



CENTRAL POLLUTION CONTROL BOARD
DELHI – 110 032

BRIEF NOTE ON
CENTRAL SECTOR SCHEME: ‘CONTROL OF POLLUTION’

The ‘Control of Pollution’ (CoP) is an ongoing scheme under Central Sector Scheme (CSS) which was initiated in the year 2018-19 with the approval of Expenditure Finance Committee (EFC). The full budget for the scheme was made available from the year 2019-20 for the following sub-components:

1. Environmental Monitoring Network Programme:
 - a. National Air Quality Monitoring Programme (NAMP)
 - b. Continuous Ambient Air Quality Monitoring Stations (CAAQMS)
 - c. National Ambient Noise Monitoring Network (NANMN)
 - d. National Water Quality Monitoring Programme (NWMP)
2. National Clean Air Programme (NCAP).
3. Assistance for Abatement of Pollution In lieu of Water Cess Fund.
4. Research and Outreach Programme.

The sub-components details are:

1. Environmental Monitoring Network Programme:

State Pollution Control Boards (SPCBs) and Pollution Control Committees (PCCs) are being funded under CSS – CoP for Environmental Monitoring Network Programme i.e. NAMP, NWMP, NANMN and CAAQMS for Pollution Assessment, Survey & Monitoring, Operation & Maintenance of Water, Air and Noise Monitoring stations, and establishment of New Monitoring Stations for Water, Air and Noise monitoring across the country.

The details of monitoring station established over the years from 2017-18 to 2024-25 under (i) National Water Quality Monitoring Programme (NWMP), (ii) National Ambient Air Quality Monitoring Programme (NAMP), (iii) National Ambient Noise Monitoring Network (NANMN) and (iv) Continuous Ambient Air Quality Monitoring stations (CAAQMS) are tabulated below:

Environmental Monitoring Stations over the year

Programme	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25 (30.06.2024)
NWMP	3500	4022	4111	4294	4484	4703	4736	4736
NAMP	703	731	793	818	882	910	962	965
NANMN	70	70	70	70	70	82	82	82
CAAQMS	114	164	228	279	313	456	538	545

a. National Water Quality Monitoring Programme (NWMP):

Government of India enacted the Water (Prevention and Control of Pollution) Act 1974 to maintain wholesomeness of aquatic resources. The act prescribes various functions for the Central Pollution Control Board (CPCB) at the apex level and SPCBs/PCCs at the state level. One of the function of CPCB is to plan and cause to be executed a nation-wide programme for the prevention, control and abatement of water pollution. This nation-wide programme initiated under Global Environment Monitoring Systems (GEMS) during 1977 - 78 is now called as National Water Quality Monitoring Programme (NWMP). The objective of the programme is:

- Rational planning of pollution control strategies and their prioritisation
- To assess nature and extent of pollution control needed in different water bodies or their part
- To evaluate effectiveness of pollution control measures already in existence
- To evaluate water quality trend over a period of time
- To assess assimilative capacity of a water body thereby reducing cost on pollution control
- To understand the environmental fate of different pollutants
- To assess the fitness of water for different uses

As on 31.06.2024, Nation-wide NWMP network has been established in the States / Union Territories covering Rivers / Water Bodies at 4736 locations and operated by CPCB through its Regional Directorate and SPCBs / PCCs. All these stations are functional for improved water quality monitoring network.

National Ambient Air Quality Monitoring Programme (NAMP) and Continuous Ambient Air Quality Stations (CAAQMS):

Ambient air quality is monitored across the country through manual monitoring under National Ambient Air Quality Monitoring Programme (NAMP) and real-time monitoring under Continuous Ambient Air Quality Monitoring System (CAAQMS).

b. National Ambient Air Quality Monitoring Programme (NAMP):

Under Sub-section 2 (h) of Section 16 of the Air (Prevention and Control of Pollution) Act, 1981, National Ambient Air Quality Standard (NAAQS) has been notified on

November 18, 2009 as a policy guideline that regulates the effect of human activity on the environment. The Objectives of the programme is:

- To determine the status and trends of ambient air quality;
- To ascertain whether the prescribed ambient air quality standards are violated;
- To identify non-attainment cities with respect to national standards and;
- To obtain the knowledge and understanding necessary for developing preventive and corrective measures.

CPCB along with SPCBs / PCCs are monitoring ambient air quality at 962 manual stations covering 419 cities / towns in 28 States and 7 Union Territories across the country under NAMP. The air pollutants such as Particulate Matter (PM₁₀ & PM_{2.5}), Sulphur Dioxide (SO₂) and Nitrogen Dioxide (NO₂), Carbon Monoxide (CO), Ammonia (NH₃), Ozone (O₃), Benzo(a)pyrene {B(a)P}, Lead (Pb) and Nickel (Ni) are being monitored at selected locations.

c. *Continuous Ambient Air Quality Monitoring Stations (CAAQMS):*

Continuous Ambient Air Quality Monitoring System (CAAQMS) is a specialized system housed in temperature controlled container and is equipped with all necessary analyzers required for ambient air quality monitoring, calibration equipment, data acquisition (hardware and software) system with complete power backup facility. This system generates real time data and can be remotely managed.

The network of CAAQMS is expanding in the country and 538 CAAQM stations are existing across the country. CPCB is operating 15 Stations established in 4 cities namely Delhi, Lucknow, Bangalore and Chennai. The air pollutants such as Particulate Matter (PM₁₀ & PM_{2.5}), Sulphur Dioxide (SO₂), Nitrogen Dioxide (NO₂), Ammonia (NH₃), Carbon Monoxide (CO), Ozone (O₃) and Benzene (C₆H₆) are being monitored at all locations. The stations are also equipped with sensors to measure meteorological parameters such as Wind Speed, Wind Direction, Ambient Temperature, Relative Humidity, Solar Radiation and Rainfall.

The data of these CAAQMS are being used for generating the daily National Air Quality Index (NAQI) of the cities, the same is provided through Portal Sameer. Sameer Provides the hourly update of the National Air Quality Index (AQI) published by CPCB. Air Quality Index is a tool for effective communication of air quality status to people in terms, which are easy to understand. It transforms complex air quality data of various pollutants into a single number, nomenclature and color. This App is also for public to register Complaints related to air pollution.

d. *National Ambient Noise Monitoring Network (NANMN):*

The Ambient Noise Quality for day & night for industrial, commercial, sensitive zones has been notified in Schedule III under Rule 3 of The Environment (Protection) Rules, 1986. MoEF&CC has notified the regulation for control of noise producing and generating source namely The Noise Pollution (Regulation and Control) Rules, 2000. As per section 4 (3) of the Noise Pollution (Regulation and Control) Rules, 2000, responsibility for monitoring and devising methodology for mitigation of noise pollution are vested with SPCBs / PCCs / CPCB.

Noise Monitoring System (NMS) is used for measuring real time noise level. NMSs are optimized for outdoor use with small, custom designed enclosure, and also designed for use in all climatic environments. Sound level is measured in Leq dB (A) units. CPCB in association with SPCBs has established 82 nos. of Real Time National Ambient Noise Monitoring Network in 10 metropolitan cities. Ten noise monitoring stations in each 07 Cities namely Bengaluru, Chennai, Delhi, Hyderabad, Kolkata, Lucknow & Mumbai, 04 stations each in Bhopal, Vijayawada & Visakhapatnam were established.

Data from all remote stations communicated through GPRS/3G/4G media, processes the Noise data and generates different reports. The central station software allows analysis of the noise data for remedial measures to control noise pollution and for research and development. Data generated from the Remote units can be displayed through Internet to the authorized addresses.

2. Assistance for Abatement of Pollution In lieu of Water Cess Fund

CSS sub-component of “**Assistance for Abatement of Pollution In lieu of Water Cess**” was introduced in the year 2018-19 to compensate the SPCBs/ PCCs and CPCB for the loss of resources/ revenue due to the subsuming of the Water Cess in to the Goods and Services Tax (GST) w.e.f. 01.07.2017. After subsuming of the Water Cess in to the GST, the financial resources of all SPCBs / PCCs were limited to (1) own resources like consent fee collections, interest on investments, sample testing fees, consultancy receipts, receipts from sale of forms, fines and forfeitures and (2) external assistance in the form of grants-in-aid from Central and State Governments, project-based grants from CPCB and other grants. Earlier before subsuming of Water Cess with GST, the Water (Prevention and Control of Pollution) Cess Act, 1977 provided for levy and collection of cess on water consumed by persons carrying on certain industries and by local authorities with a view to augment the resources of the CPCB and SPCBs constituted under the Water Act, 1974.

The following specific areas are permitted under this scheme for financial assistance / allocated funds may be utilized for following activities:

- Pollution Abatement activity including Pollution Assessment.
- Technical Studies for R&D, survey & documentation for creation of environmental database and consultation in the area of pollution abatement.
- Inventorisation of Wastes.
- Laboratory Up-gradation / Procurement of Instruments
- Training & Mass awareness, Seminars / Workshops / Conferences
- E-governance and IT applications, OCEMS, Development of IT Infrastructure

The Terms and Conditions are:

- ✓ Expenditure on salary and establishment should not be more than 50% of financial support.
- ✓ Minimum of 5% of total fund shall be utilized for the purpose of e-governance and IT applications.
- ✓ To ensure that funds are utilized as per terms and conditions of MoEF&CC sanctioned letter.

3. National Clean Air Programme (NCAP)

The National Clean Air Programme (NCAP) was launched by the MoEF&CC in January 2019 as a long-term, time-bound, national level strategy making determined efforts to deal with the air pollution problem across the country in a comprehensive manner. The process of implementation is ongoing. Impact on air quality improvement takes a long time as the whole system is dynamic. So it may be difficult to assess the effectiveness of the measures taken at such a short time. NCAP is a national level strategy to reduce air pollution levels across the country. Taking into account the available international experiences and national studies, the tentative national level target under NCAP is 20%–30% reduction of PM_{2.5} and PM₁₀ concentration by 2024.

Non-attainment cities have been identified based on ambient air quality levels exceeding National Ambient Air Quality Standards (NAAQS) for 05 consecutive years and list of non-attainment cities is updated annually. Further, list of Urban Agglomerations with million plus population have been recommended by the 15th Finance Commission for focused air quality improvement grants. Accordingly, City Specific Clean Air Action Plans have been prepared and rolled out for implementation in 131 non-attainments and million plus cities to control air pollution.

- The NCAP focuses on Multi-sectoral sources of pollution including power plants, industries, vehicles, open burning of waste, construction & demolition activities, etc.; Inter-Ministerial co-ordination for convergence of actions and interventions; and partnership with Institutes of National repute and International Agencies as Knowledge Partners.
- Activities in these cities include strengthening of ambient air quality network, source apportionment studies, dust mitigation equipment, composting units, infrastructure for non-motorized transport, shifting to clean energy in unorganized sectors, etc.
- Clean air action plans of 131 NACs are being implemented under overall supervision and coordination of Principal Secretary, environment of the concerned State / UT and further supervised by the concerned Chief Secretaries.
- Source Apportionment Studies have been completed by 49 cities under NCAP.
- Out of 131 Cities, 16 cities @ (12 %) are meeting National Ambient Air Quality Standards of annual average PM₁₀ in FY 2023-24.
- Based on the expenditure data entered by the ULBs for FY 2023-24 in the Finance Module of the PRANA, it may be inferred that 92% cities (121 out of 131) have implemented air quality improvement measures as per their city action plan and allocation of funds under NCAP & XV-FC in the first three quarters of FY 2023-24
- Out of 131 cities, 38 cities (29%) have met the assigned target in FY 2023-24 based on performance assessment.

To monitor implementation of NCAP A portal named “Portal for Regulation of Air Pollution in Non-Attainment Cities” or “PRANA” has been launched for paperless monitoring of NCAP and for disseminating information about the programme to public, link is www.prana.cpcb.gov.in

4. Research and Outreach Programme:

MoEF&CC has identified the important thematic areas for funding of projects under R&OP Scheme for conservation and development. The R&OP schemes aims to promote Research & Development in various facets of ecology and environment for conservation and development of environment and natural resources of the country.

CPCB has identified projects under R&OP scheme for Conservation and Development. Accordingly, 34 projects during FY 2021-22 and 16 projects during 2022-23 amounting to Rs. 195 lakhs and Rs.490 Lakhs were sanctioned by MoEF&CC.

The details of the projects sanctioned during 2021-22 and 2022-23 are as follow:

Projects sanctioned during F.Y. 2021-22	
S. No.	Name of Project
1	Revision of Environmental Standards for Aluminium Smelters
2	Development of Environmental Standards for Calcined Pet Coke units
3	Development of Environmental Standards for Boilers
4	Development of Guidelines for Pyro - Metallurgical Slag
5	Development of Guidelines for Fly ash Management
6	Revision of Bio- composting guidelines w.r.t. Utilization of MEE concentrate in composting
7	Revision of Environmental Standards & COINDS for Dairy Industries
8	Study on Waterless Chrome Tanning Technology (WCTT) in tannery units
9	Development of Environmental Guidelines for Crematorium
10	Development of Environmental Standards and Guidelines for Pickling Industries
11	Development of Guideline for Environmental Management in Ready Mix Concrete Plants
12	Guidelines for Charcoal Kilns
13	Revision of Guidelines for Poultry Farms
14	Development of Mobile application for tracking of biomedical waste
16	Implementation of Centralized Barcode System in the Country for tracking of biomedical waste
15	Comprehensive document on environmental management in various activities of sea Ports
17	Study and Guidelines on Faecal Sludge Management
18	Revision of Guidelines and protocols for Ambient Air Quality Monitoring
19	Data validation software and protocol for Ambient Air Quality Monitoring
20	Development of facilities to add new parameters with respect to trace metals like Hexavalent Chromium, Silver etc. for industrial effluent, emissions and other sector
21	New Real-time Industrial Data Acquisition and Management System (New RTDMS) for OCEMS

Projects sanctioned during F.Y. 2021-22	
S. No.	Name of Project
22	Bioaccumulation of Heavy Metals in Local Edible Plants in and around Municipal Landfill site
23	Seasonal variation of trace element composition of PM ₁₀ and PM _{2.5} in Kolkata city
24	Seasonal variation in Physio-Chemical & Microbiological Parameter of Lakes Water in and around Kolkata
25	Comparative Assessment of Coal Washing Technology adopted in Eastern Region
26	Status Electric Arc Furnace/ Induction Furnace in secondary steel sector of Eastern region
27	Status of Pulp & Paper industries in Eastern region
28	Environmental Status of Stone Crushers in Sahibganj, Jharkhand
29	Environmental Status of Bauxite Mining in Eastern Region
30	Environmental Status of Coal Bed Methane (CBM) projects in Eastern Region
31	Generation of Hazardous Waste and its 100% collection, treatment and disposal on TSDF sites (State of Odisha & West Bengal)
32	Study of SO ₂ emission level in Cement industry using limestone with high Pyritic Sulphur percent/content and prepare report and recommendation for consideration of relevant emission level
33	Assessment of Chemical Profile of various industrial sectors in the North East
34	Review of Environmental standards of Caustic Soda industry (membrane cell) and preparation of COINDs on Caustic Soda

Projects sanctioned during F.Y. 2022-23	
S. No	Name of project
1	Assessment of Environment Issues and study of BAT in the respective industrial Sector in respect of Process and Pollution Control for revision / development of new Environment Standards for identified sectors – 11 Sectors
a	Basic Organic Chemicals : Revision of Effluent standards and development of Emission Standards
b	Coal Mines: Revision of Effluent & Emission Standards
c	Coal Washeries: Revision of Effluent Standards
d	Copper smelter: Revision of Emission Standards & Load/ Mass based standards
e	Zinc smelter: Revision of Emission Standards & Load/Mass based standards
f	Textile (BAT): Effluent Standards
g	Starch Maize Processing : Effluent Standards
h	Soft drink, Non-Alcoholic Beverages, Bakery and Confectionery : Revision of Effluent Standards.
i	Edible Oil: Revision of Effluent Standards.
j	Stone Crusher: Revision of SPM Standards.
k	Cupola Furnace: Revision of SO ₂ & PM standards
2	Study on the Macroinvertebrate Community, a bio-indicator of Water Quality, in the Eastern Stretch of River Ganga

Projects sanctioned during F.Y. 2022-23	
S. No	Name of project
3	Insight of Polycyclic Aromatic Hydrocarbons(PAHs) from the Tropical Riverine system : Bhagirathi – Hooghly (Lower stretch of the River Ganga)
4	Assessment and Preparation of Ambient Noise Maps of Important Cities/ Towns/ Industrial Hubs
5	Field-Scale Demonstration Project on Bio-Remediate Polluted natural drain using industrial by-products to make the bio-blocks with combined Engineering Approach of Aeration, Microorganisms
6	Mapping of Surface Water bodies, Pollution Sources and Assessment of Water Quality in Rivers and lakes using GIS and Remote Sensing
7	Assessment of Micro Plastics in Ambient Air at Selected Locations
8	Assessment of Contaminated Sites, Performance Evaluation & Monitoring of remediation work execution and updating inventory of confirmed / probable contaminated sites
9	Performance Evaluation and Monitoring of Sea ports to review status of Environment Management and Prevailing Practices of Environmental Regulations
10	Assessment of Environment Issues and study of BAT in management of Battery in respect of Process and Pollution Control for development of Guidelines for Implementation of Battery Waste Management Rules, 2022
11	Preparation of Sector Specific Documents for identification of Hazardous Waste streams in Aluminium, Pulp & Paper and Pesticide Sectors, its characterization and waste management practices for individual sectors, including options for Best Available Practices / Cleaner Technologies for waste minimization.
12	Revision of Guidelines on Hazardous Waste Management
13	Performance Evaluation of various treatment technologies adopted by Sewage Treatment Plants and to assess the potential of recycling for different use and best practices
14	Assessment of Air, Water and Soil Pollution in different Mining Areas in North Eastern Region
15	Monitoring and Assessment of impact on Water Quality due to Unscientific Mining of Sand in the Catchment Area of Umtyngar river
16	Measurement of POPs/ Elements/ VOCs in Critically Polluted area in Eastern Region