

Press release

Satellite data solidifies need to move beyond India's city-centric air quality policies

New Delhi, 25 November 2025 – India's clean air action plan demands a decisive shift in focus beyond metropolitan boundaries. According to a new satellite-based assessment released today by the [Centre for Research on Energy and Clean Air \(CREA\)](#), harmful PM_{2.5} concentrations represent a widespread, year-round crisis, not merely an urban or seasonal issue. Drawing on high-resolution satellite data, the report presents comprehensive annual and seasonal population-weighted PM_{2.5} concentrations analyses across India's districts, states, and airsheds exposing extreme regional disparities and calling for urgent, data-driven interventions.

Airshed analysis

Seasonal PM_{2.5} concentration analysis highlights regional differences in India's air quality. The Indo-Gangetic airshed remains the most polluted region in the country, consistently non-compliant during winter, summer, and post-monsoon season.

The Northeast airshed is an emerging concern, with states such as Assam and Tripura maintaining elevated PM_{2.5} levels throughout the year. During the monsoon season, all airsheds except Northeast airshed were below the annual National Ambient Air Quality Standard (NAAQS) of 40 µg/m³. However, the rapid return to high PM_{2.5} levels post-monsoon emphasises that baseline emissions, not meteorology, are the fundamental problem.

'Without airshed-based governance frameworks, satellite monitoring integration into NCAP, sectoral emission targets, and accountability mechanisms, millions in non-metropolitan India will remain locked out of clean air policy and locked into chronic pollution exposure,' said Manoj Kumar, Analyst at CREA.

'To make air quality information more accessible and actionable, CREA is developing daily PM_{2.5} concentration maps for India. These maps will soon be available for public use, helping policymakers, researchers, and citizens track pollution patterns and support data-driven air quality management,' he added.

District analysis

Annual satellite analysis finds that 60% of districts (447 out of 749) exceed India's NAAQS for annual PM_{2.5}, while none meet the World Health Organization (WHO) guideline of 5 µg/m³.

Assam (11 districts) and Delhi (11 districts) together account for nearly half of the top 50 most polluted districts, followed by Haryana and Bihar with seven each.

Delhi, Tripura, Punjab, Haryana, Himachal Pradesh, Meghalaya, and Chandigarh maintained 100% district-level exceedance in all seasons except for monsoon.

Exceedance of the PM_{2.5} NAAQS is highest in winter with 616 of 749 districts (82%), remains significant in summer with 405 districts (54%), drops sharply during the monsoon to 74 districts (10%), and it surges again post-monsoon to 566 districts (75%).

'India's clean air challenge can no longer be viewed through the narrow lens of city pollution or winter smog. The latest data clearly show that poor air quality persists through most of the year, affecting nearly every region of the country,' said Manoj.

State analysis

Of the 33 states and union territories assessed, 28 had at least one district exceeding the annual NAAQS, and none met the annual WHO guideline.

Delhi consistently ranks as the most polluted state in three out of four seasons, recording the annual population-weighted mean concentration of 101 µg/m³, 2.5 times the NAAQS and 20 times the WHO guideline.

Southern states with annual PM_{2.5} levels below the NAAQS have a clear policy opportunity to move toward WHO interim targets by adopting stricter, region-specific limits.

Note: Ladakh, Andaman & Nicobar Islands, and Lakshadweep were excluded from the analysis due to insufficient ground monitoring data during the study period. The remaining 33 states and union territories, covering 749 districts, were included in the assessment. Seasons are defined as: winter (December 2024 - February 2025), summer (March 2024 - May 2024), monsoon (June 2024 - September 2024), and post-monsoon (October 2024 - November 2024).

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Notes to editors

- India monthly air quality snapshots can be found [here](#).
- Daily 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. We use scientific data, research and evidence to support the efforts of governments, companies and campaigning organisations worldwide in their efforts to move towards clean energy and clean air. www.energyandcleanair.org.