 cities appeared at least 10 times. Byrnihat had the highest recurrence (111 days), followed by Delhi (105 days), Hajipur (80 days), Ghaziabad (52 days), and Bahadurgarh (47 days).

### Cleanest cities: Aizawl records the lowest PM<sub>2.5</sub> levels

**Aizawl, Mizoram recorded the lowest winter-average PM<sub>2.5</sub> level at 7 µg/m<sup>3</sup>, making it the cleanest city in the analysis.** The top 10 least polluted cities included six cities from Karnataka, three from Tamil Nadu, and one from Mizoram.



## National Clean Air Programme (NCAP) and non-NCAP cities

Among the 98 NCAP cities with Continuous Ambient Air Quality Monitoring Stations (CAAQMS) data, **78 recorded winter-average PM2.5 levels above NAAQS**, while all 98 exceeded the WHO's recommended limit. Similarly, **in 140 non-NCAP cities, 95 surpassed NAAQS**, and all remained above WHO guidelines. This highlights that air pollution is not limited to NCAP cities but extends to a wider set of urban areas.

### Data gaps

Data gaps remain a challenge in assessing air pollution trends comprehensively. **During winter 2024-25, no CAAQMS data was available for any day from stations in Darbhanga, Ernakulam, Hosur, Kochi, Kozhikode, Pathardih, and Thoothukudi. Additionally, 44 cities had less than 80% data coverage, including 21 cities in Haryana.** While all 24 cities in Haryana initially had data available at the start of winter, several monitoring stations stopped reporting by December. By the end of the season, only Charkhi Dadri, Faridabad, and Gurgaon met the 80% data coverage threshold, while data from the remaining 21 cities, crucial for assessing winter pollution, was unavailable.

Manoj Kumar, Analyst at CREA, noted that, *'Reducing winter air pollution is essential to bringing down the annual average pollution levels in Indian cities. CREA's winter air quality analysis highlights that both NCAP and non-NCAP cities face high pollution levels, and the issue extends far beyond NCR, affecting regions across India. The upcoming NCAP revision presents a crucial opportunity to include more cities under the programme and implement targeted mitigation measures that focus on cutting pollution at the source, such as enforcing stricter emission standards rather than only addressing its effects.'*

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Note: The analysis was based on Continuous Ambient Air Quality Monitoring Stations (CAAQMS) data from the Central Pollution Control Board (CPCB), covering the period from October 1, 2024, to February 28, 2025. Only cities with at least 80% data availability during this period were considered.

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## Notes to editors

- The Winter Ambient Air Quality Snapshot can be found [here](#).
- Previous India monthly air quality snapshots can be found [here](#).
- Daily Winter Air Quality Dashboard: <https://ncap.energyandcleanair.org/>

## About CREA

The Centre for Research on Energy and Clean Air (CREA) is an independent research organisation focused on revealing the trends, causes, and health impacts, as well as the solutions, to air pollution. CREA was founded in December 2019 in Helsinki and has staff in several Asian and European countries. The organisation's work is funded through philanthropic grants and revenue from commissioned research. [www.energyandcleanair.org](http://www.energyandcleanair.org).