Tracing the Hazy Air 2024
Progress Report on National Clean Air Programme (NCAP)

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Top 10 Polluted cities in India in 2023 by PM10

CREA is an independent research organisation focused on revealing the trends, causes, and health impacts, as well as the solutions to air pollution.

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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 uses 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, believing that effective research and communication are the keys to successful policies, investment decisions, and advocacy efforts. CREA was founded in Helsinki and has staff in several Asian and European countries.

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List of Abbreviations

AMRUT - Smart City Mission, and Atal Mission for Rejuvenation and Urban Transformation

CAAQMS - Continuous Ambient Air Quality Monitoring Stations

CBG - Compressed Bio-Gas

CEMS - Continuous Emission Monitoring System

CFBC - Circulating Fluidized Bed Combustion

CPCB - Central Pollution Control Board

DSI - Dry sorbent injection

DSS - Decision Support System

EC - Environmental Clearance

FAME - Faster Adoption and Manufacturing of Hybrid and Electric Vehicles

FGD - Flue Gas Desulfurization

MOEF&CC - Ministry of Environment, Forest and Climate Change

NAAQS - National Ambient Air quality Standards

NAMP - National Air Quality Monitoring Programme

NCAP - National Clean Air Programme

OCEMS - Online Continuous Emission and Effluent Monitoring System

PM10 - Particulate Matter with aerodynamic diameter of 10 micrometers or less

PM2.5 - Particulate Matter with aerodynamic diameter of 2.5 micrometers or less

PCC - Pollution Control Committees

PNGRB - Petroleum and Natural Gas Regulatory Board

PRANA - Portal for Regulation of Air Pollution in Non-Attainment Cities

SATAT - Sustainable Alternative Towards Affordable Transportation

SBM - Swachh Bharat Mission

SPCB - State Pollution Control Board

Summary

The National Clean Air Programme (NCAP) was launched in India in 2019 aimed to significantly enhance the air quality in India by 2024 by reducing PM concentration by 20-30 per cent which in 2022 has been extended to 2026 aiming to have a 40% reduction in pollution levels compared to 2017. The programme has faced challenges and shortcomings, as highlighted in the 'Tracing the Hazy Air 2022 & 2023' reviews. The latest report evaluates the progress under NCAP and ambient air quality trends for 2023, revealing critical findings:

Air Information Centers and Pollution Forecasting:
- NCAP aimed to establish air information centres at central and regional levels by 2020; however, as of December 2023, only the central 'Portal for Regulation of Air Pollution in Non-Attainment Cities (PRANA)' portal by Central Pollution Control Board (CPCB) is functional.
- Despite NCAP's goal for air pollution forecasting systems in non-attainment cities by 2022, only Delhi has a functional system by December 2023.

Committee Setup and Utilization of Funds:
- Committees at various levels were proposed by NCAP, but their functionality, transparency, and public availability of information remain challenging.
- Out of total allocations of 1253 crore to 82 non-attainment cities, only 498 crores (40%) was utilized till November 2023 while 49 million plus cities were allocated 9610 crores out of which 5909 crore (62%) was utilised, showing significant underutilization of the allocated funds.

Monitoring Stations and Continuous Ambient Air Quality Monitoring Stations:
- NCAP envisaged augmenting the manual monitoring stations under the National Air Quality Monitoring Programme (NAMP) from the existing 703 stations to 1,500 stations by 2024, but as of December 2023, only 931 manual stations were operational, with a minimal increase from the previous year, showing critical shortfall against the target.
- NCAP aimed for 150 Continuous Ambient Air Quality Monitoring Stations (CAAQMS), but 531 stations are currently operational, indicating very good progress.

- The rural monitoring network consists of 26 manual stations, covering limited areas. Efforts to set up 100 monitoring stations by 2024 in rural areas are yet to be fully realized and seem difficult to achieve.

Source Apportionment:
- Only 44 out of 131 non-attainment cities conducted source apportionment studies by December 2023.

Air Quality and Most Polluted Cities:
- Byrnihat (301 µg m^{-3}) in Meghalaya/Assam, Begusarai (265 µg m^{-3}) in Bihar, and Greater Noida (228 µg m^{-3}) in Uttar Pradesh were among the most polluted cities in 2023.
- Sri Ganganagar (Rajasthan), Chhapra (Bihar), Patna (Bihar), Hanumangarh (Rajasthan), Delhi, Bhiwadi (Rajasthan), and Faridabad (Haryana) were the other cities in the top 10 most polluted cities list in India in 2023 holding respective positions from fourth to 10th in order of mention.
- Of the top 50 polluted cities, Bihar (19) had the highest representation, followed by Haryana (8) and Rajasthan (8).

Data Availability and Compliance with National Ambient Air quality Standards:
- Of the 227 cities with over 75% data availability days in 2023, 85 cities were under NCAP. Additionally, 142 cities were not covered by NCAP. Within the NCAP cities, 78 exceeded PM10 levels above National Ambient Air quality Standards (NAAQS). Conversely, among the non-NCAP cities, 118 surpassed NAAQS for PM10 levels.
- This highlights widespread air quality concerns, emphasizing the need to reassess the list of non-attainment cities. Such reassessment is crucial to reverse the trend of increasing air pollution levels in cities with recent ambient air quality monitoring but recording pollution levels above the prescribed standards.

In conclusion, the report underscores the need for enhanced coordination, monitoring, and effective utilization of allocated funds to achieve the ambitious goals set by NCAP for improving air quality in India.

Recommendations:

- The presence of a high number of non-NCAP cities recording hazardous pollution levels highlights widespread air quality concerns, emphasizing the need to reassess the list of non-attainment cities. Such reassessment is crucial to reverse the trend

of increasing air pollution levels in cities with recent ambient air quality monitoring but recording pollution levels above the prescribed standards.

- Setting up a penalization mechanism for the responsible authorities and sectors for non-compliance to the timelines and action points stipulated under the original NCAP and revised action points thereafter. Failure to abide by timelines for conducting various research studies (i.e., emission Inventory, source apportionment, carrying capacity studies and health baselines etc.) should be penalised. These research studies are only helpful in setting the baseline if conducted within proper timelines.

- Public access to national air quality data generated through satellite, industrial air quality monitoring, continuous emission monitoring system (CEMS), low-cost sensors and manual monitors should be ensured at an easy-to-use platform such as Central Control Room for Ambient Air Quality Data by CPCB which should further be linked to PRANA portal.

- A future roadmap for NCAP will need to expedite the identification of airsheds in the country to formulate and implement airshed-based air quality management. The National Ambient Air Quality Standards Revision Committee should also discuss the notification of varied ambient air quality standards or guidelines based on the background air quality levels for different airsheds and set ambitious targets by tightening the NAAQS for airsheds having ambient air quality levels near or under the NAAQS. The ambition should be to move towards WHO guideline levels in the long term while setting interim guideline levels as short-term and mid-term targets.

- A national emissions database quantifying the emission reduction targets at district/state and national levels, based on emission load should be set up to propel the improvements in ambient air quality levels.

- An effective resource distribution strategy should be adopted where a more balanced allocation of funds to address emission load reduction at source should be prioritised rather than a disproportionate focus on any single action point/sector.

- Accelerate the efforts to expand the air quality monitoring network to meet the stipulated targets. Increase the number of monitoring stations to cover a wider geographical area, including rural regions, with the integration of satellite data and early warning/forecasting systems for air quality.

Introduction

In January 2019, the Ministry of Environment, Forest and Climate Change (MoEFCC) initiated the National Clean Air Programme (NCAP) with the objective of enhancing air quality in 102 cities initially, which has now increased to 131 cities with the inclusion of new cities (non-attainment and million plus cities) in the list, these cities are across 24 States/Union Territories. The initial goal of the National Clean Air Programme (NCAP) was to achieve a 20-30% reduction in key air pollutants such as particulate matter less than 2.5μm (PM2.5) and 10μm (PM10) by the year 2024, using the pollution levels from 2017 as the baseline for improvement (MOEF&CC, 2019 & CPCB, 2023).

In 2022 a new goal of achieving a 40% reduction in PM10 concentration by 2026 was introduced (PIB, 2023a). After the 2022 update in the target for pollution reduction under NCAP, 82 cities were assigned annual targets for reducing PM10 levels by 3-15%, contributing to an overall reduction of air quality of up to 40% in PM10 levels. Additionally, the other 49 cities, benefiting from the XVth Finance Commission air quality grant, were allocated an annual target of a 15% reduction in average annual Particulate Matter of 10 μm aerodynamic diameter (PM10) concentrations, along with an enhancement of good air quality days (Air Quality Index less than 200).

IQAir, 2023 report indicates that despite ongoing efforts to address air quality, India still retained 12 of Central and South Asia's 15 most polluted cities list and approximately 60 percent of Indian cities had PM2.5 levels at least seven times higher than the World Health Organization's guideline (IQAir, 2023).

The entire Indian population of 1.3 billion people residing in areas with annual average PM2.5 levels surpassing the World Health Organization (WHO) guideline, faces significant health burden due to high pollution levels. Exposure to high pollution levels in the country reduces the average Indian's life expectancy by 5.3 years, surpassing the impact of cardiovascular diseases (4.5 years) and child/maternal malnutrition (1.8 years) (AQLI, 2023).

While efforts such as access to finances for air quality improvement, setting up of an institutional mechanism for better governance and policies such as the introduction of BSVI fuel for transportation and stricter emission standards for industries have been introduced over the past years, the persistent high pollution levels highlight the need for an assessment of prevailing trends in pollution levels as well as progress on indicators

stipulated under NCAP. Such an assessment helps identify the deviation from the efficient path towards clean air and ensures course correction for efficient utilisation of time and resources through gap identification in the existing approach.

This report serves as a follow-up to the 'Tracing the Hazy Air: Progress Report on National Clean Air Programme' released by the Centre for Research on Energy and Clean Air in both January 2022 and January 2023 (CREA, 2022 & CREA, 2023a). The first report highlighted sluggish progress in formulating state action plans, regional action plans, and the transboundary action plan. The report also highlighted the fact that only 15 out of all non-attainment cities had completed the source apportionment studies by December 2022, which were initially planned to be completed by 2020. While the source apportionment studies were at least initiated in most non-attainment studies, none of the cities completed carrying capacity studies. The report also highlighted that against a target of installing 1500 manual ambient air quality stations, only 818 stations were present (till December 2021) while the PM2.5 monitoring capability was only available at 262 stations against a target of all manual stations to be covered by 2024.The report recommends making NCAP legally binding, setting interim and long-term targets aligned with WHO guidelines, and improving transparency through platforms like the PRANA web portal developed by CPCB (PRANA, 2023).

In the second report, we again accessed the progress of NCAP and found that after four years of NCAP being in force, only 37 of 131 non-attainment cities had completed source apportionment studies by December 2022 and almost all of them lacked availability in the public domain, raising questions on the purpose of conducting these studies and limiting their effectiveness in playing a significant role in pollution reduction. The report highlighted that although the committees and framework for implementing, monitoring and review of actions stipulated under NCAP have been formulated, their functioning and transparent information sharing with the public remains opaque, reducing the effectiveness of such measures at the State level.

Between 2019 and 22, India added only 45 air quality monitoring stations annually, totalling 883 stations by December 2022. The report stressed that India will be required to install more than 300 manual air quality monitoring stations per year under NAMP to reach the NCAP goal of 1,500 monitoring stations by 2024. The review identified lacunae, including a lack of emission reduction-based approaches, transparent air quality data sharing, and integration of management plans. The absence of a cap on fossil fuel consumption, integration of monitoring infrastructure, and collaboration with forecasting mechanisms were also noted. The report recommended expediting the airshed

identification, setting stratified ambient air quality standards with the aim to move towards WHO interim targets first and then to the WHO guideline levels.

Purpose and Scope of the Report

The current report is a continuation of previous reports 'Tracing the Hazy Air: Progress Report on National Clean Air Programme' released by the Centre for Research on Energy and Clean Air in January 2022 and January 2023 ([CREA, 2022](#) & [CREA, 2023a](#)). This report endeavors to assess the implementation and progress of the National Clean Air Programme (NCAP) in reducing air pollution levels since its initiation in January 2019. The aim of this analysis is to assist policymakers, civil society organizations, researchers, and citizens in realigning actions and priorities for the effective use of resources and energy in air quality improvement.

Focusing on governance and management of ambient air quality in the country until December 2023, this review specifically evaluates the flagship NCAP, concentrating on key areas such as institutional strengthening, finance, mitigation measures, source apportionment studies, and air quality trends.

The scope of the study is limited to tracking the indicators at the national level coordinated or implemented by national institutions while an in-depth analysis of the actions by non-attainment cities and their respective states or union territories is not included in the current study.

Materials and Methodology

The methodology employed to monitor the implementation of the NCAP involved the comprehensive examination of both primary and secondary sources. Valuable information was gathered from various government ministries, including but not limited to MoEFCC, MoPNG, CPCB, SPCBs, and MoP. Additionally, data was extracted from parliamentary sessions in both Houses (Loksabha and Rajyasabha), encompassing questions posed during different sessions. The research process extended to the inclusion of reports from non-governmental organizations, articles from diverse news agencies, and the submission of several RTIs to pertinent government ministries and departments. The compiled data

from these diverse sources was systematically organized using Google Sheets, with a focus on quantifiable parameters.

Institutional Strengthening

NCAP in 2019 January advocated for setting up of air information centres at central and regional levels by 2020; as of December 2023, the only air information system available is at the central levels 'PRANA' portal by CPCB, apart from which no other regional air information system seems to be available (PRANA, 2023). A dashboard for monitoring air pollution levels for Delhi-NCR as per GRAP categories 'Central Control Room for Air Quality Monitoring-Delhi-NCR (CCR: Delhi-NCR)' by CPCB is also available, which provides average air quality levels in the Delhi-NCR region, but no other information on policies, guidelines and directions etc (CPCB-CCR, 2023). Similar to CCR: Delhi-NCR, Delhi NCR also has a specific body the 'Commission for Air Quality Management (CAQM), responsible for regional air quality governance and works with other existing bodies (CAQM, 2023). The CAQM provides a repository of prevailing policies, guidelines and directions. No institution or commission similar to CAQM exists for any other city, state or region in India.

NCAP also outlined that by 2022 all non-attainment cities will have an air pollution forecasting system. Still, as of December 2023, only Delhi has a functionally used air quality forecasting system, while SAFAR has developed air quality forecasting models for other cities such as Pune, Mumbai and Ahmedabad; these are still not widely known or used for air pollution regulation purposes (IITM, 2023). The remaining cities are still left without any such system. **NCAP also envisioned setting up hotspot-based forecasting to be taken up from city-specific forecasting in non-attainment cities by 2022, but in the absence of city-based forecasting, no city has deployed hotspot-based forecasting of air quality in India, including Delhi.**

The efforts to augment ambient air quality monitoring through ground measurements are a focus area under the 'Knowledge and Database Augmentation' section of the NCAP. Under institutional strengthening, NCAP proposed the integration of ISRO satellite data for monitoring and forecasting by 2022. As of December 2023, the available information suggests that in September 2023 IIT Delhi started working on phase 2 of Satellite-based Applications for Air quality monitoring at the National Scale (SAANS) project funded by CPCB under which the researchers will develop hourly PM2.5 and PM10 products for

tracking progress under the NCAP ([Dey et.al, 2020](#)). The project is estimated to be completed by 2026 ([IITD, 2023](#)).

Apart from SAANS, the Ministry of Earth Sciences has developed an advanced integrated air quality early warning and decision support system for providing early warnings on air quality in Delhi at a resolution of 400 meters and in other major cities like Kanpur and Lucknow at a resolution of 10 kilometres. This prototype system serves as a noteworthy contribution towards improving air quality management in India. The system employs advanced technology, incorporating both ground-based and satellite-based measurements, to deliver timely information on air quality. The real-time data collection and analysis capabilities of the system enable the generation of accurate air quality indices and forecasts, thereby enabling decision-makers to take appropriate action in response to deteriorating air quality ([PQLS 5087, 03/04/23](#))

NCAP proposed setting up of various committees at the Centre, State and City/District levels, where most of these committees have been set up their functioning and transparency in terms of working, actions taken and public availability of information still remains a big challenge. Table 1 outlines the committees to be formulated under NCAP and their respective timelines:

Table 1: Committees to be set-up under NCAP

Activity	Level of Funding	Level of Implementation	Agencies	Timeline (Year)
Apex committee at the MoEF&CC	Centre	Centre	MoEF&CC	2019
National Level PMU at the MoEF&CC	Centre	Centre	MoEF&CC	2019
Five Sectoral Working Groups on a cochairing basis	Centre	Centre	MoEF&CC, MoP, MoRTH, MoHUA, MoA, DIPP	2019
A Monitoring and Forecasting Working Group	Centre	Centre	MoEF&CC	2019
A Technical Expert Committee at the MoEF&C	Centre	Centre	MoEF&CC	2019
A national-level Project Implementation Unit (PIU) at the CPCB	Centre	Centre	CPCB	2019
A State Monitoring Committee under the chief secretary in the states	State	State	DoE	2019
State-level PMU at the SPCB	State	State	SPCB	2019
City-level Review Committee under the municipal commissioner	State	City	Municipal Corporation	2019
A DM-level committee in the districts	State	City/District	DM	2019

In addition to the committees proposed above an additional Steering Committee to review and approve the MoEF&CC budget required for city clean air action plans and their components for the priority cities under NCAP receiving MoEF&CC funding was also set-up in 2019 holding its first meeting in June 2019. The committee has met six times since then with the latest meeting being held on 13th September 2023.

Table 2:. Meetings held by centre levels committees between 2019 to 2023 (November)

Committees	# Meetings Till Date	# Meetings in 2023	Last Meeting Held
Apex Committee	2	1	15.03.2023
Steering Committee	6	1	13.09.2023
Monitoring Committee	11	3	27.10.2023
Implementation Committee	14	3	18.08.2023

The committees displayed varying levels of activity and engagement from 2019 to 2023, while the Apex committee at the national level was constituted in 2021 and has only met twice since then; the other national levels committees such as the steering committee, Monitoring committee and Implementation committee were constituted in 2019. Having convened twice, the Apex committee held its most recent meeting on 15.03.2023.

The Steering committee, with a total of six meetings, conducted one session in 2023, with the last meeting occurring on 13.09.2023. The Monitoring Committee, having met a total of eleven times, demonstrated a high level of engagement by conducting three meetings in 2023, the latest of which was on 27.10.2023. Similarly, with a total of fourteen meetings, the Implementation Committee held three sessions in 2023, concluding in the most recent meeting on 18.08.2023 (PRANA MOM, 2023a).

Along with setting up of Centre level committees the NCAP also outlined setting up of state levels Air Quality Management Committee (AQMC)/State Level Monitoring Implementation Committee (SLMIC) and Steering Committee. Table 3 provides details of state-wise meetings held by AQMC and SLMIC in 2023. Delhi leads with a total of seven meetings (5 AQMC/SLMIC and 2 Steering Committee meetings).

All states except Himachal Pradesh have conducted at least one AQMC or SLMIC meeting during the period. However, Andhra Pradesh, Chandigarh, Chhattisgarh, Himachal Pradesh, Jharkhand, Karnataka, Maharashtra, Rajasthan, Tamil Nadu, Telangana and Uttarakhand did not conduct steering committee meetings (PRANA MOM, 2023b).

Table 3: Meetings held in 2023 by the state-level committee under NCAP

State	AQMC/ SLMIC meeting held between January 2023 - November 2023	Steering Committee meeting held b/w 2023 - till date	Total
Andhra Pradesh	3	0	3
Assam	1	4	5
Bihar	2	1	3
Chandigarh	2	0	2
Chhattisgarh	1	0	1
Delhi	5	2	7
Gujarat	2	1	3
Himachal Pradesh	0	0	0
Jammu & Kashmir	3	1	4
Jharkhand	1	0	1
Karnataka	3	0	3
Madhya Pradesh	1	1	2
Maharashtra	2	0	2
Meghalaya	1	1	2
Nagaland	2	2	4
Odisha	2	2	4
Punjab	2	1	3
Rajasthan	3	0	3
Tamil Nadu	1	0	1
Telangana	2	0	2
Uttar Pradesh	1	1	2
Uttarakhand	2	0	2
West Bengal	4	1	5

Note: SLMIC - State Level Monitoring and Implementation Committee and AQMC - Air Quality Monitoring Committee

Financial Support

Trends in the release and utilization of funds for air quality improvement initiatives in 82 Non-Attainment Cities and 49 Million Plus Cities, spanning the fiscal years 2019-20 to 2023-24[1] (PRANA MOM, 2023b) shows severe under utilisation of the funds. Fund released and utilization details of all 131 NCAP cities are given in Annexure 3 (PIB, 2023b). Out of total allocations of 1253 crore to 82 non-attainment cities, only 498 crores (40%) was utilized till November 2023 while 49 million plus cities were allocated 9610 crores out of which 5909 crore (62%) was utilised, showing significant underutilization of the allocated funds.

While just looking at the overall utilization of the allocated funds does not provide details on efficient allocation and utilization of the funds, the details of spending for specific actions and activities are more useful in understanding whether the funds have been spent

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[1] Data for 2023-24 is from allocation grants and utilization till November 2023

on emission/pollution load reduction policies and actions or is allocated for inefficient actions which do not necessarily result into systematic and comprehensive air pollution level reductions.

Funds released under NCAP for non attainment + million plus cities (2019-2023)

■ Released ■ Utilized

82 Non Attainment cities

2019-20	225 / 16
2020-21	151 / 71
2021-22	97 / 148
2022-23	476 / 136
2023-24	700 / 128

Amount in Crores

49 Million Plus Cities

2019-20	
2020-21	4400 / 1157
2021-22	2025 / 482
2022-23	1932 / 2682
2023-24	2431 / 1089
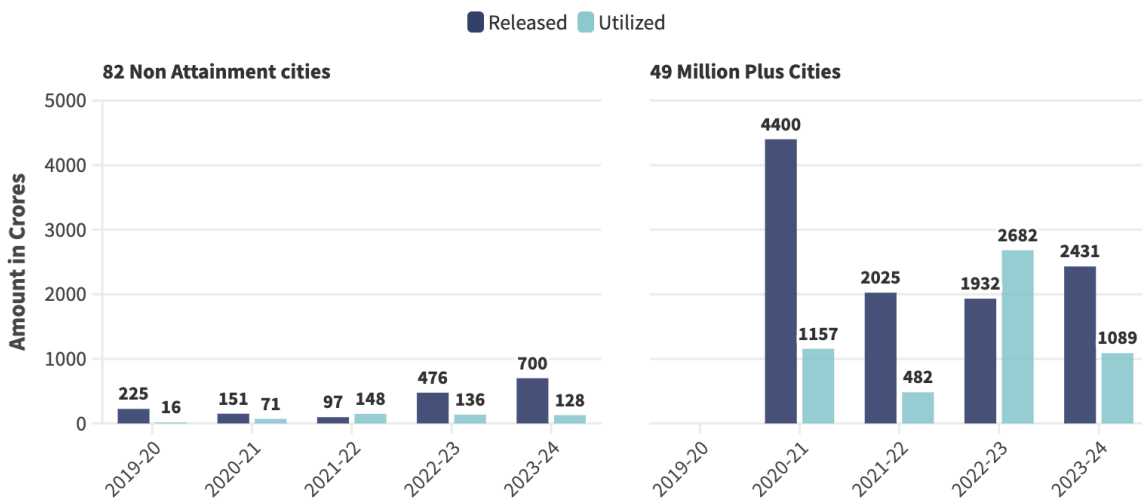
Utilization of funds across different sectors in 131 cities since 2019 (till November 2023), reveals a perplexing distribution strategy. Notably, a considerable portion of nearly 64% is designated for addressing Road Dust, signalling a disproportionate focus on this specific component over other sources of air pollution. A mere 6% of the utilized funds going to capacity building suggests a modest commitment to enhancing skills, resources and tools for better air pollution regulation, followed by nearly negligible amounts of less than 1% being spent on public outreach, raising concerns about the level of importance attributed to engaging and informing the public in the entire NCAP. The data prompts questions about the rationale behind these allocations and the overall

Breakup of Fund Utilization in 131 NCAP cities

Industries 0.61
Vehicles 12.63
Construction and Demolition 1.65
Capacity Building 6.24
Domestic Fuel 0.02
Biomass Burning 14.51
Public Outreach 0.66
Road Dust 63.68
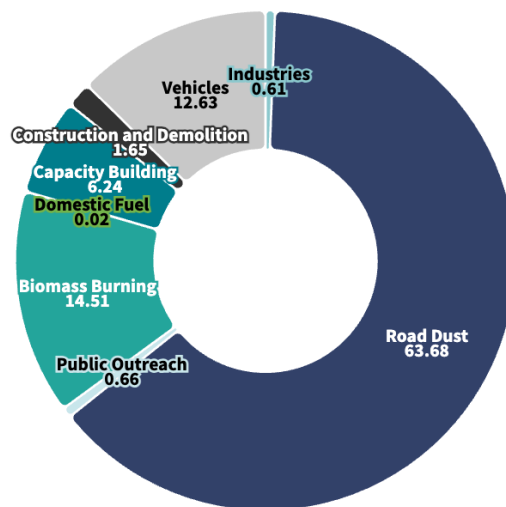
Source: PRANA Portal: MOM of 15th Implementation Committee

efficacy of the resource distribution strategy in comprehensively addressing the prevailing high pollution levels across the country (PRANA MOM, 2023c).

Mitigation Actions

Table 5 provides a comprehensive overview of key initiatives undertaken by various ministries Under NCAP (PRANA, 2023d).

- The Ministry of Housing and Urban Affairs is actively involved in the Swachh Bharat Mission (SBM 2.0), Smart City Mission, and Atal Mission for Rejuvenation and Urban Transformation (AMRUT), focusing on waste management, urban mobility, and green spaces.
- The Ministry of Heavy Industries is driving the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME II) scheme to incentivize electric vehicle adoption and boost domestic manufacturing.
- The Ministry of Petroleum and Natural Gas is spearheading Sustainable Alternative Towards Affordable Transportation (SATAT), City Gas Distribution Network, and GOBARdhan to promote bio-gas usage and expand gas infrastructure.
- The Ministry of Environment, Forest, and Climate Change's Nagar Van Yojana targets the creation of green spaces.
- The Ministry of Power is actively engaged in biomass utilization and emission reduction measures from thermal power plants.
- The Ministry of Road Transport and Highways' Vehicle Scrapping Policy aims to phase out old vehicles, contributing to sustainable transportation practices.

While various ministries and departments responsible for actions linked to NCAP are making progress on action points mentioned under NCAP, the Ministry of Power has been dragging its feet on ensuring the implementation of emission standard notification, 2015 for coal-based power stations and has extended the deadline for power plants four times since 2015. Only less than 8% of the nationally installed coal-based electricity generation capacity have been able to install Flue Gas Desulfurization (FGD)/ Dry sorbent injection (DSI)/ Circulating Fluidized Bed Combustion (CFBC) to control SO_2 emissions till now, while only seven (2 GW) out of 75 (23.5 GW) NCAP units have installed the retrofits to comply to SO_2 emission norms (CREA, 2023b).

Table 4: Progress of action taken by various ministries under NCAP

Ministry	Scheme	Time	Area Focused/Objectives	Progress Made
Ministry of Housing and Urban Affairs	Swachh Bharat Mission (SBM 2.0)	2026	Waste management	SBM encompass all 131 NCAP cities. Approved action plans for waste processing in 105 cities, legacy waste remediation in 76 cities, construction and demolition waste facilities in 52 cities, and road sweepers procurement in 82 cities. The status of remediated waste and area reclaimed in NCAP cities are given in Annexure 4.
Ministry of Housing and Urban Affairs	Smart City Mission	2024	Urban Mobility	Connected 17 out of 47 smart cities (listed as NCAP) Integrate Command Control Centers with environmental and air quality monitors. NCAP cities have an operational metro network of 845 km, with 908 km under construction in 21 cities for urban transport.
Ministry of Housing and Urban Affairs	Atal Mission For Rejuvenation And Urban Transformation (AMRUT)	2025-26	Green Spaces & Parks and Non-Motorised Urban Transport	Implemented projects for green spaces and parks in 106 cities, and non-motorized transport in 16 cities
Ministry of Heavy Industries	Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME II)	2024	Support to Electric Mobility	So far scheme has incentivized 9.36 lakh electric vehicle (EV) consumers. Plans to deploy 7210 e-buses in different cities. Rs.25,938 crore, is designed to enhance domestic manufacturing in Advanced Automotive Technology products. Rs.18,100 crore, allocated to establish battery storage manufacturing projects.
Ministry of Petroleum and Natural Gas	Sustainable Alternative Towards Affordable Transportation (SATAT), City Gas Distribution Network and GOBARdhan	2024-25	Set up 5,000 Compressed Bio-Gas (CBG) production plants. CBG for use in automotive fuels	Petroleum and Natural Gas Regulatory Board (PNGRB) has granted authorization for the development of the CGD network in 127 out of 131 cities. In NCAP cities, a total of 80.35 lakh PNG connections, 2578 CNG stations, and 21 CBG plants (with a daily capacity of 102 TPD) have been established.
Ministry of Environment, Forest and Climate Change	Nagar Van Yojana	2024-25	Targets the creation of 1000 Nagar Vans/Vatikas	52 NCAP cities have submitted proposals, and 335 projects have received approval under the scheme.
Ministry of Power	National Mission on Biomass	2026	Aims to address the air pollution due to farm stubble burning and to reduce the carbon footprint of thermal power generation	97,635 MT of biomass has been used by 41 units with a capacity of 55,590 MW. The procurement of 1192.64 lakhs MT of biomass has been initiated and is at various stages of the procurement process in several thermal power plants.

Ministry of Power	Installing Flue-Gas Desulfurization and Pollution Control measures.	2027	Reducing emissions from thermal power plants	7 NCAP Units (2080 MW) out of 75 NCAP units (23489 MW) installed FGD.
Ministry of Road Transport and Highways	Vehicle Scrapping Policy		Phasing out of old vehicles and the implementation of the vehicle scrapping policy	Registered Vehicles Scrapping Facility approved by 8 states of which 12 are operational and 20 are in the process of operationalization. 63 automated testing station applications approved by 7 states of which 7 are operational. More than 8800 vehicles scrapped to date (Private vehicles: 5800 and Government vehicles: 3074)

Knowledge Network and Augmentation

Air Quality Monitoring Network

NCAP Report, released in January 2019, aimed to:

- Augment the manual monitoring stations under the National Air Quality Monitoring Programme (NAMP) from the then-existing 703 stations to 1,500 stations by 2024. in 2023, the government had also proposed to augment the manual monitoring stations from 818 to 1936 by FY 2025-26 to monitor ambient air quality under NAMP (PQRS, 1803, 16/03/2023).
  - As of December 2023, the network has only grown to 931 manual stations, installing only 48 new monitoring stations in the last year since December 2022 (PQRS 1009, 15/12/22).

Progress on Ambient Air Quality Monitoring in India since 2016
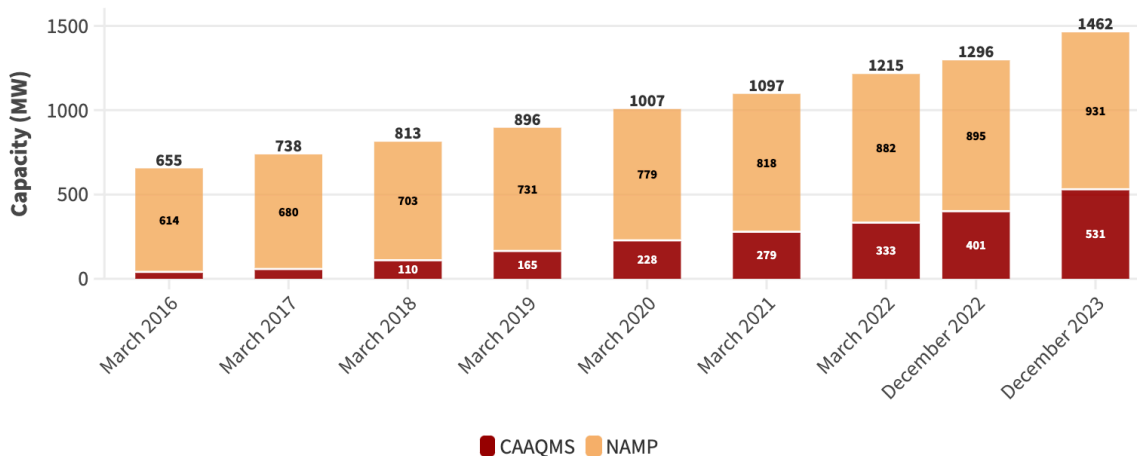
Source: CPCB & Rajya Sabha

- The NCAP proposed to augment the number of monitoring stations for PM2.5 from the then-existing 167 in 80 cities to all stations under NAMP. The number of manual stations under NAMP with PM2.5 monitoring had increased to 360 stations by March 2022, and information was available after that.
  - Total funds of 766.5 lakhs were released to 68 cities across 11 states/UTs for the augmentation of 192 stations for PM2.5 monitoring in 2021-22 (PQRS 1009, 15/12/22).

- - 2096.4 lakhs were released for establishing 282 new NAMP stations in 54 cities/towns across 31 states/UTs in FY 2021-22 to strengthen NAMP (PQRS 1009, 15/12/22).
  - During the same FY 2021-22, an amount of 2954.71 lakhs was released for O&M of the NAMP stations to 30 states/institutions (PQRS 1009, 15/12/22).
- Under initial NCAP it was proposed to install 150 CAAQMS (additional to 110 existing CAAQMS in 2018) with an average of 2–3 stations in each city prioritizing the Indo-Gangetic plain.
  - As of December 2023, a total of 531 CAAQM stations have been installed across 279 cities spread across 31 states/union territories which has grown by 130 stations since December 2022 (PQRS 1009, 15/12/22).
- NCAP also proposed setting up 100 monitoring stations in rural areas by 2024.
  - The rural network consists of 26 manual stations in 26 villages covering 1 state & 1 UT. Funds were released in FY 2021-22 to establish 17 new NAMP stations in rural areas (PQRS 1803, 16/03/2023).
- Set up 10 city Super-Network to generate highly-quality controlled data and represent national air quality dynamics.
  - The information on city Super-Networks isn't available in the public domain.

The Ministry of Earth Sciences (MoES) has developed an advanced integrated air quality early warning and decision support system for providing early warnings on air quality in Delhi at a resolution of 400 meters and in other major cities like Kanpur and Lucknow at a resolution of 10 kilometres. This prototype system serves as a noteworthy contribution towards improving air quality management in India. The system employs advanced technology, incorporating both ground-based and satellite-based measurements, to deliver timely information on air quality. The system's real-time data collection and analysis capabilities enable the generation of accurate air quality indices and forecasts, thereby enabling decision-makers to take appropriate action in response to deteriorating air quality (PQLS 5087, 03/04/23). While the efforts by MoES, IITM Pune, and CPCB-IIT Delhi are underway for air quality forecasting and satellite air quality monitoring, it only cover a few cities under the NCAP, and even for cities for which such systems are available, there seems to be very little information available in public domain and its usage for air pollution governance.

State-wise number of CAAQM stations and NAMP stations in India
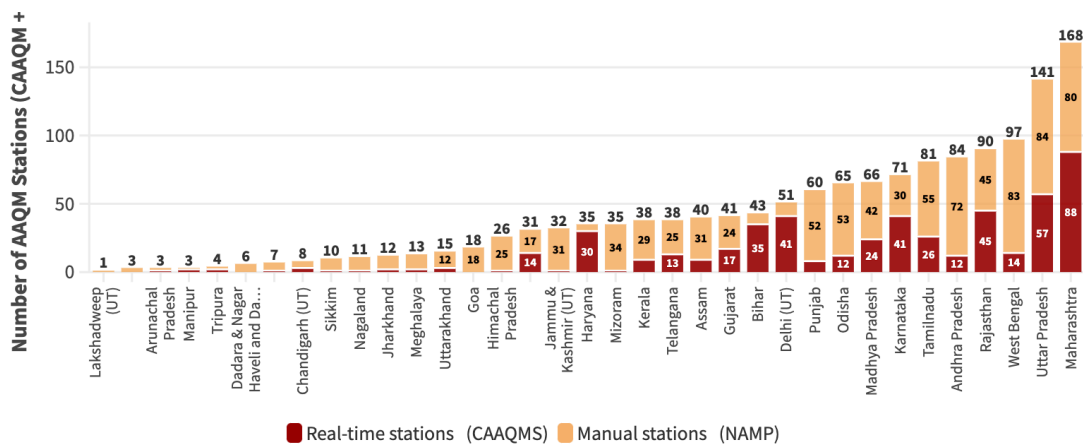
Source: CPCB

Online Continuous Emission and Effluent Monitoring System (OCEMS) is an initiative by the Central Pollution Control Board (CPCB) aimed at promoting real-time monitoring of industrial emissions and effluent in India. It involves collecting and transmitting accurate and continuous data directly from industrial units to the CPCB server and State Pollution Control Boards (SPCBs) or Pollution Control Committees (PCCs).

Out of 36 states and union territories in India, only 17 state facilities (Andhra Pradesh, Bihar, Chhattisgarh, Delhi, Goa, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Odisha, Punjab, Rajasthan, and Tamil Nadu) are collecting the OCEMS data and all states except Chhattisgarh and Jammu Kashmir, have started providing public access to this data but the data quality remains a big concern.

Source Apportionment Study

NCAP outlined that all non-attainment cities should conduct source apportionment studies by 2020 against which as of December 2023 only 44 cities have completed source apportionment studies leaving 87 cities without the baseline of emission load and scientific understanding of what pollutes these cities. (PRANA MOM, 2023b & PRANA MOM, 2023c). Further, not all of these source apportionment studies are in the public domain, reducing the effectiveness of usage of these studies to inform ground actions and enhance the accountability of polluting sectors and authorities.

Table 5: State-wise Source Apportionment Study Completed Cities

State	Source Apportionment Study Completed Cities
Andhra Pradesh	Vijayawada
Delhi	Delhi
Maharashtra	Mumbai, Pune, Solapur, Nashik, Navi Mumbai, Amravati, Aurangabad, Kolhapur
Bihar	Gaya, Patna, Muzaffarpur
Gujarat	Ahmedabad, Surat
Karnataka	Bangalore, Gulburga, Hubli Dharwad and Devanagere
Punjab	Mandi-Gobindgarh, Khanna, Patiala, Dera Bassi, Naya Nangal, Dera Baba Nanak, Ludhiana & Jalandhar
Tamil Nadu	Chennai, Madurai, Trichy
Jharkhand	Dhanbad
Rajasthan	Jaipur
Uttar Pradesh	Kanpur, Agra & Ghaziabad
West Bengal	Kolkata & Howrah
Himachal Pradesh	Baddi, Damtal, Kala-Amb, Nalagarh, Paonta Sahib, Parwanoo, Sunder Nagar

Air Quality Levels in 2023

The increasing number of ambient air quality monitoring stations is resulting in an increased understanding of prevailing pollution levels in NCAP and non-NCAP cities, which either didn't have comprehensive monitoring stations or had just one or two stations in cities. While the data coverage is increasing, we must keep in mind that sighting the new monitoring stations and their data availability and averaging period can misrepresent the trends and result in a false sense of improving or deteriorating air quality. For the purpose of tracking trends in ambient air quality in this report, we have compiled the CAAQMS data for PM10 and PM2.5 from only the stations meeting the criteria of a minimum of 75% of the data availability days.

Ranking of NCAP and Non-NCAP cities based on PM10 concentrations in 2023
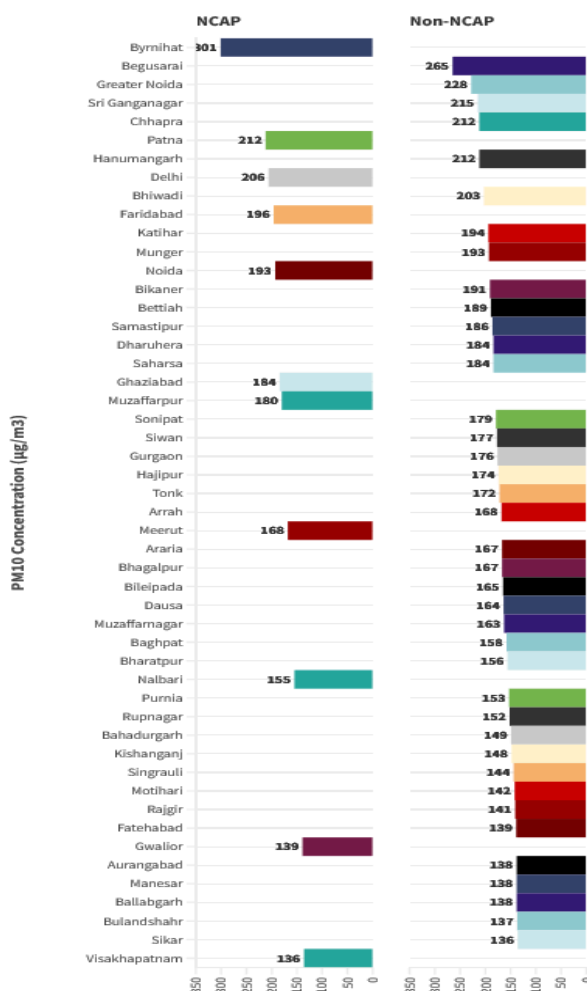
PM10 Levels in 2023

Among the cities with more than 75% of days with data availability days in 2023, Byrnihat **in Assam was the most polluted city, with an average PM10 concentration of 301 μg m^{-3}**. Out of the 347 monitored days, 324 days (93%) recorded PM10 levels above the Indian NAAQS, while 344 days (99%) exceeded the WHO standard.

Top 10 Polluted cities in India in 2023 by PM10

Source: CCR
Note: Cities with 75% data coverage is considered for analysis

Begusarai in Bihar was India's second most polluted city in 2023, with an average annual PM10 concentration of 265 μg m^{-3}. The city recorded 89% of the monitored days above the NAAQS by CPCB, and 97% of the recorded days were above the WHO guideline levels.

The third polluted city in India in 2023 was Greater Noida in Uttar Pradesh, with 365 observations in 2023 recording the average PM10 concentration of 228 μg m^{-3}. The city recorded 89% of the days exceeding Indian NAAQS and 98% of the monitored days exceeding WHO guidelines.

Sri Ganganagar (Rajasthan), Chhapra (Bihar), Patna (Bihar), Hanumangarh (Rajasthan), Delhi, Bhiwadi (Rajasthan), and Faridabad (Haryana) were the other cities in the top 10 most polluted cities list in India in 2023 holding respective positions from fourth to 10th in order of mention.

The concentrations in the top 10 polluted cities were notably 3-5 times higher than the Indian NAAQS and 13-20 times the WHO standard. While the number of days

exceeding the prescribed limits for these cities ranged from 73% to 93% for Indian NAAQS and 85% to 100% for the WHO standard. With increasing ambient air quality monitoring in Bihar, it becomes evident that areas without monitoring might not be seen as polluted cities because of the absence of the data, but this doesn't take away the fact that these cities also lie in polluted airshed and have hazardous air quality. Bihar had three of the ten most polluted cities in India (Begusarai, Chhapra, and Patna), followed by three in Rajasthan (Sri Ganganagar, Hanumangarh, and Bhiwadi), one each in Assam/Meghalaya (Byrnihat), Uttar Pradesh (Greater Noida), Haryana (Faridabad), and Delhi.

Out of the 50 most polluted cities in India in 2023, 19 cities were present in Bihar followed by Haryana and Rajasthan with 8 cities. Uttar Pradesh had seven cities in the 50 most polluted cities list. Madhya Pradesh and Assam had two cities each, followed by Delhi, Andhra Pradesh, Punjab, and Odisha with one city each in the list of 50 most polluted cities in India.

Target Achieved NCAP Cities

■ Apr 2023 - Dec 2023 PM10 Value   ■ FY23-24 NCAP Target Value

City	Apr 2023 - Dec 2023 PM10 Value	FY23-24 NCAP Target Value
Gwalior	124	124
Jodhpur	121	130
Surat	119	121
Lucknow	112	113
Thane	109	119
Dhanbad	108	133
Navi Mumbai	104	114
Bhopal	102	105
Udaipur	102	104
Jabalpur	97	119
Moradabad	97	176
Durgapur	94	104
Kashipur	91	101
Khurja	91	170
Gorakhpur	90	193
Mumbai	89	99
Aurangabad	89	129
Pune	88	89
Asansol	87	131
Alwar	84	102
Firozabad	83	152
Bareilly	82	137
Srinagar	78	99
Raipur	74	86
Dehradun	68	128
Latur	67	69
Amaravati	65	74
Varanasi	61	67
Vijayawada	57	105
Kalaburagi	56	69
Kohima	54	68
Thoothukudi	53	71
Davanagere	53	54
Rishikesh	47	109
Kadapa	38	41
Sivasagar	32	55
Silchar	21	38

PM10 Concentration (µg/m3)   PM10 Concentration (µg/m3)

NCAP Cities Target Achieved Vs Not Achieved Cities[2]

82 cities covered by the NCAP are mandated to achieve an annual reduction target ranging from 3% to 15% for PM10 levels, contributing to an overall goal of a 40% reduction in PM10 levels by 2025-26. Additionally, the 49 cities receiving air quality grants under the XVth Finance Commission are assigned an annual target of a 15% reduction in the annual average PM10 concentration and an enhancement in the number of good air quality days (Air Quality Index less than 200). Although a thorough evaluation awaits the conclusion of the financial year, this analysis offers an early insight into the progress status of NCAP cities towards meeting their targets for FY24. As only 87 cities out of 131 have CAAQMS data, we looked at the performance of cities with data availability for more than 75% of the days in 2023 and found that

- 37 cities have already achieved the NCAP target for FY24, but despite achieving FY24 targets 28 cities are still above the Indian NAAQS.
- Nine cities namely Vijayawada, Kalaburagi, Kohima, Thoothukudi, Davanagere, Rishikesh, Kadapa, Sivasagar, and Silchar achieved both NCAP FY24 target and Indian NAAQS by CPCB.

Target Not Achieved NCAP Cities

	Apr 2023 - Dec 2023 PM10 Value	FY23-24 NCAP Target Value
Byrnihat	255	81
Delhi	197	137
Patna	189	177
Faridabad	185	181
Ghaziabad	177	176
Muzaffarpur	156	101
Meerut	155	150
Nalbari	130	64
Jaipur	129	105
Ludhiana	127	120
Visakhapatnam	124	104
Baddi	122	107
Virar	119	105
Ujjain	115	74
Kota	112	106
Rourkela	110	90
Jalgaon	110	48
Jalandhar	108	96
Mandi Gobindgarh	108	102
Akola	104	57
Indore	103	99
Kanpur	103	98
Guwahati	102	87
Jhansi	102	84
Amritsar	102	91
Gaya	101	67
Ahmedabad	99	95
Dewas	98	74
Solapur	98	72
Nagaon	97	74
Talcher	96	88
Khanna	96	87
Howrah	92	92
Patiala	92	81
Nagpur	90	88
Jalna	89	79
Agra	84	69
Chandrapur	83	75
Kolkata	81	81
Hyderabad	80	67
Kolhapur	78	75
Haldia	73	61
Nashik	70	60
Sagar	70	61
Sangli	64	57
Chennai	62	58
Bengaluru	61	60
Anantapur	59	51
Chittoor	59	45
Korba	57	45

PM10 Concentration (µg/m3) **PM10 Concentration (µg/m3)**

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[2] The data assessment here includes data from 1st April 2023 till 31st December 2023

- Out of 37 cities, only 4 cities namely Davanagere in Karnataka, Kadapa in Andhra Pradesh, Sivasagar and Silchar in Assam had 2023-24 NCAP targets below Indian NAAQS but 9 cities Vijayawada, Kalaburgi, Kohima, Thoothukudi, Davanagere, Rishikesh, Kadapa, Sivasagar and Silchar all have recorded PM10 levels (April-December 2023) below NAAQS.

The assessment also indicated that 50 cities have not achieved the FY24 targets under NCAP and

- Byrnihat displays the highest PM10 concentration, requiring a reduction of approximately 215% to meet the current-year target set under NCAP
- Jalgaon, Nalbari, Akola, Ujjain, Muzaffarpur, and Gaya cities require at least 50% reduction in current levels to reach FY24 NCAP target
- Delhi needs a 44% reduction to meet the NCAP target for FY24
- 7 cities necessitate a 20-30% reduction, 14 cities need a 10-20% reduction, and 4 cities require a 6-9% reduction.

The assessment indicates that 13 out of the 50 cities that haven't achieved the FY24 targets as of December 2023 can still achieve them if they reduce PM10 levels by one to five per cent.

NCAP and Non-NCAP cities

There were 227 cities in 2023 with more than 75% of the days with data availability from the CAAQMS, of which 85 were covered under NCAP and the remaining 142 cities aren't covered under NCAP. The data assessment suggests that 78 of the 85 cities under NCAP had PM10 levels above NAAQS with only seven cities recording air quality within the NAAQS. Byrnihat recorded the highest annual average PM10 concentration of 301 μg m^{-3} among NCAP cities while Silchar recorded the lowest PM10 concentration of 29 μg m^{-3}.

Out of the remaining 142 cities that aren't covered under NCAP, 118 cities exceeded NAAQS, and only 24 cities recorded PM10 levels under NAAQS. Begusarai was the city with the highest annual average PM10 concentration of 265 μg m^{-3} among non-NCAP cities, and Gadak recorded the lowest PM10 concentration of 31 μg m^{-3}.

The presence of a high number of non-NCAP cities recording hazardous pollution levels highlights widespread air quality concerns, emphasizing the need to reassess the list of non-attainment cities. Such reassessment is crucial to reverse the trend of increasing air

pollution levels in cities with recent ambient air quality monitoring but recording pollution levels above the prescribed standards.

PM2.5 levels in 2023

Out of a total of 271 cities with CAAQMS only 225 cities had more than 75% of the days with PM2.5 data availability. Details on PM2.5 concentrations along with exceedance days above Indian NAAQS and WHO standards are given in Annexure 5.

The data analysis showed that in terms of PM2.5 concentrations, Byrnihat, Begusarai, and Delhi were India's three most polluted cities. **Byrnihat was the most polluted city with an annual average of 152 µg/m³**, exceeding both NAAQS and WHO standards on 86% and 99% of monitored days, respectively.

Begusarai closely follows at 147 µg/m³, with 75% of days exceeding NAAQS and 98% surpassing WHO standards.

Delhi, though with a comparatively lower average of 101 µg/m³, exceeds NAAQS on 57% of days and WHO standards on 100% of days monitored.
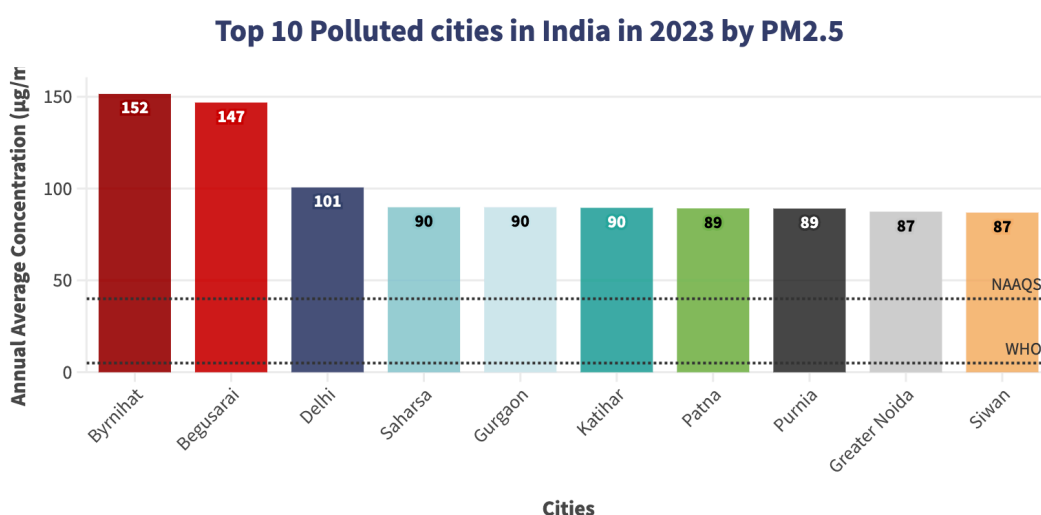
Source: CCR
Note: Cities with 75% data coverage is considered for analysis

Gurgaon, Katihar, Saharsa, Purnia, Patna, Siwan, and Greater Noida were the other cities in the top 10 most polluted cities list according to PM2.5 concentrations taking the respective

positions from 4th to the 10th spot in order of mention.Six of the top 10 most polluted cities by PM2.5 were recorded in Bihar and one each in Assam, Haryana, Uttar Pradesh and Delhi.

Bihar also topped the list of 50 most polluted cities by PM2.5 concentrations with 15 cities featured in the list followed by Haryana (15), Uttar Pradesh (6), and Rajasthan (5).

Out of 225 cities 135 cities exceeded the annual NAAQS for PM2.5 and all monitored cities exceeded WHO standards. The remaining 90cities recorded PM2.5 levels below the annual NAAQS with most of these cities located in southern India.

Silchar and Aizwal were the cleanest cities recording annual average PM2.5 levels below 10 μg/m³.

Top 50 most polluted cities in India by PM2.5

Legend ● IN Top 10 ● IN Top 11- 20 ● IN Top 21- 30 ● IN Top 31- 40 ● IN Top 41- 50
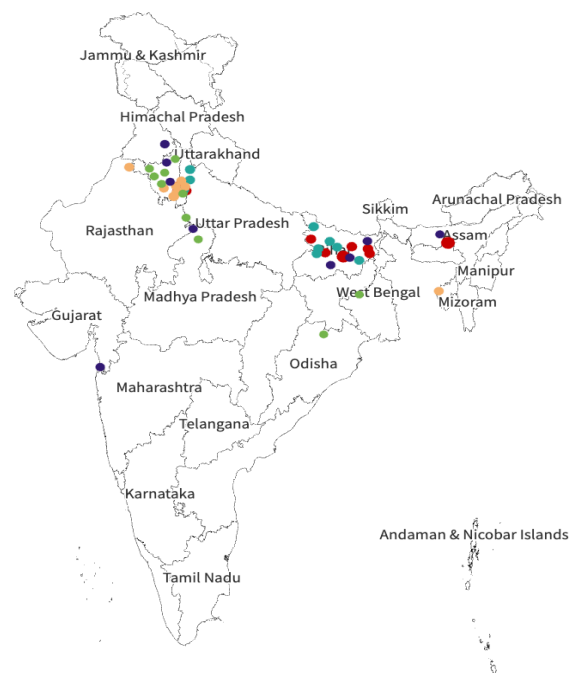
Source: CPCB
Note: Cities with a minimum of 75% of the days with data coverage in 2023 are considered for analysis

Conclusion and the way forward

The review of NCAP and the ambient air quality levels highlights various shortcomings in air pollution regulation and governance process, such as

- Lack of penalization mechanism for the responsible authorities and sectors for non-compliance to the timelines and action points stipulated under original NCAP and revised action points thereafter.
- Lack of transparent information sharing at PRANA portal or any other state/city portal (ideally should be linked to PRANA), i.e., absence of information on actions taken at city levels for air pollution reduction, absence of Source apportionment studies and carrying capacity studies etc.

- Lack of transparent data availability on air quality levels across the country in the absence of an adequate air quality monitoring infrastructure, lack of integration of already existing infrastructure i.e., ambient air quality monitoring stations installed by industries in compliance of Environmental Clearance (EC) conditions and usage of satellite data for remote assessment of pollution levels in a systematic manner.
- Lack of any substantive emission load reduction-based approach as no action plan speaks of a cap on the consumption of fossil fuels and its reduced usage, especially in the power, industry and transport sectors.
- Lack of integration of air quality management plans with forecasting mechanisms, CEMS data and Decision Support System (DSS) by administrative agencies.

While the introduction of BS VI fuel and vehicles has reduced emissions from the transportation sector, the absence of reliable and efficient electric vehicle (EV) powered public transportation and non-motorized transport infrastructure still compels private vehicle usage, resulting in increased fuel consumption and higher emissions. Delhi's experience illustrates the pitfalls of selective policy interventions, such as the introduction of Compressed Natural Gas (CNG) for public transportation in the early 2000s, which initially decreased emissions but was eventually outweighed by the surge in private vehicle numbers.

Delhi also serves as a cautionary tale for other cities, emphasizing the importance of a holistic approach rather than selective sectoral actions. While Delhi focused on reducing transport sector emissions in the early 2000s, it simultaneously allowed polluting industries and coal-based power stations in the Delhi-National Capital Region (NCR) airshed to expand, increasing their production, fuelled by polluting fossil fuels. More than 75% operational capacity of coal-based power generation in the 300 km radius of Delhi has been installed since 2007. Without adequate emission control technology, this unchecked growth in coal-based power generation capacity substantially increased emissions in the region. Similarly, many districts in Delhi-NCR saw an increase in small and medium-scale industries, contributing to escalating emissions from the industrial sector. The expansion of private vehicle usage, unregulated industrial growth, and power generation without efficient emission controls in the larger airshed around polluted cities, compounded by the absence of emission load caps, resulted in hazardous air pollution levels and despite spending thousands of crores of rupees and almost 5 years since the NCAP was announced most of the Indian population is exposed to high air pollution levels. Based on the current review, we recommend:

- The presence of a high number of non-NCAP cities recording hazardous pollution levels highlights widespread air quality concerns, emphasizing the need to reassess the list of non-attainment cities. Such reassessment is crucial to reverse the trend of increasing air pollution levels in cities with recent ambient air quality monitoring but recording pollution levels above the prescribed standards.

- Setting up a penalization mechanism for the responsible authorities and sectors for non-compliance to the timelines and action points stipulated under the original NCAP and revised action points thereafter. Failure to abide by timelines for conducting various research studies (i.e., emission Inventory, source apportionment, carrying capacity studies and health baselines etc.) should be penalised. These research studies are only helpful in setting the baseline if conducted within proper timelines.

- Public access to national air quality data generated through satellite, Industrial air quality monitoring, CEMS, low-cost sensors and manual monitors should be ensured at an easy-to-use platform such as Central Control Room for Ambient Air Quality Data by CPCB which should further be linked to PRANA portal.

- A future roadmap for NCAP will need to expedite the identification of airsheds in the country to formulate and implement airshed-based air quality management. The National Ambient Air Quality Standards Revision Committee should also discuss the notification of varied ambient air quality standards or guidelines based on the background air quality levels for different airsheds and set ambitious targets by tightening the NAAQS for airsheds having ambient air quality levels near or under the NAAQS. The ambition should be to move towards WHO guideline levels in the long term while setting interim guideline levels as short-term and mid-term targets.

- A national emissions database quantifying the emission reduction targets at district/state and national levels based on emission load should be set up to propel the improvements in ambient air quality levels.

- An effective resource distribution strategy should be adopted where a more balanced allocation of funds to address emission load reduction at source should be prioritised rather than a disproportionate focus on any single action point/sector.

- Accelerate the efforts to expand the air quality monitoring network to meet the stipulated targets. Increase the number of monitoring stations to cover a wider geographical area, including rural regions, with the integration of satellite data and early warning/forecasting systems for air quality.

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Annexure

Annexure 1: Details of Ambient Air Quality Monitoring Stations in 489 cities in the country (as on 03.10.2023)

State / Union Territory	City / town	Number of Monitoring Stations	Manual Ambient Air Quality Stations
Andaman & Nicobar (UT)	Brookshabd		1
Andaman & Nicobar (UT)	Port Blair		2
Andhra Pradesh	Amaravati	1	
Andhra Pradesh	Anatapur	1	4
Andhra Pradesh	Chittor	1	5
Andhra Pradesh	Eluru		4
Andhra Pradesh	Guntur		4
Andhra Pradesh	Kadapa	1	5
Andhra Pradesh	Kakinada		4
Andhra Pradesh	Kurnool		4
Andhra Pradesh	Nellore		4
Andhra Pradesh	Ongole		4
Andhra Pradesh	Rajahmundry	1	4
Andhra Pradesh	Srikakulam		4
Andhra Pradesh	Tirupati	2	4
Andhra Pradesh	Vijayawada	4	9
Andhra Pradesh	Visakhapatnam	1	9
Andhra Pradesh	Vizianagaram		4
Arunachal Pradesh	Itanagar		1
Arunachal Pradesh	Naharlagun	1	1
Assam	Bongaigaon		2
Assam	Byrnihat	1	
Assam	Daranga		1
Assam	Dibrugarh		1
Assam	Golaghat		1
Assam	Guwahati	4	8
Assam	Magherita		1
Assam	Nagaon	1	3
Assam	Nalbari	1	3
Assam	North Lakhimpur		1
Assam	Silcher	1	3
Assam	Sivasagar	1	3
Assam	Tezpur		1
Assam	Tinsukia		3
Bihar	Araria	1	
Bihar	Arrah	1	
Bihar	Aurangabad	1	
Bihar	Begusarai	1	1
Bihar	Bettiah	1	
Bihar	Bhagalpur	2	
Bihar	Bihar Sharif	1	
Bihar	Buxar	1	
Bihar	Chhapra	1	
Bihar	Darbhanga	1	1
Bihar	Gaya	3	1
Bihar	Hajipur	1	
Bihar	Katihar	1	
Bihar	Kishanganj	1	

Bihar	Manguraha	1	
Bihar	Motihari	1	
Bihar	Munger	1	
Bihar	Muzaffarpur	3	1
Bihar	Patna	6	2
Bihar	Purnia	1	
Bihar	Rajgir	1	1
Bihar	Saharsa	1	
Bihar	Samastipur	1	
Bihar	Sasaram	1	1
Bihar	Siwan	1	
Chandigarh (UT)	Chandigarh	3	5
Chattisgarh	Bilaspur	1	1
Chattisgarh	Chhal	1	
Chattisgarh	Durg-Bhillainagar	3	4
Chattisgarh	Korba	2	3
Chattisgarh	Kunjemura	1	
Chattisgarh	Milupara	1	
Chattisgarh	Raigarh		3
Chattisgarh	Raipur	4	6
Chattisgarh	Tumidih	1	
Dadara & Nagar Haveli and Daman & Diu (UT)	Baldevi (Dadra & Nagar Haveli)		1
Dadara & Nagar Haveli and Daman & Diu (UT)	Daman		2
Dadara & Nagar Haveli and Daman & Diu (UT)	Patlara (Daman)		1
Dadara & Nagar Haveli and Daman & Diu (UT)	Silvasa		2
Delhi (UT)	Delhi	41	10
Goa	Amona		1
Goa	Assanora		1
Goa	Bicholim		1
Goa	Codli		1
Goa	Cuncolim		1
Goa	Curchorem		1
Goa	Honda		1
Goa	Kundaim		1
Goa	Mapusa		1
Goa	Margao		1
Goa	Marmagao		1
Goa	Panaji		1
Goa	Ponda		1
Goa	Sanguem		1
Goa	Tilamol		1
Goa	Tuem		1
Goa	Usgao-Pale		1
Goa	Vasco		1
Gujarat	Ahmedabad	9	9
Gujarat	Ankleshwar	1	2
Gujarat	Gandhinagar	4	
Gujarat	Jamnagar		1
Gujarat	Nandesari	1	
Gujarat	Rajkot		2
Gujarat	Surat		3
Gujarat	Vadodara		5
Gujarat	Vapi	1	2
Gujarat	Vatva	1	
Haryana	Ambala	1	
Haryana	Bahadurgarh	1	

Haryana	Ballabgarh	1	
Haryana	Bhiwani	1	
Haryana	Charkhi Dadri	1	
Haryana	Dharuhera	1	
Haryana	Faridabad	4	2
Haryana	Fatehabad	1	
Haryana	Gurgaon	4	
Haryana	Hissar	1	2
Haryana	Jind	1	
Haryana	Kaithal	1	
Haryana	Karnal	1	
Haryana	Kurukshetra	1	
Haryana	Mandikhera	1	
Haryana	Manesar	1	
Haryana	Narnaul	1	
Haryana	Palwal	1	
Haryana	Panchukula Urban Estate	1	
Haryana	Panipat	1	
Haryana	Rohtak	1	
Haryana	Sirsa	1	
Haryana	Sonepat	1	
Haryana	Yamuna Nagar	1	1
Himachal Pradesh	Baddi	1	3
Himachal Pradesh	Damtal		2
Himachal Pradesh	Dharamshala		2
Himachal Pradesh	Gulaba		1
Himachal Pradesh	Kala Amb		2
Himachal Pradesh	Manali		2
Himachal Pradesh	Marhi		1
Himachal Pradesh	Nalagarh		1
Himachal Pradesh	Parwanoo		2
Himachal Pradesh	Poanta Sahib		2
Himachal Pradesh	Shimla		2
Himachal Pradesh	Sunder Nagar		2
Himachal Pradesh	Una		2
Himachal Pradesh	Vashisht		1
Jammu & Kashmir (UT)	Anantnag (K)		1
Jammu & Kashmir (UT)	Bandipora (K)		1
Jammu & Kashmir (UT)	Baramulla (K)		2
Jammu & Kashmir (UT)	Budgam (K)		1
Jammu & Kashmir (UT)	Doda (J)		1
Jammu & Kashmir (UT)	Ganderbal (K)		1
Jammu & Kashmir (UT)	Jammu		6
Jammu & Kashmir (UT)	Khathua (J)		2
Jammu & Kashmir (UT)	Kulgam (K)		1
Jammu & Kashmir (UT)	Poonch (J)		1
Jammu & Kashmir (UT)	Pulwama (K)		2
Jammu & Kashmir (UT)	Rajouri(J)		2
Jammu & Kashmir (UT)	Ramban (J)		1
Jammu & Kashmir (UT)	Reasi (J)		1
Jammu & Kashmir (UT)	Samba (J)		1
Jammu & Kashmir (UT)	Shopian (K)		1
Jammu & Kashmir (UT)	Srinagar (K)	1	5
Jammu & Kashmir (UT)	Udhampur (J)		1
Jharkhand	Barajamda		1
Jharkhand	Dhanbad	1	3
Jharkhand	Jamshedpur		2
Jharkhand	Jharia		1
Jharkhand	Jorapokhar	1	

Jharkhand	Ranchi		1
Jharkhand	Saraikela		1
Jharkhand	Sindri		1
Karnataka	Bagalkote	1	1
Karnataka	Bangalore	14	9
Karnataka	Belgaum	1	1
Karnataka	Bidar	1	1
Karnataka	Bijapur / Vijayapura	1	1
Karnataka	Chamarajanagar	1	
Karnataka	Chikkaballapur	1	
Karnataka	Chikkamagaluru	1	
Karnataka	Chitradurga		1
Karnataka	Devanagere	1	3
Karnataka	Gadag	1	
Karnataka	Gulbarga / Kalaburgi	2	1
Karnataka	Hassan	1	1
Karnataka	Haveri	1	
Karnataka	Hubli-Dharwad	3	2
Karnataka	Karwar		1
Karnataka	Kolar	1	1
Karnataka	Koppal	1	
Karnataka	Madikeri	1	
Karnataka	Mandya		1
Karnataka	Mangalore	1	1
Karnataka	Mysore	1	2
Karnataka	Raichur	1	1
Karnataka	Ramanagara	1	
Karnataka	Shimaga / Shivamogga	1	1
Karnataka	Tumkuru	1	1
Karnataka	Udupi	1	
Karnataka	Yadgir	1	
Kerala	Alappuzha		2
Kerala	Eloor	1	
Kerala	Ernakulam	1	
Kerala	Kannur	1	
Kerala	Kochi	1	8
Kerala	Kollam	1	2
Kerala	Kottayam		2
Kerala	Kozhikode	1	2
Kerala	Mallapuram		2
Kerala	Palakkad		1
Kerala	Pathanamthitta		1
Kerala	Thiruvalla		1
Kerala	Thiruvananthapuram	2	4
Kerala	Thrissur	1	2
Kerala	Wayanad		2
Lakshadweep (UT)	Kavaratti		1
Madhya Pradesh	Amlai		2
Madhya Pradesh	Bhopal	3	8
Madhya Pradesh	Chindwara		2
Madhya Pradesh	Damoh	1	
Madhya Pradesh	Dewas	1	3
Madhya Pradesh	Gwalior	4	3
Madhya Pradesh	Indore	2	3
Madhya Pradesh	Jabalpur	3	2
Madhya Pradesh	Katni	1	2
Madhya Pradesh	Maihar	1	
Madhya Pradesh	Mandideep	1	
Madhya Pradesh	Nagda		3

Madhya Pradesh	Pithampur	1	2
Madhya Pradesh	Ratlam	1	
Madhya Pradesh	Rewa		1
Madhya Pradesh	Sagar	2	2
Madhya Pradesh	Satna	1	2
Madhya Pradesh	Singrauli	1	3
Madhya Pradesh	Ujjain	1	4
Maharashtra	Akola	1	3
Maharashtra	Ahmednagar	1	
Maharashtra	Ambernath		1
Maharashtra	Amravati	2	3
Maharashtra	Aurangabad	3	4
Maharashtra	Badlapur	1	1
Maharashtra	Belapur	1	
Maharashtra	Boisar	1	
Maharashtra	Bhiwandi	1	3
Maharashtra	Chandrapur	2	6
Maharashtra	Dhule	1	
Maharashtra	Dombivali / Kalyan	1	1
Maharashtra	Jalgaon	1	3
Maharashtra	Jalna	1	2
Maharashtra	Kolhapur	2	3
Maharashtra	Latur	1	3
Maharashtra	Lote		2
Maharashtra	Mahad	1	3
Maharashtra	Mumbai	25	3
Maharashtra	Nagpur	4	7
Maharashtra	Malegao	1	
Maharashtra	Mira-Bhayander	1	
Maharashtra	Nanded	1	3
Maharashtra	Nashik	4	4
Maharashtra	Navi Mumbai	8	6
Maharashtra	Parbhani	1	
Maharashtra	Pimpri-Chinchwad	3	1
Maharashtra	Pune	10	3
Maharashtra	Roha		2
Maharashtra	Sangli	1	3
Maharashtra	Solapur	3	2
Maharashtra	Tarapur		3
Maharashtra	Thane	3	3
Maharashtra	Ulhasnagar	1	2
Maharashtra	Vasai-virar	1	
Manipur	Imphal	2	1
Meghalaya	Byrnihat		2
Meghalaya	Dawki		1
Meghalaya	Khlihriat		1
Meghalaya	Nongstoin		1
Meghalaya	Shillong	2	4
Meghalaya	Tura		1
Meghalaya	Umaim		1
Mizoram	Aibawk		1
Mizoram	Aizwal	1	5
Mizoram	Biate		1
Mizoram	Champhai		2
Mizoram	Hnahthial		2
Mizoram	Khawzawl		2
Mizoram	Kolasib		3
Mizoram	Lawngtlai		3
Mizoram	Lunglei		3

Mizoram	Mamit		3
Mizoram	North Vanlaiphai		1
Mizoram	Saiha		3
Mizoram	Saitual		2
Mizoram	Serchhip		3
Nagaland	Dimapur		7
Nagaland	Kohima	1	3
Odisha	Angul		3
Odisha	Balangir		3
Odisha	Balasore		3
Odisha	Baripada	1	
Odisha	Berhampur		1
Odisha	Bhubaneshwar		6
Odisha	Bileipada	1	
Odisha	Bonaigarh		1
Odisha	Brajrajnagar	1	
Odisha	Cuttack		3
Odisha	Jharsuguda		3
Odisha	Kalinga Nagar		3
Odisha	Kandhamal		3
Odisha	Kendrapara		3
Odisha	Keonjhar	1	
Odisha	Konark		1
Odisha	Mayurbhanj		3
Odisha	Nayagarh	1	
Odisha	Paradeep		3
Odisha	Puri		2
Odisha	Rairangpur	1	
Odisha	Rajgangpur		1
Odisha	Rayagada		3
Odisha	Rourkela	3	4
Odisha	Sambalpur		1
Odisha	Suakati	1	
Odisha	Talcher	1	3
Odisha	Tensa	1	
Pondicherry (UT)	Karaikal		3
Pondicherry (UT)	Pondicherry	1	3
Punjab	Aligarh (Jagraon)		1
Punjab	Amritsar	1	2
Punjab	Aspal Khurd (Tapa)		1
Punjab	Bara Pind (Goraya)		1
Punjab	Batala		1
Punjab	Bhatinda	1	1
Punjab	Binjon (Garshankar)		1
Punjab	Bishanpura (Payal)		1
Punjab	Changal (Sangrur)		1
Punjab	Chowkimann (Jagraon)		1
Punjab	Dera Baba Nanak		1
Punjab	Dera Bassi		2
Punjab	Fatehpur (Samana)		1
Punjab	Gobindgarh Mandi Gobindgarh	1	3
Punjab	Guru Ki Dhab (Kotkapura)		1
Punjab	Gurdaspur		1
Punjab	Jaito Sarja (Batala)		1
Punjab	Jalandhar	1	4
Punjab	Khanna	1	2
Punjab	Kharaori (Sirhind)		1
Punjab	Kotladoom (Ajnala)		1
Punjab	Lakho ke Behram (Ferozpur)		1

Punjab	Ludhiana	1	4
Punjab	Mrar Kalan (Muktsar)		1
Punjab	Mukandpur (Nawashahar)		1
Punjab	Mureedke (Batala)		1
Punjab	Naudhrani (Malerkotla)		1
Punjab	Naya Nangal		2
Punjab	Patiala	1	3
Punjab	Pathankot		1
Punjab	Peer Mohammad (Jalalabad)		1
Punjab	Poohli (Bhatinda)		1
Punjab	Qila Bharian (Sangrur)		1
Punjab	Rakhra (Patiala)		1
Punjab	Rohila (Samrala)		1
Punjab	Rupnagar	1	
Punjab	Subanpur (Dhilwan)		1
Punjab	Srihind		1
Punjab	Tirathpur (Amritsar I)		1
Rajasthan	Ajmer	1	
Rajasthan	Alwar	1	3
Rajasthan	Banswara	1	
Rajasthan	Baran	1	
Rajasthan	Barmer	1	
Rajasthan	Bharatpur	1	3
Rajasthan	Bhilwara	1	
Rajasthan	Bhiwadi	1	3
Rajasthan	Bikaner	1	3
Rajasthan	Bundi	1	
Rajasthan	Churu	1	
Rajasthan	Chittorgargh	1	3
Rajasthan	Dausa	1	
Rajasthan	Dholpur	1	
Rajasthan	Dungerpur	1	
Rajasthan	Hanumangarh	1	
Rajasthan	Jaipur	6	9
Rajasthan	Jaisalmer	1	
Rajasthan	Jalor	1	
Rajasthan	Jhalawar	1	
Rajasthan	Jhunjhunu	1	
Rajasthan	Jodhpur	5	9
Rajasthan	Karauli	1	
Rajasthan	Kota	3	6
Rajasthan	Nagaur	1	
Rajasthan	Pali	1	
Rajasthan	Pratapgarh	1	
Rajasthan	Rajsamand	1	
Rajasthan	Sawai madhopur	1	
Rajasthan	Sirohi	1	
Rajasthan	Sikar	1	3
Rajasthan	Sri Ganganagar	1	
Rajasthan	Tonk	1	
Rajasthan	Udaipur	1	3
Sikkim	Chungthang		1
Sikkim	Gangtok	1	2
Sikkim	Mangan		1
Sikkim	Namchi		1
Sikkim	Pelling		1
Sikkim	Rangpo		1
Sikkim	Ravangla		1
Sikkim	Singtam		1

Tamilnadu	Ariyalur	1	
Tamilnadu	Chengalpattu	1	
Tamilnadu	Chennai	9	11
Tamilnadu	Coimbatore	2	3
Tamilnadu	Cuddalore	2	3
Tamilnadu	Dindigul	2	
Tamilnadu	Dharmapuri		3
Tamilnadu	Gummidipoondi	1	
Tamilnadu	Hosur	1	
Tamilnadu	Kanchipuram	1	
Tamilnadu	Ooty	1	
Tamilnadu	Madurai		3
Tamilnadu	Mettur		2
Tamilnadu	Nagercoil		3
Tamilnadu	Perambalur		3
Tamilnadu	Ramanathapuram	1	
Tamilnadu	Salem	1	1
Tamilnadu	Sivagangai		3
Tamilnadu	Theni		3
Tamilnadu	Tiruvannamalai		3
Tamilnadu	Tiruvarur		3
Tamilnadu	Trichy		5
Tamilnadu	Tirupur	1	
Tamilnadu	Tuticorin / Thoothukudi	1	3
Tamilnadu	Vellore	1	
Tamilnadu	Villupuram		3
Telangana	Adilabad		1
Telangana	Hyderabad	13	10
Telangana	Karimnagar		1
Telangana	Khammam		2
Telangana	Kothur		1
Telangana	Nalgonda		2
Telangana	Nizamabad		1
Telangana	Patencheru		1
Telangana	Ramagundum		1
Telangana	Sangareddy		3
Telangana	Warangal		2
Tripura	Agartala	2	2
Uttar Pradesh	Agra	6	6
Uttar Pradesh	Aligarh		2
Uttar Pradesh	Allahabad	3	5
Uttar Pradesh	Anpara		2
Uttar Pradesh	Ayodhya		2
Uttar Pradesh	Bagpat	2	2
Uttar Pradesh	Bareily	2	2
Uttar Pradesh	Bulandshahr	1	
Uttar Pradesh	Firozabad	2	3
Uttar Pradesh	Gajroula		2
Uttar Pradesh	Ghaziabad	4	4
Uttar Pradesh	Gorakhpur	1	3
Uttar Pradesh	Greater Noida	2	2
Uttar Pradesh	Hapur	1	2
Uttar Pradesh	Hatras		2
Uttar Pradesh	Jhansi	1	2
Uttar Pradesh	Kanpur	4	9
Uttar Pradesh	Khurja	1	2
Uttar Pradesh	Lucknow	7	8
Uttar Pradesh	Mathura		2
Uttar Pradesh	Meerut	3	2

Uttar Pradesh	Moradabad	7	2
Uttar Pradesh	Muzaffarnagar	1	2
Uttar Pradesh	Noida	4	4
Uttar Pradesh	Raibareli		3
Uttar Pradesh	Saharanpur		2
Uttar Pradesh	Unnao		2
Uttar Pradesh	Varanasi	4	5
Uttar Pradesh	Vrindavan	1	
Uttarakhand	Dehradun	1	3
Uttarakhand	Haldwani		1
Uttarakhand	Haridwar		1
Uttarakhand	Kashipur	1	3
Uttarakhand	Rishikesh	1	3
Uttarakhand	Rudrapur		1
West Bengal	Alipurduar		1
West Bengal	Amtala		1
West Bengal	Asansol	1	3
West Bengal	Baharampur		1
West Bengal	Balurghat		1
West Bengal	Bankura		1
West Bengal	Barasat		1
West Bengal	Bardhaman		1
West Bengal	Barrckpore		3
West Bengal	Baruipur		1
West Bengal	Birpara		1
West Bengal	Bolpur		1
West Bengal	Chinsura		1
West Bengal	Coochbihar		2
West Bengal	Dankuni		1
West Bengal	Darjeeling		1
West Bengal	Durgapur	1	4
West Bengal	Ghatal		1
West Bengal	Haldia	1	4
West Bengal	Howrah	3	4
West Bengal	Jalpaiguri		1
West Bengal	Jhargram		1
West Bengal	Jaigaon		1
West Bengal	Kalimpong		1
West Bengal	Kalyani		1
West Bengal	Kharagpur		1
West Bengal	Kolkata	7	21
West Bengal	Krishnanagar		1
West Bengal	Madhyamgram		1
West Bengal	Malda		1
West Bengal	Medinipur		1
West Bengal	Purulia		1
West Bengal	Raigunj		1
West Bengal	Rampurhat		1
West Bengal	Ranaghat		1
West Bengal	Raniganj		3
West Bengal	Rishra		1
West Bengal	Sankrail		4
West Bengal	Siliguri	1	1
West Bengal	Suri		1
West Bengal	Tamluk		1
West Bengal	Tribeni		1

West Bengal	Uluberia		1
West Bengal	Uttarpara		1

Annexure 2: Ranking of cities based on PM10 concentrations from CAAQMS in 2023[3]

S.No.	City Name	State	No.of.Observations	Annual Average PM10 Conc. (µg/m3)	# Days exceeding Indian NAAQS	# Days exceeding WHO standard	% Days exceeding Indian NAAQS	% Days exceeding WHO standard	NCAP/Non-NCAP
1	Byrnihat	Assam/Meghalaya	347	301	324	344	93	99	NCAP
2	Begusarai	Bihar	346	265	307	335	89	97	Non-NCAP
3	Greater Noida	Uttar Pradesh	365	228	325	359	89	98	Non-NCAP
4	Sri Ganganagar	Rajasthan	300	215	268	297	89	99	Non-NCAP
5	Chhapra	Bihar	361	212	262	313	73	87	Non-NCAP
6	Patna	Bihar	365	212	287	357	79	98	NCAP
7	Hanumangarh	Rajasthan	300	212	245	294	82	98	Non-NCAP
8	Delhi	NCT of Delhi	365	206	299	360	82	99	NCAP
9	Bhiwadi	Rajasthan	365	203	310	361	85	99	Non-NCAP
10	Faridabad	Haryana	365	196	309	365	85	100	NCAP
11	Katihar	Bihar	365	194	238	355	65	97	Non-NCAP
12	Munger	Bihar	358	193	294	338	82	94	Non-NCAP
13	Noida	Uttar Pradesh	365	193	295	355	81	97	NCAP
14	Bikaner	Rajasthan	332	191	286	328	86	99	Non-NCAP
15	Bettiah	Bihar	361	189	288	357	80	99	Non-NCAP
16	Samastipur	Bihar	361	186	258	345	71	96	Non-NCAP
17	Dharuhera	Haryana	363	184	289	356	80	98	Non-NCAP
18	Saharsa	Bihar	357	184	251	320	70	90	Non-NCAP
19	Ghaziabad	Uttar Pradesh	365	184	294	353	81	97	NCAP
20	Muzaffarpur	Bihar	365	180	268	338	73	93	NCAP
21	Sonipat	Haryana	347	179	283	341	82	98	Non-NCAP
22	Siwan	Bihar	363	177	268	345	74	95	Non-NCAP
23	Gurgaon	Haryana	365	176	292	363	80	99	Non-NCAP
24	Hajipur	Bihar	365	174	259	327	71	90	Non-NCAP
25	Tonk	Rajasthan	312	172	237	301	76	96	Non-NCAP
26	Arrah	Bihar	359	168	287	349	80	97	Non-NCAP
27	Meerut	Uttar Pradesh	365	168	269	332	74	91	NCAP
28	Araria	Bihar	364	167	227	302	62	83	Non-NCAP
29	Bhagalpur	Bihar	365	167	262	342	72	94	Non-NCAP
30	Bileipada	Odisha	365	165	294	360	81	99	Non-NCAP
31	Dausa	Rajasthan	307	164	248	303	81	99	Non-NCAP
32	Muzaffarnagar	Uttar Pradesh	338	163	269	327	80	97	Non-NCAP
33	Baghpat	Uttar Pradesh	354	158	259	329	73	93	Non-NCAP
34	Bharatpur	Rajasthan	332	156	228	308	69	93	Non-NCAP
35	Nalbari	Assam	350	155	228	305	65	87	NCAP
36	Purnia	Bihar	364	153	231	345	63	95	Non-NCAP
37	Rupnagar	Punjab	346	152	274	338	79	98	Non-NCAP
38	Bahadurgarh	Haryana	364	149	247	347	68	95	Non-NCAP
39	Kishanganj	Bihar	362	148	218	297	60	82	Non-NCAP
40	Singrauli	Madhya Pradesh	354	144	207	299	58	84	Non-NCAP
41	Motihari	Bihar	357	142	218	307	61	86	Non-NCAP

[3] With data availability for more than 75% of the days in 2023

S.No.	City Name	State	No.of.Observations	Annual Average PM10 Conc. (µg/m3)	# Days exceeding Indian NAAQS	# Days exceeding WHO standard	% Days exceeding Indian NAAQS	% Days exceeding WHO standard	NCAP/Non-NCAP
42	Rajgir	Bihar	364	141	234	323	64	89	Non-NCAP
43	Fatehabad	Haryana	311	139	193	303	62	97	Non-NCAP
44	Gwalior	Madhya Pradesh	362	139	224	335	62	93	NCAP
45	Aurangabad	Bihar	365	138	222	362	61	99	Non-NCAP
46	Manesar	Haryana	365	138	234	359	64	98	Non-NCAP
47	Ballabgarh	Haryana	360	138	198	328	55	91	Non-NCAP
48	Bulandshahr	Uttar Pradesh	365	137	244	333	67	91	Non-NCAP
49	Sikar	Rajasthan	301	136	182	275	60	91	Non-NCAP
50	Visakhapatnam	Andhra Pradesh	359	136	251	451	40	72	NCAP
51	Hisar	Haryana	319	136	199	312	62	98	Non-NCAP
52	Charkhi Dadri	Haryana	365	135	235	354	64	97	Non-NCAP
53	Baddi	Himachal Pradesh	356	135	236	352	66	99	NCAP
54	Panipat	Haryana	361	133	232	351	64	97	Non-NCAP
55	Navi Mumbai	Maharashtra	365	133	211	315	58	86	NCAP
56	Mandi Gobindgarh	Punjab	363	132	238	341	66	94	NCAP
57	Ludhiana	Punjab	365	132	229	360	63	99	NCAP
58	Jodhpur	Rajasthan	365	132	254	360	70	99	NCAP
59	Katni	Madhya Pradesh	331	132	206	299	62	90	Non-NCAP
60	Kalyan	Maharashtra	331	130	200	303	60	92	Non-NCAP
61	Bathinda	Punjab	357	129	183	320	51	90	Non-NCAP
62	Yamunanagar	Haryana	354	129	235	342	66	97	Non-NCAP
63	Asanol	West Bengal	358	129	219	306	61	85	NCAP
64	Jaipur	Rajasthan	365	128	249	352	68	96	NCAP
65	Rourkela	Odisha	365	128	229	340	63	93	NCAP
66	Nayagarh	Odisha	361	128	223	298	62	83	Non-NCAP
67	Narnaul	Haryana	358	128	212	330	59	92	Non-NCAP
68	Thane	Maharashtra	319	127	194	275	61	86	NCAP
69	Jhunjhunu	Rajasthan	300	127	182	285	61	95	Non-NCAP
70	Guwahati	Assam	365	126	211	334	58	92	NCAP
71	Kaithal	Haryana	365	126	206	338	56	93	Non-NCAP
72	Bhiwani	Haryana	365	125	224	335	61	92	Non-NCAP
73	Ujjain	Madhya Pradesh	319	124	207	302	65	95	NCAP
74	Vrindavan	Uttar Pradesh	355	123	213	290	60	82	Non-NCAP
75	Yamuna Nagar	Haryana	294	122	177	282	60	96	Non-NCAP
76	Surat	Gujarat	336	122	198	267	59	79	NCAP
77	Mandideep	Madhya Pradesh	356	121	203	323	57	91	Non-NCAP
78	Lucknow	Uttar Pradesh	365	121	223	326	61	89	NCAP
79	Bihar Sharif	Bihar	362	121	212	268	59	74	Non-NCAP
80	Chandigarh	Chandigarh	365	120	222	349	61	96	NCAP
81	Gaya	Bihar	365	119	198	306	54	84	NCAP
82	Gummidipoondi	Tamil Nadu	326	119	227	321	70	98	Non-NCAP

S.No.	City Name	State	No.of.Observations	Annual Average PM10 Conc. (µg/m3)	# Days exceeding Indian NAAQS	# Days exceeding WHO standard	% Days exceeding Indian NAAQS	% Days exceeding WHO standard	NCAP/Non-NCAP
83	Kota	Rajasthan	365	119	205	354	56	97	NCAP
84	Vatva	Gujarat	359	119	216	355	60	99	Non-NCAP
85	Durgapur	West Bengal	356	118	203	315	57	88	NCAP
86	Agartala	Tripura	353	117	195	335	55	95	Non-NCAP
87	Churu	Rajasthan	290	116	141	256	49	88	Non-NCAP
88	Chittorgarh	Rajasthan	304	115	147	287	48	94	Non-NCAP
89	Nagaon	Assam	315	115	154	267	49	85	NCAP
90	Pithampur	Madhya Pradesh	357	114	206	350	58	98	Non-NCAP
91	Jabalpur	Madhya Pradesh	365	113	208	328	57	90	NCAP
92	Suakati	Odisha	359	112	202	328	56	91	Non-NCAP
93	Banswara	Rajasthan	304	111	173	293	57	96	Non-NCAP
94	Satna	Madhya Pradesh	343	111	148	314	43	92	Non-NCAP
95	Kurukshetra	Haryana	361	110	181	320	50	89	Non-NCAP
96	Jalandhar	Punjab	365	110	187	351	51	96	NCAP
97	Bhopal	Madhya Pradesh	365	110	195	348	53	95	NCAP
98	Ahmedabad	Gujarat	365	109	216	360	59	99	NCAP
99	Pali	Rajasthan	362	109	178	362	49	100	Non-NCAP
100	Howrah	West Bengal	365	109	174	303	48	83	NCAP
101	Mumbai	Maharashtra	365	109	180	329	49	90	NCAP
102	Indore	Madhya Pradesh	362	108	187	345	52	95	NCAP
103	Vapi	Gujarat	365	108	172	302	47	83	Non-NCAP
104	Sawai Madhopur	Rajasthan	298	108	140	276	47	93	Non-NCAP
105	Udaipur	Rajasthan	365	108	187	354	51	97	NCAP
106	Kanpur	Uttar Pradesh	365	107	189	338	52	93	NCAP
107	Talcher	Odisha	346	107	139	251	40	73	NCAP
108	Solapur	Maharashtra	365	107	234	347	64	95	NCAP
109	Sirsa	Haryana	356	106	170	322	48	90	Non-NCAP
110	Dewas	Madhya Pradesh	338	105	193	293	57	87	NCAP
111	Tumakuru	Karnataka	314	104	157	238	50	76	Non-NCAP
112	Muradabad	Uttar Pradesh	365	103	192	349	53	96	Non-NCAP
113	Jind	Haryana	365	103	150	321	41	88	Non-NCAP
114	Amritsar	Punjab	359	103	164	345	46	96	NCAP
115	Hapur	Uttar Pradesh	344	103	110	269	32	78	Non-NCAP
116	Barmer	Rajasthan	306	103	151	286	49	93	Non-NCAP
117	Jhansi	Uttar Pradesh	365	102	157	336	43	92	NCAP
118	Baripada	Odisha	361	101	176	315	49	87	Non-NCAP
119	Ajmer	Rajasthan	365	101	152	365	42	100	Non-NCAP
120	Ratlam	Madhya Pradesh	347	100	160	307	46	88	Non-NCAP
121	Kurukshetra	Haryana	301	100	125	260	42	86	Non-NCAP
122	Keonjhar	Odisha	365	100	184	321	50	88	Non-NCAP
123	Sasaram	Bihar	347	100	152	278	44	80	Non-NCAP

S.No.	City Name	State	No.of.Observations	Annual Average PM10 Conc. (µg/m3)	# Days exceeding Indian NAAQS	# Days exceeding WHO standard	% Days exceeding Indian NAAQS	% Days exceeding WHO standard	NCAP/Non-NCAP
124	Nagpur	Maharashtra	365	99	173	310	47	85	NCAP
125	Pratapgarh	Rajasthan	299	99	156	274	52	92	Non-NCAP
126	Mandikhera	Haryana	359	99	149	291	42	81	Non-NCAP
127	Aurangabad	Maharashtra	365	99	392	621	54	85	NCAP
128	Rairangpur	Odisha	312	98	159	275	51	88	Non-NCAP
129	Jhalawar	Rajasthan	297	97	134	260	45	88	Non-NCAP
130	Moradabad	Uttar Pradesh	305	96	138	289	45	95	NCAP
131	Khurja	Uttar Pradesh	365	96	125	353	34	97	NCAP
132	Patiala	Punjab	365	95	156	306	43	84	NCAP
133	Khanna	Punjab	365	94	132	352	36	96	NCAP
134	Gorakhpur	Uttar Pradesh	365	94	170	324	47	89	NCAP
135	Kunjemura	Chhattisgarh	343	94	153	281	45	82	Non-NCAP
136	Chandrapur	Maharashtra	365	94	133	340	36	93	NCAP
137	Prayagraj	Uttar Pradesh	365	94	137	332	38	91	NCAP
138	Kolkata	West Bengal	365	93	151	277	41	76	NCAP
139	Pune	Maharashtra	347	93	150	310	43	89	NCAP
140	Karnal	Haryana	365	92	134	317	37	87	Non-NCAP
141	Rajsamand	Rajasthan	293	92	106	270	36	92	Non-NCAP
142	Manguraha	Bihar	355	91	133	260	37	73	Non-NCAP
143	Ankleshwar	Gujarat	343	90	136	293	40	85	Non-NCAP
144	Dharwad	Karnataka	345	89	115	302	33	88	NCAP
145	Sirohi	Rajasthan	282	88	91	243	32	86	Non-NCAP
146	GandhiNagar	Gujarat	365	87	121	345	33	95	Non-NCAP
147	Raichur	Karnataka	331	86	138	253	42	76	Non-NCAP
148	Haldia	West Bengal	359	86	136	247	38	69	NCAP
149	Hubballi	Karnataka	365	86	109	312	30	85	NCAP
150	Tumidih	Chhattisgarh	308	85	104	229	34	74	Non-NCAP
151	Bareilly	Uttar Pradesh	365	85	118	294	32	81	NCAP
152	Alwar	Rajasthan	365	85	83	356	23	98	NCAP
153	Hyderabad	Telangana	365	85	79	365	22	100	NCAP
154	Tensa	Odisha	337	85	119	269	35	80	Non-NCAP
155	Firozabad	Uttar Pradesh	365	84	111	324	30	89	NCAP
156	Kolar	Karnataka	276	82	98	200	36	72	Non-NCAP
157	Siliguri	West Bengal	361	82	100	265	28	73	Non-NCAP
158	Ambala	Haryana	358	81	102	291	28	81	Non-NCAP
159	Manglore	Karnataka	363	80	95	311	26	86	Non-NCAP
160	Raipur	Chhattisgarh	363	80	107	288	29	79	NCAP
161	Mangalore	Karnataka	303	79	84	255	28	84	Non-NCAP
162	Rajamahendravaram	Andhra Pradesh	362	79	117	251	32	69	NCAP
163	Kochi	Kerala	353	78	95	303	27	86	Non-NCAP
164	Palwal	Haryana	365	78	74	252	20	69	Non-NCAP
165	Agra	Uttar Pradesh	365	78	87	309	24	85	NCAP
166	Thrissur	Kerala	346	77	86	323	25	93	Non-NCAP
167	Kollam	Kerala	361	77	44	344	12	95	Non-NCAP
168	Hosur	Tamil Nadu	332	77	88	248	27	75	Non-NCAP
169	Brajrajnagar	Odisha	311	75	76	230	24	74	Non-NCAP
170	Dehradun	Uttarakhand	319	75	75	236	24	74	NCAP

S.No.	City Name	State	No.of.Observations	Annual Average PM10 Conc. (µg/m3)	# Days exceeding Indian NAAQS	# Days exceeding WHO standard	% Days exceeding Indian NAAQS	% Days exceeding WHO standard	NCAP/Non-NCAP
171	Belgaum	Karnataka	358	74	74	232	21	65	Non-NCAP
172	Nashik	Maharashtra	365	74	83	277	23	76	NCAP
173	Sagar	Madhya Pradesh	363	73	84	269	23	74	NCAP
174	Srinagar	Jammu and Kashmir	321	73	55	232	17	72	NCAP
175	Bilaspur	Chhattisgarh	353	72	67	288	19	82	Non-NCAP
176	Vijayawada	Andhra Pradesh	291	71	52	184	18	63	NCAP
177	Amaravati	Andhra Pradesh	358	70	88	234	25	65	NCAP
178	Bangalore	Karnataka	365	69	31	311	8	85	NCAP
179	Korba	Chhattisgarh	363	69	76	252	21	69	NCAP
180	Kannur	Kerala	294	68	0	294	0	100	Non-NCAP
181	Chennai	Tamil Nadu	365	68	44	296	12	81	NCAP
182	Hassan	Karnataka	310	68	15	266	5	86	Non-NCAP
183	Kohima	Nagaland	337	67	67	232	20	69	NCAP
184	Shillong	Meghalaya	296	65	37	193	13	65	Non-NCAP
185	Chikkaballapur	Karnataka	301	65	51	189	17	63	Non-NCAP
186	Eloor	Kerala	282	64	0	252	0	89	Non-NCAP
187	Chikkaballarpur	Karnataka	360	64	58	227	16	63	Non-NCAP
188	Chhal	Chhattisgarh	347	64	51	248	15	71	Non-NCAP
189	Palwal	Haryana	305	63	32	192	10	63	Non-NCAP
190	Bhilai	Chhattisgarh	363	63	52	237	14	65	NCAP
191	Kalaburagi	Karnataka	350	63	13	280	4	80	NCAP
192	Varanasi	Uttar Pradesh	365	62	36	249	10	68	NCAP
193	Davanagere	Karnataka	328	61	44	214	13	65	NCAP
194	Haveri	Karnataka	347	61	51	199	15	57	Non-NCAP
195	Tirupati	Andhra Pradesh	365	61	28	256	8	70	Non-NCAP
196	Yadgir	Karnataka	361	60	30	235	8	65	Non-NCAP
197	Tirupur	Tamil Nadu	293	58	19	182	6	62	Non-NCAP
198	Karauli	Rajasthan	301	58	22	182	7	60	Non-NCAP
199	Chittoor	Andhra Pradesh	365	58	43	208	12	57	NCAP
200	Anantapur	Andhra Pradesh	352	58	16	244	5	69	NCAP
201	Ramanagara	Karnataka	363	57	12	235	3	65	Non-NCAP
202	Bidar	Karnataka	288	55	37	164	13	57	Non-NCAP
203	Ooty	Tamil Nadu	346	54	23	199	7	58	Non-NCAP
204	Kadapa	Andhra Pradesh	310	52	36	132	12	43	NCAP
205	Puducherry	Puducherry	365	52	10	216	3	59	Non-NCAP
206	Thoothukodi	Tamil Nadu	360	51	4	212	1	59	NCAP
207	Kanchipuram	Tamil Nadu	310	51	14	168	5	54	Non-NCAP
208	Mysuru	Karnataka	365	51	0	257	0	70	Non-NCAP
209	Salem	Tamil Nadu	291	51	10	153	3	53	Non-NCAP
210	Aizawl	Mizoram	302	50	41	126	14	42	Non-NCAP

S.No.	City Name	State	No.of.Observations	Annual Average PM10 Conc. (µg/m3)	# Days exceeding Indian NAAQS	# Days exceeding WHO standard	% Days exceeding Indian NAAQS	% Days exceeding WHO standard	NCAP/Non-NCAP
211	Rishikesh	Uttarakhand	315	49	4	171	1	54	NCAP
212	Maihar	Madhya Pradesh	311	49	19	137	6	44	Non-NCAP
213	Koppal	Karnataka	311	48	35	136	11	44	Non-NCAP
214	Shivamogga	Karnataka	365	47	0	220	0	60	Non-NCAP
215	Vijayapura	Karnataka	360	47	0	271	0	75	Non-NCAP
216	Bagalkot	Karnataka	365	46	0	219	0	60	Non-NCAP
217	Chikkamagaluru	Karnataka	363	44	0	163	0	45	Non-NCAP
218	Thiruvananthapuram	Kerala	364	43	3	141	1	39	Non-NCAP
219	Ariyalur	Tamil Nadu	344	43	5	148	1	43	Non-NCAP
220	Chamarajanagar	Karnataka	365	43	0	81	0	22	Non-NCAP
221	Ramanathapuram	Tamil Nadu	349	42	2	132	1	38	Non-NCAP
222	Damoh	Madhya Pradesh	342	40	5	120	1	35	Non-NCAP
223	Sivasagar	Assam	364	37	0	125	0	34	NCAP
224	Gadag	Karnataka	350	33	1	76	0	22	Non-NCAP
225	Madikeri	Karnataka	362	32	0	38	0	10	Non-NCAP
226	Gangtok	Sikkim	294	31	9	59	3	20	Non-NCAP
227	Silchar	Assam	354	29	0	74	0	21	NCAP

Annexure 3: Funds released and utilized in 131 NCAP cities (FY 20 to FY24)[4]

S.No	City	Total Fund released	Total fund utilised
1	Anantapur	8.765	2.16
2	Chittoor	4.905	3.61
3	Eluru	4.625	3.42
4	Guntur	11.55	4.53
5	Kadapa	5.77	2.49
6	Kurnool	5.272	2.95
7	Nellore	14.855	7.36
8	Ongole	6.105	4.1
9	Rajamahendravaram	6.345	4.32
10	Srikakulam	3.59	3.19
11	Vijayawada	130.35	33.67
12	Visakhapatnam	129.37	0
13	Vizianagaram	4.6855	2.7
14	Guwahati	29.39	12.09
15	Nagaon	4.91	1.97
16	Nalbari	2.92	1.21
17	Silchar	3.92	2.48
18	Sibsagar	4.14	1.78
19	Patna	298.57	157.72
20	Gaya	9.4185	6.47
21	Muzaffarpur	14.01	5.39
22	Chandigarh	28.783	12.96
23	Korba	3.846	1.06
24	Bhilai Nagar	118.35	28.45
25	Raipur	125.35	51.86
26	Delhi	38.2185	10.77
27	Ahmedabad	365.54	261.93
28	Rajkot	83.1	64.61
29	Surat	261.15	254.23
30	Vadodara	98.15	81.98
31	Faridabad (NCR)	73.53	0.78
32	Baddi	2.7725	2.6
33	Damtal	1.5725	1.05
34	Kala Amb	3.5625	3.33
35	Nalagarh	1.925509	1.8
36	Paonta Sahib	1.7225	1.47
37	Parwanoo	1.6225	1.33
38	Sunder Nagar	1.9315	1.71
39	Jammu	19.9215	11.93
40	Srinagar	60.93	4
41	Dhanbad	69.09	57.39
42	Jamshedpur	116.85	31.9
43	Ranchi	93.5	48.09
44	Bengaluru	541.1	5.47
45	Devanagere	10.05	4.78
46	Gulburga	15.8965	1.29
47	Hubli-Dharwad	16.7245	0.8
48	Bhopal	183.85	166.44
49	Dewas	6.6415	5.31
50	Gwalior	102.64	65.08
51	Indore	191.95	166.64
52	Jabalpur	112.25	104.18
53	Sagar	8.9935	2.58
54	Ujjain	12.61	3.22

[4] Till December 2023

S.No	City	Total Fund released	Total fund utilised
55	Aurangabad	68.3	51.54
56	Akola	8.66	3.95
57	Amravati	25.005	12.87
58	Badlapur	2	0.15
59	Chandrapur	5.595	3.88
60	Greater Mumbai	938.59	680.32
61	Jalgaon	4.58	1.07
62	Jalna	5.415	3.09
63	Kolhapur	17.2	0.33
64	Latur	12.9965	5
65	Nagpur	142.05	6.32
66	Nashik	91.55	0
67	Navi Mumbai	9.45	26.43
68	Pune	271.3	70.48
69	Sangli	10.5	2.54
70	Solapur	31.725	7.18
71	Thane	0	41.49
72	Ulhasnagar	2.1	18.15
73	Vasai virar	72.35	13.46
74	Byrnihat	6.151	2.84
75	Dimapur	7.05	0.47
76	Kohima	6.65	1.15
77	Angul	0.3375	0.95
78	Balasore	3.741	1.16
79	Bhubaneswar	4.6237	20.53
80	Cuttack	40.23	14.23
81	Kalinga Nagar	4.6875	1.82
82	Rourkela	12.0575	6.55
83	Talcher	3.87	1.15
84	Amritsar	73.25	65.86
85	Pathankot/Dera Baba	4.73	1.66
86	DeraBassi	1.115	0.42
87	Jalandhar	30.045	2.63
88	Khanna	5.18	2.04
89	Ludhiana	97.75	56.48
90	Gobindgarh	5.269	2.8
91	NayaNangal	2.718	0.67
92	Patiala	14.86	2.96
93	Jaipur	325.85	260.71
94	Alwar	15	1.69
95	Jodhpur	80.34	55.99
96	Kota	101.2	63.34
97	Udaipur	14.7265	9.39
98	Chennai	367	367.51
99	Madurai	72.44	49.8
100	Trichy	50.35	46.36
101	Tuticorin	12.64	7.15
102	Hyderabad	454.3	365.6
103	Nalgonda	4.3965	1.62
104	Patencheru	0.48	0.39
105	Sangareddy	3.3575	2.03
106	Agra	175.92	128.63
107	Allahabad	180.78	141.72
108	Ghaziabad	136.25	97.08
109	Kanpur	249.34	209.47
110	Lucknow	385.83	199.5
111	Meerut (NCR)	139.19	86.84
112	Varanasi	229.17	83.49

S.No	City	Total Fund released	Total fund utilised
113	Anpara	2.185	1.53
114	Bareily	49.24	11.68
115	Firozabad	34.355	17.9
116	Gajraula	4.04	0.89
117	Gorakhpur	52.19	19.56
118	Jhansi	9.06	4.74
119	Khurja	13.665	3.8
120	Moradabad	57.195	15.23
121	Noida	26.42	1.19
122	Raebareli	11.3685	5.5
123	Dehradun	38.24	10.11
124	Kashipur	6.772	2.76
125	Rishikesh	8.6715	3.9
126	Asansol/Raniganj	67.6	42.55
127	Barrackpore	2	1.94
128	Durgapur	44.58	5.87
129	Haldia	10.325	4.43
130	Howrah	5	7.71
131	Kolkata	687.25	636.18

Annexure 4: State-wise progress under Swacch Bharat Mission 2.0

S.No.	State/UT	Total no. of Dumpsite	Legacy Waste Qty (In Lakh Tonne)	Remediated Waste Qty (In Lakh Tonne)	Waste to be Remediated (In Lakh Tonne)	Area (In Acre)	Area Reclaimed (In Acre)	Area to be Reclaimed (In Acre)
1	ANDHRA PRADESH	14	45.68	14.98	30.71	377.66	33	344.66
2	ASSAM	4	18.59	0	18.59	53.93	0	53.93
3	BIHAR	4	13.52	4.13	9.39	114.2	51	63.2
4	CHANDIGARH	2	12.77	10.56	2.21	28	20	8
5	CHHATTISGARH	2	2.65	2.39	0.26	33.4	31.4	2
6	DELHI	3	203	76.98	126.02	202	0	202
7	GUJARAT	6	146.05	122.87	23.18	217.2	104.2	113
8	HARYANA	2	47	23.51	23.49	20	20	0
9	HIMACHAL PRADESH	1	0.4	0.28	0.12	2.5	0	2.5
10	JAMMU AND KASHMIR	3	17.37	1.7	15.67	66.5	34	32.5
11	JHARKHAND	3	20.48	0	20.48	40.15	0	40.15
12	KARNATAKA	10	114.07	0	114.07	339.82	0	339.82
13	KERALA	4	10.17	4.12	6.05	100.56	11	89.56
14	MADHYA PRADESH	8	10.43	1.97	8.46	38.62	5.75	32.87
15	MAHARASHTRA	28	491.67	116.18	375.5	925.19	262.26	662.93
16	NAGALAND	2	6.1	0	6.1	28	0	28
17	ODISHA	5	26.07	0.35	25.72	107.14	10	97.14
18	PUNJAB	11	44.17	8.99	35.18	127.25	14	113.25
19	RAJASTHAN	7	36.37	1.45	34.93	282.7	2	280.7
20	TAMIL NADU	11	120.4	33.54	86.86	822.28	163	659.28
21	TELANGANA	5	125.55	121.95	3.61	454	395	59
22	UTTAR PRADESH	18	68.34	49.8	18.54	436.27	260.98	175.29
23	UTTARAKHAND	4	5.01	0.26	4.75	25.89	2	23.89
24	WEST BENGAL	12	66.66	5.88	60.78	185.7	22	163.7

![CREA logo]

Annexure 5: PM2.5 Concentration and exceedance percentage of all Indian Cities[5]

City	Annual Average PM2.5 Conc. (μg/m3)	Monitored Days	% days > Annual NAAQS	% days > Annual WHO
Byrnihat	152	351	86	99
Begusarai	147	345	75	98
Delhi	101	365	58	100
Gurgaon	90	365	68	100
Saharsa	90	357	54	89
Katihar	90	365	55	92
Patna	89	365	64	100
Purnia	89	364	55	96
Greater Noida	87	365	52	98
Siwan	87	364	55	96
Bettiah	86	356	50	95
Faridabad	86	365	53	100
Muzaffarnagar	85	343	62	100
Arrah	84	355	59	98
Muzaffarpur	83	365	62	97
Chhapra	83	363	48	96
Noida	83	365	50	99
Samastipur	82	363	54	95
Bhagalpur	82	365	47	94
Meerut	81	365	53	93
Hanumangarh	80	298	42	93
Dharuhera	79	363	58	98
Manesar	78	365	56	100
Ghaziabad	78	365	47	99
Baghpat	77	353	56	96
Bhiwadi	77	365	55	99
Charkhi Dadri	77	365	60	99
Agartala	76	360	61	100
Bahadurgarh	76	364	47	99
Munger	73	358	56	96
Araria	73	362	47	79
Rajgir	72	365	40	90
Vapi	71	364	46	100
Rohtak	69	363	44	98
Kaithal	69	365	49	98
Sri Ganganagar	68	301	43	99
Mandi gobindgarh	68	363	50	98
Dholpur	68	306	32	96
Nalbari	67	356	46	87
Hisar	66	326	40	99
Bhiwani	66	365	46	95
Ballabgarh	66	360	39	96
Bharatpur	65	331	39	96
Gwalior	65	362	41	96
Jind	65	365	38	97
Fatehabad	65	329	39	95
Kurukshetra	63	361	45	98
Bileipada	63	364	49	100
Asansol	61	358	48	96
Yamunanagar	61	353	48	99
Chandigarh	61	365	40	98
Narnaul	61	358	39	97
Ludhiana	61	365	39	100

[5] With data availability for more than 75% of the days in 2023

City	Annual Average PM2.5 Conc. (µg/m3)	Monitored Days	% days > Annual NAAQS	% days > Annual WHO
Sonipat	61	345	37	86
Ujjain	60	324	37	97
Kota	60	365	35	99
Rairangpur	60	310	50	92
Gummidipoondi	60	328	42	99
Baddi	60	356	32	98
Aurangabad	60	365	35	91
Bulandshahr	60	365	41	96
Amritsar	59	359	44	99
Gaya	59	365	34	98
Navi Mumbai	59	365	39	88
Khurja	58	365	37	100
Guwahati	58	365	36	89
Kishanganj	58	363	38	85
Lucknow	58	365	41	97
Sasaram	58	345	33	90
Yamuna Nagar	57	294	41	98
Rourkela	57	363	39	98
Singrauli	57	365	40	89
Hajipur	57	365	39	90
Talcher	56	328	35	90
Keonjhar	56	365	38	96
Nayagarh	55	364	40	93
Jhunjhunu	55	300	29	95
Jaipur	55	365	30	99
Surat	54	336	40	86
Tonk	54	319	27	92
Pali	54	352	25	100
Chittorgarh	54	290	33	99
Vatva	54	359	33	99
Dausa	54	307	24	98
Suakati	53	361	35	99
Howrah	53	365	34	87
Visakhapatnam	53	358	19	86
Bikaner	53	332	27	94
Pune	52	347	40	99
Nagpur	52	365	35	94
Jalandhar	52	365	28	99
Hapur	51	365	29	85
Aurangabad	42	365	29	91
Panchkula	51	350	29	99
Ahmedabad	51	365	31	100
Chandrapur	51	365	30	91
Bathinda	50	361	24	90
Muradabad	50	365	32	99
Karnal	50	364	30	94
Durgapur	50	358	30	93
Rupnagar	50	348	29	93
Ankleshwar	50	342	38	96
Nagaon	49	324	25	86
Bhopal	49	365	27	97
Kanpur	48	365	29	98
GandhiNagar	48	365	26	99
Katni	48	330	28	93
Gorakhpur	48	365	24	99
Udaipur	48	365	19	100
Jabalpur	48	365	27	93

City	Annual Average PM2.5 Conc. (µg/m3)	Monitored Days	% days > Annual NAAQS	% days > Annual WHO
Mumbai	47	365	32	93
Manguraha	47	357	32	76
Kolkata	47	365	30	87
Baripada	47	355	34	79
Churu	47	296	23	77
Motihari	47	359	27	77
Ajmer	46	365	16	100
Sawai Madhopur	46	294	28	94
Moradabad	45	305	23	99
Jodhpur	45	365	24	96
Dewas	45	357	22	94
Banswara	44	305	20	98
Pithampur	43	356	22	98
Mandideep	43	356	24	92
Sikar	43	301	22	84
Sirsa	43	356	22	85
Patiala	43	365	24	93
Tensa	43	329	17	87
Prayagraj	42	365	22	98
Ambala	42	355	25	87
Indore	42	362	18	99
Panipat	42	362	26	80
Alwar	42	365	19	99
Bihar Sharif	41	362	15	76
Khanna	41	365	20	95
Kalyan	40	354	24	88
Hosur	40	332	14	96
Vijayawada	40	300	18	87
Ratlam	39	346	12	96
Siliguri	39	361	17	94
Dharwad	39	340	22	88
Jhalawar	39	297	20	85
Firozabad	39	365	16	92
Hyderabad	38	365	2	100
Nashik	38	365	18	86
Rajamahendravaram	38	353	23	71
Rajsamand	38	293	15	89
Solapur	38	365	11	96
Jhansi	37	365	13	87
Thrissur	37	342	15	94
Tumakuru	36	307	13	77
Pratapgarh	36	299	11	94
Kochi	36	351	19	81
Bareilly	35	365	12	89
Kannur	35	294	0	100
Kollam	35	361	3	95
Kadapa	35	310	13	85
Dehradun	35	332	11	82
Manglore	34	364	12	92
Chittoor	34	364	12	86
Shillong	34	340	16	73
Tumidih	34	315	11	84
Agra	33	365	12	87
Amaravati	33	355	13	72
Tirupati	33	365	7	88
Kohima	33	350	12	81
Vrindavan	33	355	10	86

City	Annual Average PM2.5 Conc. (μg/m3)	Monitored Days	% days > Annual NAAQS	% days > Annual WHO
Bangalore	33	365	2	93
Mangalore	32	304	11	91
Brajrajnagar	32	310	6	84
Haldia	32	359	11	68
Yadgir	32	361	7	78
Raipur	31	363	4	81
Chikkaballarpur	31	352	10	73
Palwal	30	365	6	87
Sirohi	30	281	6	82
Karauli	30	300	6	74
Bilaspur	30	355	5	90
Haveri	30	360	10	60
Chikkaballapur	30	293	9	70
Eloor	30	282	0	90
Hubballi	29	365	7	78
Chennai	29	365	3	90
Salem	29	303	4	82
Sagar	29	362	6	80
Korba	28	363	7	65
Kalaburagi	28	343	7	77
Bhilai	28	363	5	75
Ooty	28	345	1	82
Davanagere	28	358	4	71
Palwal	28	305	3	86
Chhal	28	348	4	80
Srinagar	28	300	5	82
Belgaum	27	359	11	73
Barmer	27	306	8	71
Ramanagara	27	363	2	75
Satna	27	344	2	88
Varanasi	26	365	2	76
Kanchipuram	25	309	0	77
Rishikesh	25	315	2	81
Puducherry	24	365	3	68
Maihar	24	292	3	65
Cuddalore	24	278	4	76
Anantapur	24	358	0	79
Ariyalur	23	320	2	67
Bagalkot	23	365	0	100
Thiruvananthapuram	22	365	2	57
Mysuru	21	365	0	88
Mandikhera	21	357	3	52
Visakhapatnam	21	272	0	70
Shivamogga	20	365	0	88
Vijayapura	19	360	0	99
Raichur	19	312	0	62
Koppal	19	315	0	58
Madikeri	19	362	0	72
Kunjemura	19	342	1	58
Chikkamagaluru	18	363	0	58
Gadag	18	343	1	52
Chamarajanagar	18	365	0	88
Ramanathapuram	17	345	2	40
Sivasagar	17	363	0	44
Damoh	16	348	0	47
Gangtok	15	308	5	22
Aizawl	10	301	0	23

City	Annual Average PM2.5 Conc. (µg/m3)	Monitored Days	% days > Annual NAAQS	% days > Annual WHO
Silchar	10	316	0	27