MAHARASHTRA POLLUTION CONTROL BOARD

2023-24

ANNUAL REPORT

OUR VISION

To be a leading authority in environmental protection, ensuring a cleaner and healthier Maharashtra.

To excel in the implementation of environmental laws and pollution control regulations, securing sustainable development.

Foster partnerships with industries, communities, and government agencies to collectively work towards environmental protection.

Translate the vision into measurable impact, mobilizing efforts to improve the quality of life for the people of Maharashtra.

Promote awareness and responsible environmental behavior among the citizens of Maharashtra.

Strive for a balanced approach, promoting industrial growth while minimizing the environmental footprint.

Embrace innovation and technology to address emerging environmental challenges effectively.

Thane Region

No. of Air Quality Monitoring stations: 12
No. of Water Quality Monitoring stations: 31
No. of CETP: 2
No. of STP: 18

Nashik Region

No. of Air Quality Monitoring stations: 18
No. of Water Quality Monitoring stations: 43
No. of STP: 15

Amravati Region

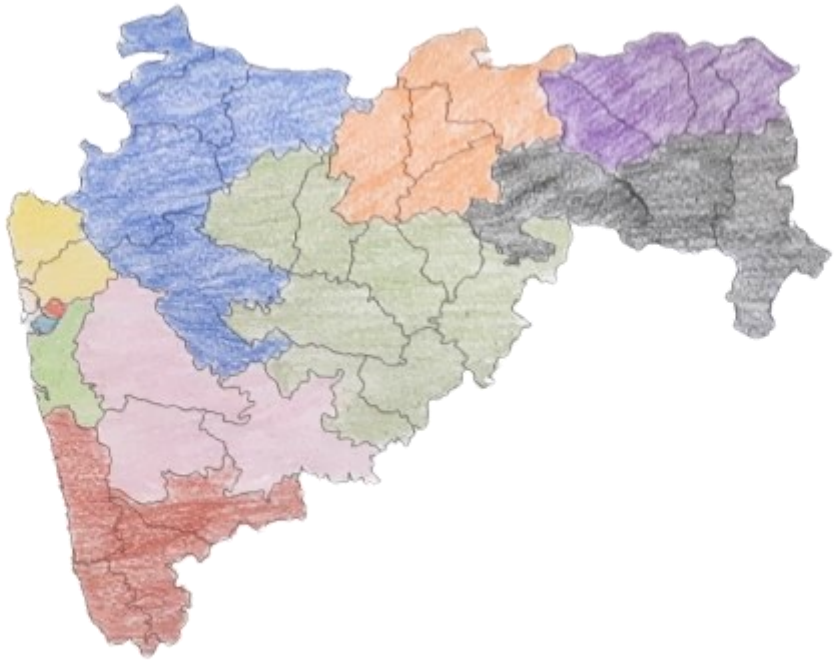
No. of Air Quality Monitoring stations: 9
No. of Water Quality Monitoring stations: 11
No. of CETP: 1
No. of STP: 7

Nagpur Region

No. of Air Quality Monitoring stations: 14
No. of Water Quality Monitoring stations: 29
No. of CETP: 1
No. of STP: 13

Mumbai Region

No. of Air Quality Monitoring stations: 15
No. of Water Quality Monitoring stations: 11
No. of STP: 8



Chandrapur Region

No. of Air Quality Monitoring stations: 13
No. of Water Quality Monitoring stations: 11
No. of STP: 2

Kalyan Region

No. of Air Quality Monitoring stations: 15
No. of Water Quality Monitoring stations: 14
No. of CETP: 5
No. of STP: 17

Chhatrapati Sambhaji Nagar Region

No. of Air Quality Monitoring stations: 21
No. of Water Quality Monitoring stations: 23
No. of CETP: 1
No. of STP: 11

Raigad Region

No. of Air Quality Monitoring stations: 5
No. of Water Quality Monitoring stations: 22
No. of CETP: 3
No. of STP: 8

Navi Mumbai Region

No. of Air Quality Monitoring stations: 11
No. of Water Quality Monitoring stations: 8
No. of CETP: 2
No. of STP: 7

Kolhapur Region

No. of Air Quality Monitoring stations: 13
No. of Water Quality Monitoring stations: 39
No. of CETP: 5
No. of STP: 7

Pune Region

No. of Air Quality Monitoring stations: 21
No. of Water Quality Monitoring stations: 52
No. of CETP: 5
No. of STP: 43

Foreword

It is with great pride and responsibility; we present the Annual Report for the Maharashtra Pollution Control Board (MPCB) for the F.Y. 2023-24. This report provides a complete overview of our efforts, initiatives, and successes in protecting the environment and promoting sustainable development in Maharashtra. It highlights our partnerships with government agencies, non-governmental organizations, industry partners, and the community, all of whom have been crucial in our efforts for a cleaner and healthier environment.

Details on the State's environmental resources, current environmental trends, their implications, and related efforts are also presented in this report. To assess the environmental status, we use the latest data gathered from real-time monitoring stations and sampling. Each evaluation and assessment conducted during the reporting period includes a summary of findings and conclusions. Key initiatives such as tree plantation campaigns, improved waste management strategies and monitoring of industrial emissions have greatly improved the State's environmental quality. Our focus on raising public awareness and involving the community has been essential in encouraging environmental responsibility among Maharashtra's residents.

As we look back on our progress, we recognize that challenges remain. We remain committed to protecting the environment and pursuing sustainable development with renewed energy and dedication. We thank all our stakeholders for their ongoing support and cooperation. Together, we can build a sustainable and resilient Maharashtra for future generations.

Shri. Siddhesh Ramdas Kadam
Chairman, MPCB

Preface

As an organization committed to promoting sustainable development, our focus this year has been on integrating advanced technologies, fostering community participation, and enforcing stringent regulations to address environmental challenges.

This report encapsulates our sustained efforts, initiatives, and accomplishments in our ongoing mission to protect and enhance the environment of Maharashtra. Our progress in various domains, including hazardous waste management, plastic waste management, and e-waste disposal is provided in the report. It also provides detailed insights into the steps taken to monitor and control air and water pollution, ensuring compliance with environmental norms and standards.

We acknowledge the invaluable support and cooperation of our stakeholders, including governmental bodies, non-governmental organizations, industry partners, and the citizens of Maharashtra. Their collective efforts have been instrumental in driving our environmental agenda forward. We remain committed to our goal of achieving environmental sustainability and resilience. We look forward to continuing our journey towards a cleaner and safer Maharashtra.

As we move forward, the MPCB remains dedicated to advancing environmental protection and resource management, ensuring that the State's growth does not come at the expense of its natural heritage.

Dr. Avinash Dhakne (IAS)
Member Secretary, MPCB

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1. INTRODUCTION

Maharashtra Pollution Control Board (MPCB) is a major regulator for implementation of environmental laws and pollution control in Maharashtra. It plays an important role in securing sustainable development by enforcing various laws, rules, regulations, notifications etc. pertaining to prevention and abatement of pollution.

The MPCB was formed under the provision of Maharashtra Water (Prevention and Control of Pollution) Act, 1969 and was established on 7th September, 1970. It functions under the administrative control of Department of Environment and Climate Change, Government of Maharashtra. The MPCB adopted the Water (P & CP) Act, 1974 and Air (P & CP) Act, 1981 to preclude air and water pollution. The Board also implements some provisions under the Environmental (Protection) Act, 1986 which includes the Biomedical Waste (M & H) Rules, 2000, Municipal Solid Waste Rules, 2000, etc.

The main function of the MPCB is to collect and disseminate information relating to pollution and the prevention, control or abatement. Also, it inspects the sewage or trade effluent treatment, disposal facilities, air pollution control systems and provides suitable and cost-effective method for treating industrial effluents. The MPCB supports and encourage the development in the field of pollution control, waste recycle and reuse, eco-friendly practices, etc. It also provides suitable advice to the State Government regarding location of industries which was likely to cause water pollution. The Board monitors air pollution through air monitoring stations set up under the National Air Quality Monitoring Program (NAMP) and the State Ambient Air Quality Monitoring Program (SAMP). Similarly, water quality monitoring is conducted under the National Water Quality Monitoring Program (NWMP) and State Water Quality Monitoring Program (SWMP) wherein surface and groundwater quality is analysed.

Significant measures are taken to address both air and water pollution by the MPCB. The air quality monitoring network has been expanded across major cities and industrial areas to provide more comprehensive and real-time data on pollution levels. The MPCB also implemented the National Clean Air Programme (NCAP) by developing city-specific action plans for cities with high pollution, which included traffic management, industrial emission control and cleaner fuels. Stricter regulations have been enforced on industrial emissions; mandated pollution control equipment and regular compliance checks are conducted. In terms of enforcement, the MPCB has imposed fines and penalties for violations and increased inspections to ensure adherence to environmental norms.

To improve water quality, MPCB has upgraded sewage treatment infrastructure by constructing new Sewage Treatment Plants (STPs), enhancing existing ones and promoted decentralized wastewater treatment solutions. Initiatives such as Namami Chandrabhaga, Krishna River Rejuvenation Project have been launched to clean and rejuvenate major rivers, focusing on pollutant removal, habitat restoration and better waste management. Additionally, MPCB enforced plastic waste management rules by banning single-use plastics, promoting alternatives and strengthening recycling regulations. It has also mandated extended producer responsibility (EPR), including manufacturers for the end-of-life management of their products such as plastics, batteries and electronics. Frequent noise monitoring is also conducted during festivals and the data collected is made available for the public on the Board's website.

In order to ensure smooth functioning of the above the mentioned initiatives, the MPCB has 12 Regional Offices and 43 Sub-Regional Offices across Maharashtra and this Annual Report provides a detailed description of the same.

2. CONSTITUTION OF THE BOARD

The Maharashtra Pollution Control Board comprises of Chairman, Members from the categories as shown below and a full time Member Secretary, as Chief Executive Officer as per the Rules under Water (P & CP) Act, 1974 notified by the State Government in 1983.

The composition of the MPCB is as under:

1. **Chairman** (Part time or fulltime)
2. **Representatives of the State Government** (not exceeding five)
3. **Representatives of local bodies** (not exceeding five)
4. **Representatives of companies or corporations of the State Government** (two)
5. **Members representing interests of agriculture, fishery or industry or trade etc.** (Not exceeding three)
6. **Member Secretary** (full time)

Government of Maharashtra has powers under Section 4 of the Water (Prevention and Control of Pollution) Act, 1974 to constitute State Pollution Control Board (MPCB).

Table 2.1 Constitution of the MPCB in 2023-24.

Shri. Abasaheb L. Jarhad (IAS) Chairman, MPCB, Mumbai.	**Chairman** **(Uptil 28th June 2023)**
Shri. Pravin Darade (IAS) Chairman In-charge, MPCB, Mumbai.	**Chairman** **(From 28th June 2023 to 10th March, 2024)**
Shri. Siddhesh Ramdas Kadam Chairman, MPCB, Mumbai.	**Chairman** **(11th March, 2024 onwards)**
Principal Secretary Public Health Department, Mantralaya, Mumbai	**Member**
Principal Secretary Urban Development Department-2, Mantralaya, Mumbai	**Member**
Principal Secretary Water Supply and Sanitation, Mantralaya, Mumbai	**Member**
Principal Secretary Home Department (Transport), Mantralaya, Mumbai	**Member**
Principal Secretary Environment and Climate Change Department, Mantralaya, Mumbai	**Member**
Chief Executive Officer MIDC, Andheri, Mumbai.	**Member**
Member Secretary Maharashtra Jeevan Pradhikaran, Mumbai.	**Member**
Shri. Pravin Darade (IAS) Member Secretary In-charge, MPCB, Mumbai	**Member Secretary** **(Uptil 28th June 2023)**
Dr. Avinash Dhakne (IAS) Member Secretary, MPCB, Mumbai	**Member Secretary** **(28th June 2023 onwards)**
Shri. Nitin Gore (Agriculture) Chakan, Tal. Khed, Dist. Pune - 410501.	**Member**
Shri. Aditya Shirodkar (Business) Shivaji Park, Dadar (W.), Mumbai - 400028.	**Member**

3. MEETINGS OF THE BOARD

During year 2023-24, two meetings of the Board were conducted and various developmental decisions taken are as summarized below;

3.1 The 181st Board Meeting

The 181st meeting of the Maharashtra Pollution Control Board was held on 16th October, 2023. The major decisions taken in the meeting are as below;

A. Revision of consent fees for renewal of infrastructure projects which are handed over to society.

The Maharashtra Pollution Control Board (MPCB) grants Consent to Operate and Renewal of Consent under the Water and Air Pollution Acts and the Hazardous Waste Rules. The fees are based on capital investment in land, plant, and machinery. MPCB received requests from industry groups and developers to adjust fee categorization for integrated township projects, particularly those under Maharashtra's Integrated Township Policy. CREDAI-MCHI also requested one-time permanent consent for real estate projects once handed over to societies, to avoid yearly renewals.

After considering these requests, MPCB proposed that consent fees for infrastructure projects handed over to societies should only be based on the capital investment in the sewage treatment plant (STP), solid waste management, and DG sets, including their maintenance costs. The fees will be charged for five years at a time. For projects with environmental clearance, costs will be verified based on the clearance details. For projects without clearance, verification will be done by a chartered engineer and accountant. The Member Secretary is authorized to proceed with the action.

B. Pilot project for plastic waste management in rural area of seven districts of Maharashtra state.

The Maharashtra Pollution Control Board (MPCB) is currently monitoring plastic waste in 418 urban areas, but rural regions lag behind in waste collection and recycling due to large areas and lower plastic waste quantities. This lack of incentive has led to plastic waste being dumped outside villages.

To address this, MPCB proposes a pilot project for plastic waste collection, transportation, and recycling in rural areas via a Public-Private Partnership (PPP) model. The project will focus on seven districts across six administrative divisions: Sindhudurg and Ratnagiri

(Konkan), Satara (Pune), Nashik (Nashik), Nagpur (Nagpur), Amravati (Amravati), and Nanded (Chhatrapati Sambhaji Nagar). Local communities will collect and store plastic waste for recyclers, who will pay them based on weight. MPCB may provide Viability Gap Funding (VGF) for the first year.

The scope includes conducting waste audits, developing waste collection and transportation plans, educating the community, and ensuring proper waste segregation. Funding will come from the sale of Extended Producer Responsibility (EPR) certificates, with any needed VGF provided by MPCB.

The project will be monitored using an online system, and its performance will be assessed after one year. If successful, it may continue for three years. During discussions, the Water Supply and Sanitation Department (WSSD) highlighted their similar initiative at the taluka level, noting challenges with waste availability. The MPCB will study WSSD's scheme before proceeding with the pilot project.

C. Proposal for fees for Authorizations issued as per the Hazardous and Other Waste (M & TM) Rules, 2016.

Hazardous wastes, due to their toxic, flammable, explosive, or corrosive nature, pose risks to health and the environment. The Government of India has notified the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 (HOWM Rules), which are implemented by the Maharashtra Pollution Control Board (MPCB) for the safe management of hazardous waste. These rules cover aspects like storage, transportation, recycling, and disposal of hazardous and other wastes.

MPCB grants the following authorizations under the HOWM Rules:

1. **Authorization under Rule 9**: For utilizing hazardous waste as a resource or co-processing.
2. **One-time Authorization**: To import other waste listed in Part D of Schedule-III.
3. **Transportation Authorization**: For the movement of hazardous waste within Maharashtra.

MPCB processes about 30-40 applications each month for these authorizations. The first category of applications (under Rule 9) undergoes preliminary scrutiny and field inspections before being reviewed by the Hazardous Waste Authorization Committee, which includes experts from various fields. The committee evaluates applications and recommends whether to grant or refuse authorizations.

MPCB holds monthly meetings to discuss and evaluate 40-50 applications, with committee members being compensated with honorariums and travel expenses. However, despite the expenses involved in processing these applications, MPCB does not charge any authorization processing fees for the three types of authorizations.

The MPCB discussed the agenda in detail and resolved that M.P.C. Board to impose application fees for three types of authorization applications under Hazardous and Other Waste (M & TM) Rules, 2016 as proposed as follow:

Sr. No.	Type of Authorization under Hazardous & Other Wastes (Management & Transboundary) Rules, 2016	Validity (as of current practice)	Proposed fee per application (Rs.)
1.	Authorization under Rule 9	Five years	5,000
2.	One Time Authorization to import of Other Waste enlisted in Part-D of Schedule – III	One-time (for specified quantity of import)	2,500
3.	Authorization to transporters for transportation of hazardous waste through vehicles in the state of Maharashtra under Rule 18	Five years	5,000

Member Secretary is authorized to take further course of action.

3.2 The 182nd Board Meeting

The 182nd meeting of the Maharashtra Pollution Control Board was held on 12th February, 2024. The major decisions taken in the meeting are as below;

A. Strengthening of Ambient Air Quality Monitoring Network by installation of Additional CAAQM stations at 50 locations in the State (Phase-2).

The Maharashtra Pollution Control Board (MPCB) currently operates 118 manual air quality monitoring stations, including 75 under NAMP (partially funded by CPCB) and 43 under SAMP (fully funded by MPCB). Additionally, MPCB runs 69 Continuous Ambient Air Quality Monitoring Stations (CAAQMS) across major cities and districts in the state, with data from these stations accessible to the public via display boards.

In compliance with a National Green Tribunal (NGT) order, MPCB has installed 69 CAAQM stations to monitor real-time air quality data for nine parameters as prescribed by the National Ambient Air Quality Standards (NAAQS). To address expanding cities, population growth, and worsening air quality, MPCB plans to further expand the air quality monitoring network. Based on population data from the 2011 census, 41 additional cities were identified for new CAAQM installations, with financial approval of Rs. 61.5 Crores granted for this expansion.

Furthermore, nine additional district headquarters are also proposed to be included in the air quality network as mentioned in list below;

Strengthening on CAAOMS Network: List of proposed CAAQMS to be installed by MPCB in the State of Maharashtra (Total 50 Nos.)

Sr No.	City/location of CAAQMS	No. of CAAQMS
1.	Thane MC	3
2.	Vasai-Virar MC	3
3.	Kalyan-Dombivali MC	3
4.	Pune MC	2
5.	Pimpri Chinchwad MC	2
6.	Mira-Bhayander MC	2
7.	Bhiwandi-Nizampur MC	2
8.	Nanded-Waghala MC	2
9.	Ulhasnagar MC	2
10.	Sangli-Miraj MC	2
11.	Chh. Sambhaji Nagar MC	2
12	Nagpur MC	1
13.	Nashik MC	1
14.	Amravati MC	1
15.	Ambernath MC	1
16.	Achalpur	1
17.	Barshi (Solapur)	1
18.	Bhusawal	1
19.	Beed	1
20.	Gondia	1
21.	Ichalkaranji	1
22.	Nandurbar	1
23.	Dharashiv	1
24.	Satara	1
25.	Udgir	1
26.	Wardha	1
27.	Yavatmal	1
28	Washim (District Place)	1
29.	Hingoli (District Place)	1
30.	Buldhana (District Place)	1
31.	Bhandara (District Place)	1
32.	Gadchiroli (District Place)	1
33.	Palghar (District Place)	1
34.	Raigad (District Place)	1
35.	Ratnagiri (District Place)	1
36.	Sindhudurg (District Place)	1
Total		50

MPCB has discussed the agenda and resolved that it has sanctioned strengthening of ambient air quality network in the state by installing additional nine CAAQMS in addition to previously approved 41 CAAQMS to make total count of 50 CAAQMS at the various cities in the state

as proposed in the Board item following due E-tendering process. Member Secretary is authorized to complete the procurement by following due process.

B. Applicability of amnesty scheme for penal fees to be imposed for violating combined consent regime prescribed under the Air / Water Act

Industries violating environmental laws, particularly through poor operation and maintenance of pollution control systems, are causing significant environmental damage. The "Polluter Pays Principle," established by the Supreme Court and National Green Tribunal, holds polluters accountable for both compensating victims and restoring environmental damage.

In line with this principle, the Maharashtra Pollution Control Board (MPCB) issued a circular on July 12, 2022, imposing penalty fees on industries violating the Combined Consent Regime under the Water and Air Acts. The penalties vary based on industry categories: 5 times the consent fee for RED category industries, 3 times for ORANGE, and 2 times for GREEN.

However, many industries have objected to the high penalties, making it difficult for them to pay, leading to non-compliance. This has resulted in a significant number of industries operating without valid consent or failing to apply for renewal on time. As of the latest data, 75% of industries due for consent renewal have not applied on time. The MPCB has imposed Rs. 205.10 Crores in penalties, of which only Rs. 58.56 Crores has been paid, showing financial difficulty for many industries.

To address this, MPCB is proposing an **amnesty scheme** to encourage industries to regularize their operations and improve monitoring. The goal is to allow industries that missed renewal deadlines or operated without consent to comply with the regulations and adopt cleaner technologies for better environmental management. The MPCB has discussed the agenda in detail and hereby resolved that the following;

Amnesty scheme will be applicable to those industries who will submit online applications for combined consent within a period of three months from the date of issuance of such a circular.

Sr. No.	Violation	Existing penal charges (Cost of Violation	Proposed Amnesty Scheme
1.	Taking effective steps towards establishment of project/unit prior to obtain consent to establish from the MPCB.	Red Category: 5 times of one term consent fee X no. of years of violation. *	Red Category: 2 times of one term consent fee X no. of days of violation. **
2.	Taking effective steps without revalidating consent to establish of the MPCB.	Orange Category: 3 times of one term consent fee X no. of years of violation. *	Orange Category: 1 time of one term consent fee

3.	Industry: Starting commercial production prior to obtain consent to operate of the MPCB.	Green Category: 1 time of one term consent fee X no. of years of violation. *	X no. of days of violation. ** Green Category: No penal charges. **
	Infrastructure Project: Handing over possession prior to obtaining consent to operate of the MPCB and occupancy certificate from local body.		
4.	Operating the industry/ activity without valid consent to operate of the MPCB and applying after lapse of validity period.		

*Calculations of nos. of years shall be calculated on the basis of nos. of days of non-compliances.

** For C to E one term is for 5 years, therefore, calculation of no. of days of violation = no. of days of violation divided by 365*5.

This amnesty scheme is not for those units/industries who had already paid the penalty. This amnesty scheme will be only for a period of 3 months from the notification. All the applications for amnesty received in this period will have to pay the penal fees in one go only. This will be applicable for all the pending cases as well.

Duration of the scheme will not be extended. Applications received after timeline will be summarily rejected without prior notice. The circular dated 12th July, 2022 will come into force automatically after the end of amnesty period. Necessary changes shall be made by IT Dept. on the portal.

C. Imposing 12% interest on non-submission of Bank Guarantee within prescribed time limit imposed by the MPCB.

The Maharashtra Pollution Control Board (MPCB) is responsible for implementing environmental laws in Maharashtra and granting conditional consents to industries, HCEs, local bodies, etc., under various acts, such as The Water Act, The Air Act, and The Hazardous Waste Rules. To ensure compliance with these laws, MPCB requires the submission of bank guarantees as a monitoring tool.

However, some industries, HCEs, and local bodies fail to submit the required bank guarantees. This makes it difficult to impose penalties for non-compliance, such as failure to provide pollution control systems or exceeding pollution limits. To address this issue, MPCB has

decided to impose a 12% interest charge on industries, HCEs, and local bodies that do not submit their bank guarantees within the prescribed time limit.

The MPCB has discussed the agenda in detail and Board resolved that, 12% interest will be imposed from the date of actual submission of BG on industries, HCE's, local bodies, etc for non-submission of bank guarantee within prescribed time limit imposed by the MPCB.

D. Proposal for installation of Rapid Composting Plants in the premises of Urban Local Bodies in Maharashtra.

The Ministry of Environment, Forest, and Climate Change has notified the Solid Waste Management (SWM) Rules, 2016, for the scientific management of solid waste. The Maharashtra Pollution Control Board (MPCB) enforces these rules through local bodies, monitors environmental standards, and issues authorizations for solid waste processing.

MPCB grants authorizations to local bodies for solid waste processing plants and sanitary landfill sites. The state has 418 urban local bodies (ULBs), with Municipal Corporations contributing 82.37% of total waste generation. However, there is a 20.62% gap between waste generated and processed in Municipal Corporations, mainly due to challenges in managing wet waste.

Proposal: A rapid, odour-free composting method using a consortium of bacteria for processing biodegradable waste (e.g., kitchen waste, vegetable refuse, and food waste) is proposed. The method excludes hard biodegradable materials like coconut shells and seeds.
The project will be implemented in five levels based on waste generation:

- **Level 1**: Household (0.1 to 2 kg/day)
- **Level 2**: Small housing societies, restaurants, schools (up to 25 kg/day)
- **Level 3**: Medium-sized housing societies, small markets, restaurants (25 to 100 kg/day)
- **Level 4**: Large housing societies, vegetable markets, hotels (100 to 1000 kg/day)
- **Level 5**: Municipalities (1 to 2 MT/day)

For biodegradable waste over 2 MT, multiple decentralized units are required. The proposed plants will be pilot projects at 28 Municipal Corporations, with financial assistance for capital expenditure from MPCB. Municipal Corporations will be responsible for land provision and operational costs.

Budget for 1 MT/day capacity plant: Rs. 5.6 lakh, with specific equipment and operational costs. Each unit will need one worker, electricity, and water for daily operations.

In the meeting it is resolved that, MPCB will issue directions to 28 Municipal Corporations, 16 'A' Class and 74 'B' Class Municipal Councils to install decentralized rapid composting technology-based plants as pilot projects. It will be the responsibility of the Municipal Corporations/Councils to provide the land for the plant. The MPCB will provide financial assistance towards the capital expenditure of the plant. The operation and maintenance cost shall be borne by the Municipal Corporation/Council. Plant and machinery will be procured by the MPCB for the project and will be installed at the designated places allotted by Corporation/Council. Member Secretary is authorized to procure the unit by following due process and distribute to concerned ULB's.

4. COMMITTEES CONSTITUTED BY THE BOARD

With a view to have smooth functioning of the MPCB, as provided under Section 9 of the Water (Prevention and Control of Pollution) Act 1974 and Section 11 of the Air (Prevention and Control of Pollution Act 1981; the MPCB has constituted various committees for efficient and effective implementation of the Acts and Rules. During the year 2023-24, the following Committees were in existence.

4.1 Consent Appraisal Committee (CAC)

The Consent Appraisal Committee comprises of following members:

Sr. No.	Members	Designation
1.	Chairman, MPCB	Chairman
2.	Addl. Chief Secretary, Home (Transport) Department, Government of Maharashtra	Member
3.	Member Secretary, MPCB	Member
4.	Deputy CEO (Environment) or Environment Advisor,	Member
5.	Representative of NEERI, NEERI, Nagpur	Member
6.	Joint Director (Water Pollution Control), MPCB	Member Conveyor
Invitee Members		
1.	Joint Director (APC), MPCB	Invitee Member
2.	Principal Scientific Officer, MPCB	Invitee Member
3.	Regional Officer (BMW), MPCB	Invitee Member
4.	Regional Officer (HQ), MPCB	Invitee Member

- Terms of Reference

The CAC shall consider applications for consents/authorizations under Water (P & CP) Act, 1974, Air (P & CP) Act, 1981, Hazardous Wastes (M & H) Rules, 1989 and BMW Rules, 1998 as per Board circular for delegation of power and policy issues about technical and legal aspects for implementations of conditions imposed in consents/authorizations as under,

'RED' Category	: Projects with capital investment above Rs. 150 Crore
'ORANGE' Category	: Projects with capital investment above Rs. 1500 Crore
'GREEN' Category	: Projects with capital investment above Rs. 4000 Crore
Infrastructure Project	: Projects with capital investment above Rs. 750 Crore

There were 23 meetings of Consent Appraisal Committee held during the year 2023-24 wherein; 1434 CAC applications were discussed out of which 1242 applications were approved.

4.2 Consent Committee (CC)

The Consent Committee comprises of following members:

Sr. No.	Members	Designation
1.	Member Secretary, MPCB	Chairman
2.	Shri. R. G. Pethe Retired Water Pollution Abatement Engineer, MPCB	Member
3.	Joint Director (APC), MPCB	Member
4.	Representative of ICT, ICT, Mumbai	Member
5.	Joint Director (WPC), MPCB	Member Conveyor
Invitee Members		
1.	Principal Scientific Officer, MPCB	Invitee Members
2.	Regional Officer (BMW), MPCB	Invitee Members
3.	Regional Officer (HQ), MPCB	Invitee Members

- Terms of Reference

The Consent Committee (CC) shall consider applications for consents/authorizations under Water (P & CP) Act 1974, Air (P & CP) Act, 1981, Hazardous Wastes (M & H) Rules, 1989 and BMW Rules, 1998 as per Board circular for delegation of power and policy issues about technical and legal aspects for implementations of conditions imposed in consents/ authorizations as under,

‘RED’ Category : Projects with capital investment above Rs. 50 Crore and up to Rs. 150 Crore

‘ORANGE’ Category : Projects with capital investment above Rs. 500 Crore and up to Rs. 1500 Crore

‘GREEN’ Category : Projects with capital investment above Rs. 1000 Crore and up to Rs. 4000 Crore

Infrastructure Project : Project with capital investment above Rs. 100 Crore and up to Rs. 750 Crore

There were 33 meetings of Consent Committee held during the year 2023-24 and a total of 1851 applications were discussed out of which 356 applications were disposed and 1495 were approved.

4.3 Committees formed for the compliance of Solid Waste Management Rules, 2016

Sr. No.	Name of Committee	Date of Formation	Division/Area of work
1.	Committee for scrutiny of authorizations for all Corporations / Councils as per the Solid Waste Management Rules, 2016	17/04/2015	Scrutiny of applications for MSW authorizations

During the year 2023-24, Authorization Committee for Scrutiny of applications for MSW Authorizations is comprised of following members:

Sr. No.	Members	Designation
1.	Assistant Secretary (Tech.) HQ, MPCB, Mumbai	Chairman
2.	Dr. Sneha Palnitkar, Representative, All India Institute of Local Self Government	Expert Member
3.	Shri. Bhalchandra Patil, Ex. Dy. Municipal Commissioner, MCGM	Expert Member
4.	Regional Officer, HQ, MPCB, Mumbai	Member Convener

In this committee, total 38 applications were discussed for Scrutiny of MSW authorization out of which 18 were rejected due to non-compliance of SWM Rules and 20 applications were granted / renewed during the year 2023-24.

4.4 Committees formed for Hazardous and Other Waste (T & M) Rule, 2016.

1.	Committee for implementing liabilities for environmental damages due to handling and disposal of hazardous waste and penalty	08/08/2017	Head Office level
2.	Committee for implementation of procedure for issuance of grant/renewal of authorization of industrial units possessing environmentally sound management facilities for reprocessing/recycling and actual users/co-processing/utilization of the hazardous waste	04/10/2016	Head Office level

During the year 2023-24, Authorization Committee for Environment Sound Management of Hazardous and Other Waste is comprised of following members:

Sr. No.	Members	Designation
1.	Shri. R.K. Garg, Former Managing Director, Indian Rare Earths Ltd.	Chairman
2.	Scientist – 1 or 2, Environment Department, Govt. of Maharashtra	Member
3.	Regional Director, Pune, CPCB	Member
4.	Shri. Dr. B. R. Naidu, Ex Regional Director, West Zone, CPCB Vadodara.	Member

5.	Shri. Bharat Nimbarte, Ex Joint Director (WPC), MPCB	Member
6.	Shri. Dr. J. B. Sangewar, Asst. Secretary (Technical), MPCB	Member
7.	Shri. Nandkumar Gurav, Asst. Secretary (Technical), MPCB	Member Convener

- Terms of Reference

The Authorization Committee for considering the applications for authorizations under Hazardous and Other Waste (M & TM) Rules, 2016;

There were 8 meetings of Authorization Committee for Hazardous waste held during the year 2023-24. During the meetings, a total of 287 applications of authorization under Hazardous waste rules were discussed, out of which 176 were approved.

4.5 Committee constituted under Plastic Waste Management Rule, 2016 and Amendment thereto;

A committee for deciding Guidelines for issuance for Registration of Producer / Brand owner / Manufacturer under Plastic Waste Management Rule, 2016 and further Amendments was constituted at Head Office level on 21st November 2016.

5. AIR AND WATER MONITORING NETWORK AND PRESENT STATUS

Air pollution is a serious problem that has an impact on both our health and the environment. It results primarily from the emission of pollutants into the atmosphere through a combination of human activities and natural phenomena. The combustion of fossil fuels, both in industrial contexts and transportation, stands out as a significant source, releasing pollutants like Carbon dioxide, Nitrogen oxides and Particulate matter. Agricultural practices, involving the application of pesticides and fertilizers, release substances such as Ammonia into the air. Inadequate waste management practices, encompassing landfill decomposition and open burning, introduce pollutants like Methane and harmful gases. Deforestation and biomass burning contribute to air pollution by releasing Particulate Matter and gases. Industrial processes, including manufacturing and waste incineration, emit hazardous chemicals and pollutants into the air. Natural sources like volcanic activity and dust storms also contribute to air pollution. Household activities, such as cooking with solid fuels, add to both indoor and outdoor air pollution. Gaining insights into the origins and consequences of air pollution is essential for reducing our environmental impact, promoting sustainable behaviour and endorsing initiatives dedicated to enhancing air quality. The MPCB adopted the Air Pollution Act of 1981 to regulate and monitor air quality throughout the State. A network to measure air quality in key cities is established to comply with the Air Act, 1981 and to disseminate information about air quality in the State.

5.1 Monitoring Network and Region-wise Air Quality in Maharashtra

The Central Pollution Control Board established the National Air Quality Monitoring Programme (NAMP) in 1984 to comprehend how air quality varies across different locations and periods. The programme focuses on measuring three air contaminants that are critical for developing air quality management plans. These are Sulphur dioxide (SO_2), Nitrogen oxides (NO_X) and Particulate matter (PM_{10}). The programme adheres to the CPCB monitoring procedure that calls for measuring the air for these pollutants every four hours for gases and every eight hours for particles, twice a week.

The air quality is depicted through the Air Quality Index (AQI). It is a colour-coded guide that depicts air quality based on a number or collection of numbers computed from the levels of various air pollutants monitored over time. The higher the AQI, the worse the air quality and the greater the risk to human health. The locations wherein the data is collected is classified into three categories; Industrial, Residential and Commercial and the observations were made

using NAAQM standards yearly average concentration as shown in the following sections. To better comprehend the data sets and approximate average number of samples that exceeded the standard limit, an Exceedance Factor (E.F. = Annual Average / Standard Value) was derived. To represent the analysis of data, colour coding system is used for identification and comparison as shown below;

Air quality classification based on colour coding.

Gases and Particulate Matter	Color code used in this report
Locations Within the limit	
Locations Exceeding the limit	
Location having Maximum value	
Location having Minimum value	

Total AQMS in Maharashtra – **167**

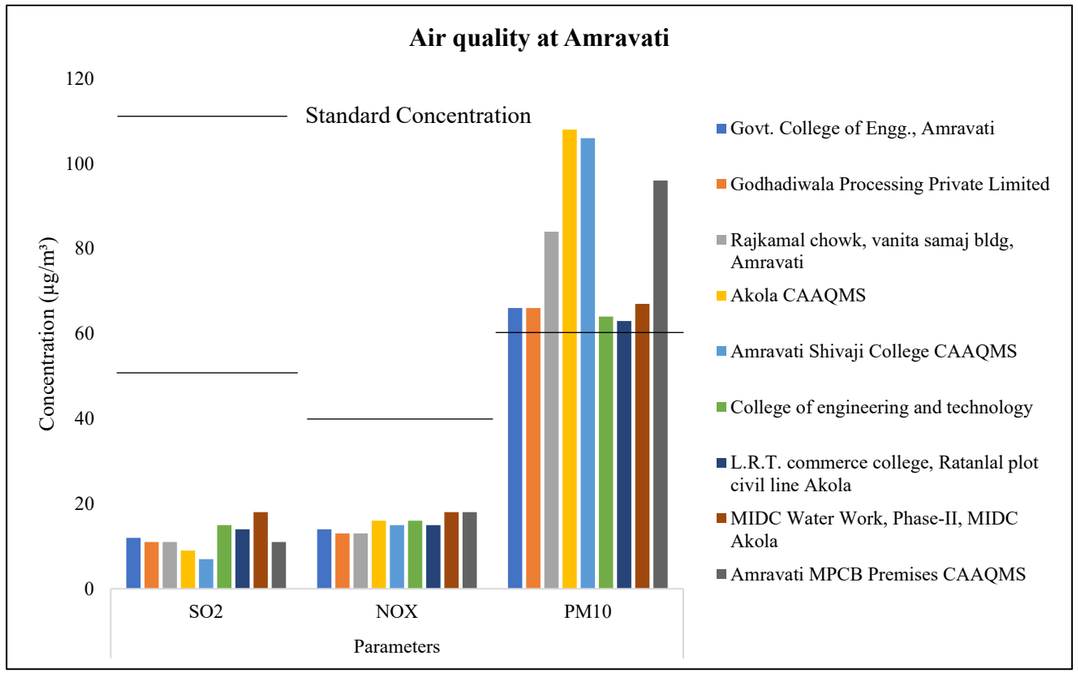
Number of AAQMS in Maharashtra under NAMP - **72**

Number of AAQMS in Maharashtra under SAMP - **26**

Number of CAAQMS in Maharashtra - **69**

Figures 5.0 (a), (b) and **(c)** represents the air monitoring results of annual average air quality of the 12 regions of Maharashtra for F.Y. 2023-24. The details of the air quality analysis of each region is presented in the following sections.

Note*: The data displayed in this section has been cleaned by removing outliers. So, the values may vary from the website.



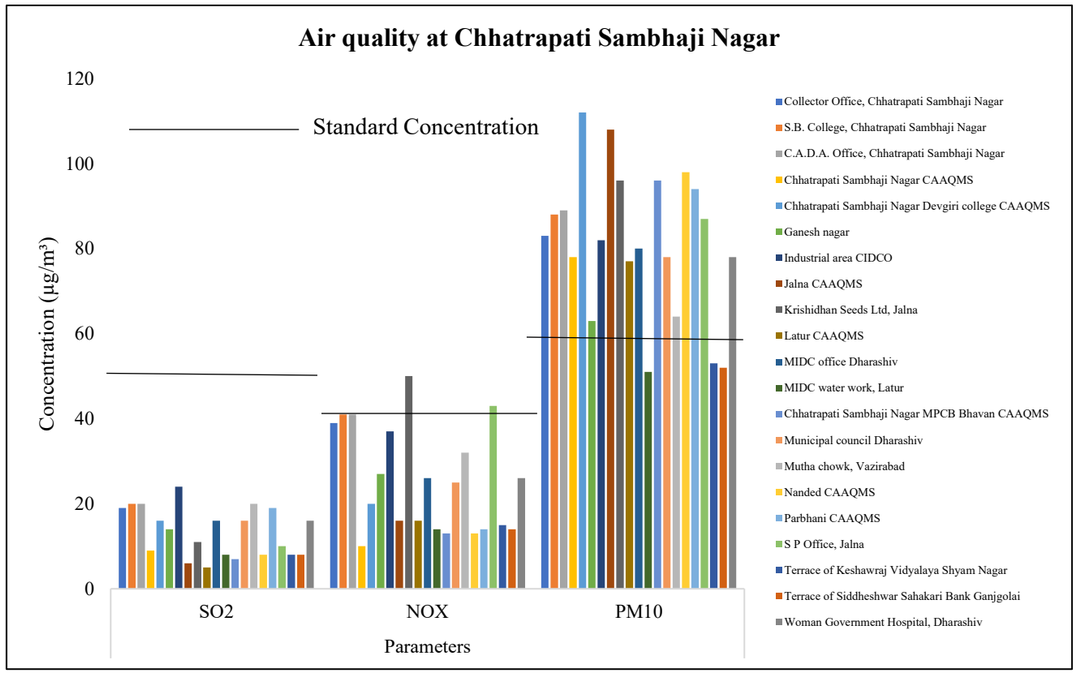
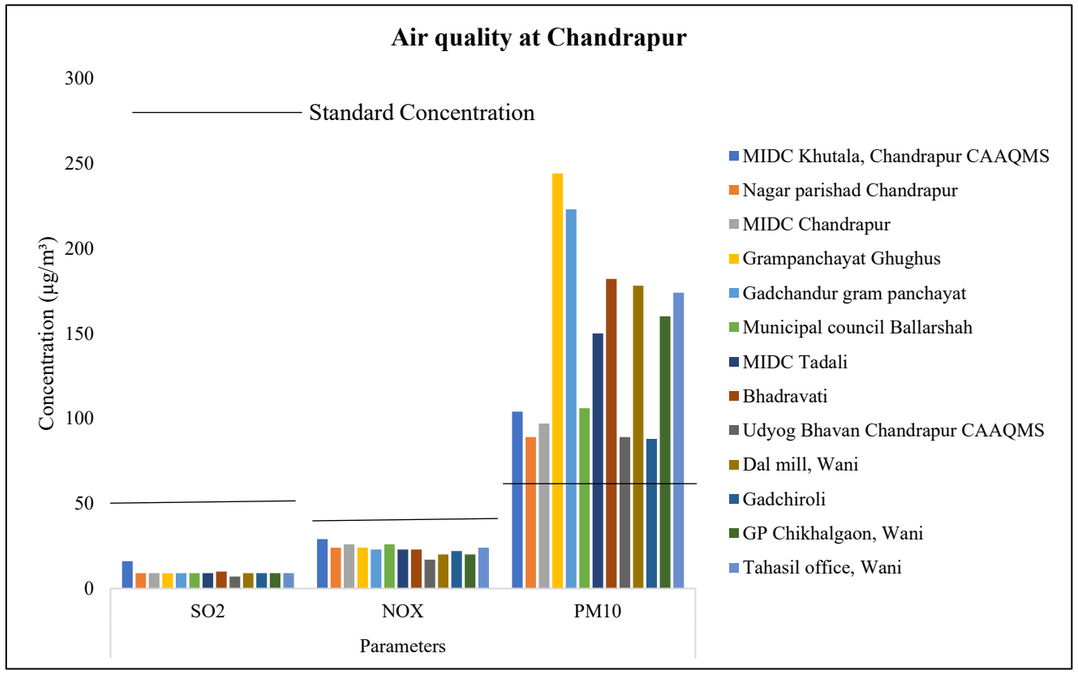
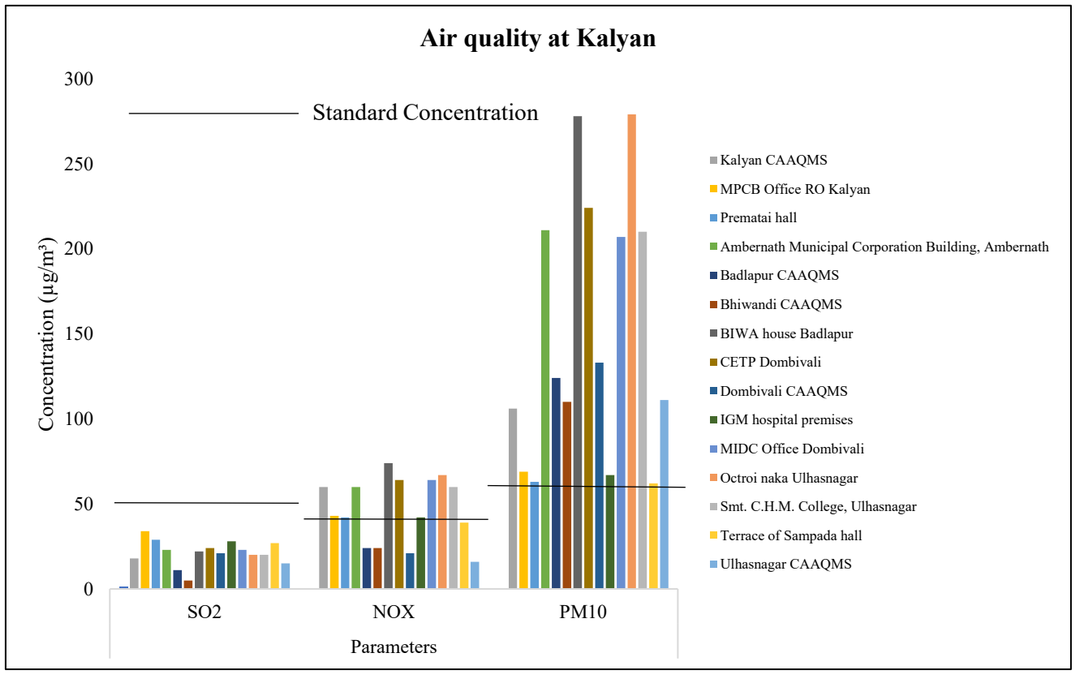
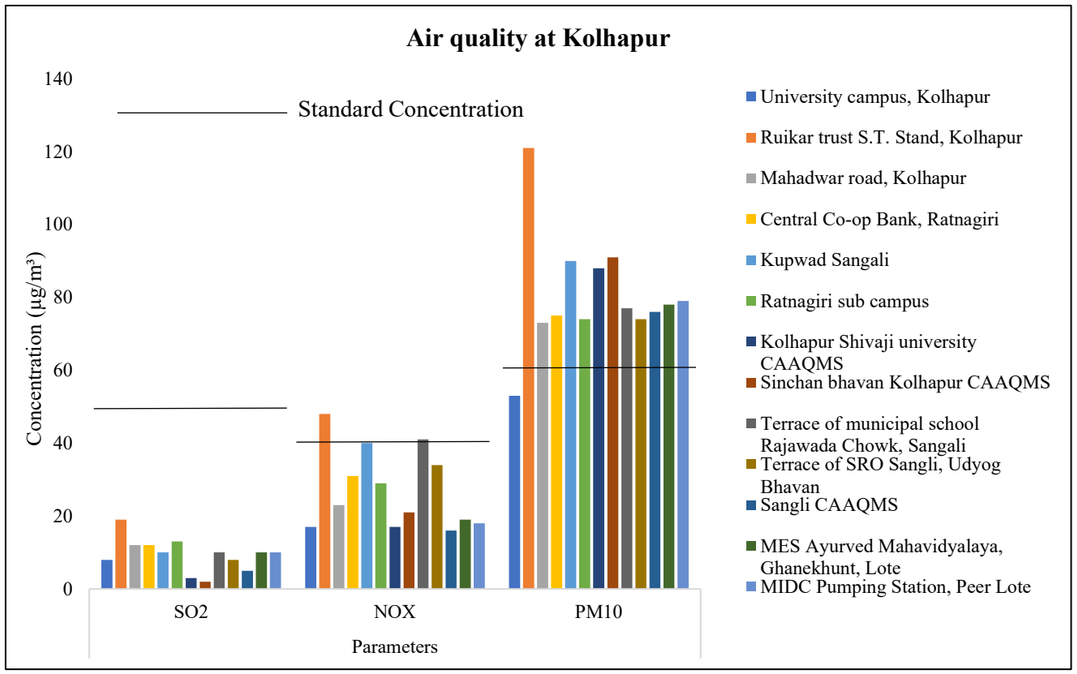


Figure 5.0 (a) Air monitoring results in Amravati, Chhatrapati Sambhaji Nagar, Chandrapur and Kalyan Regions of Maharashtra during 2023-24.







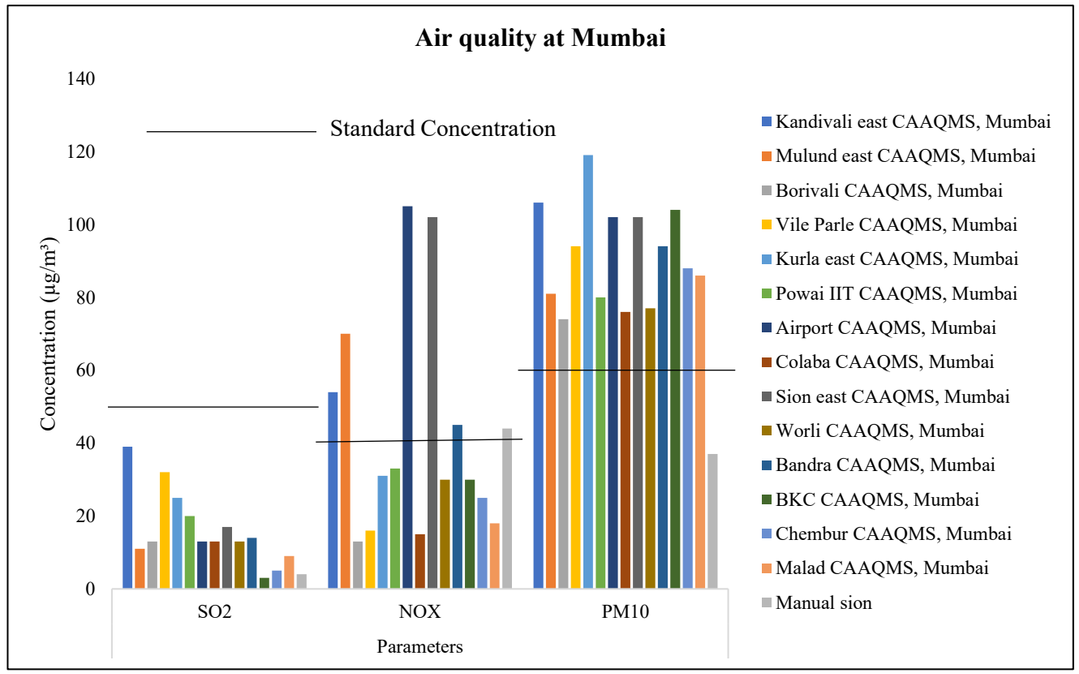
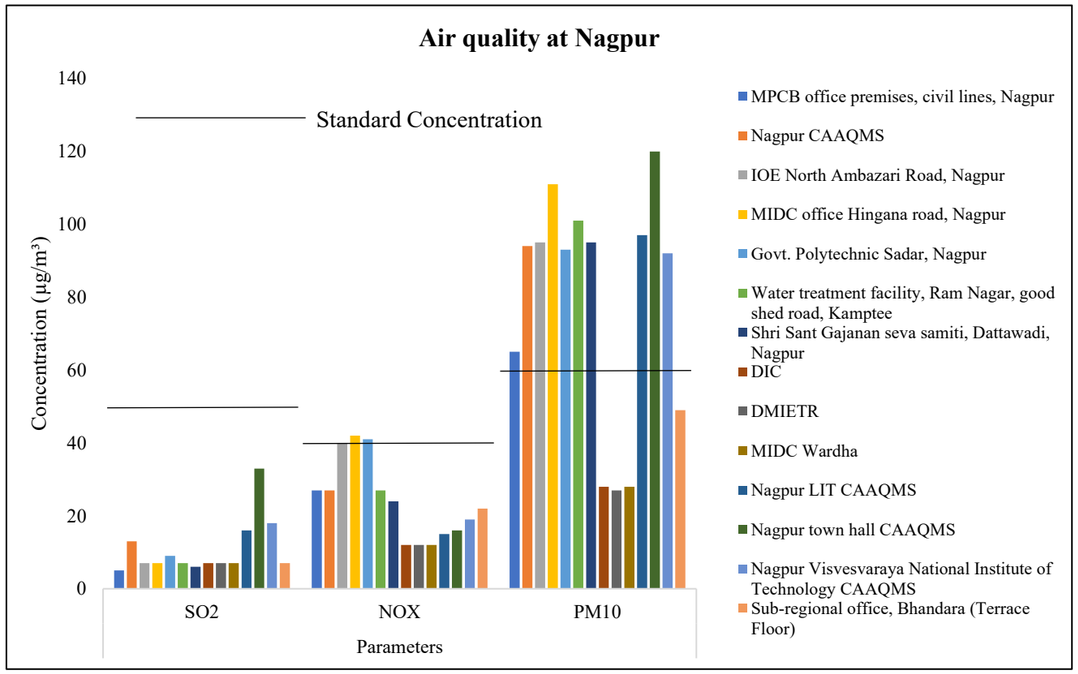
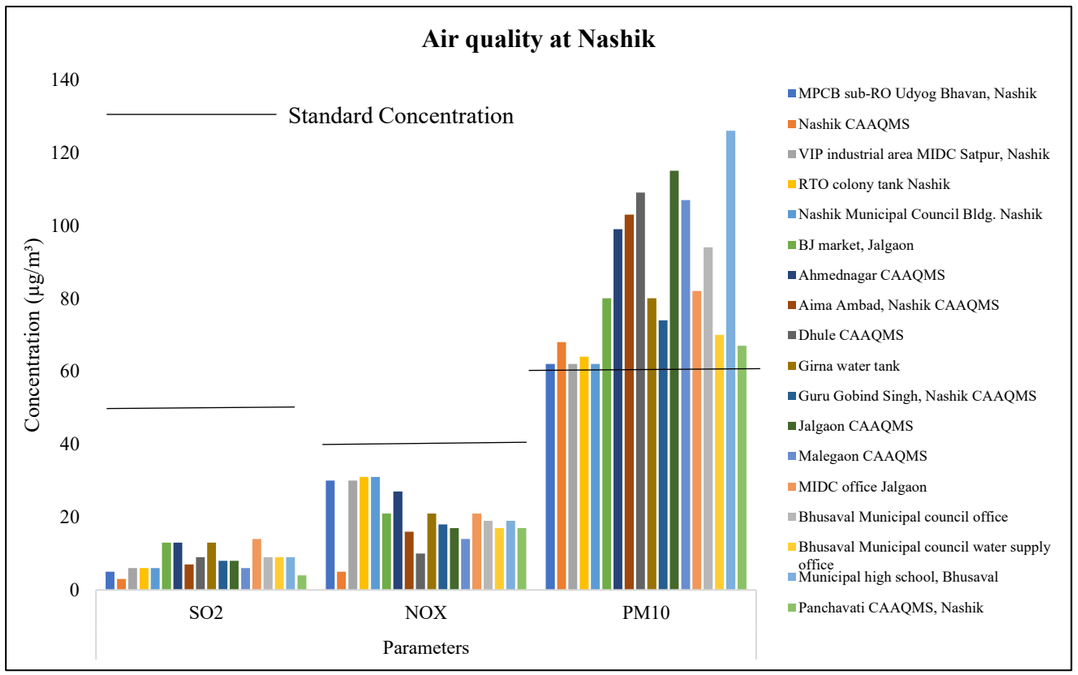
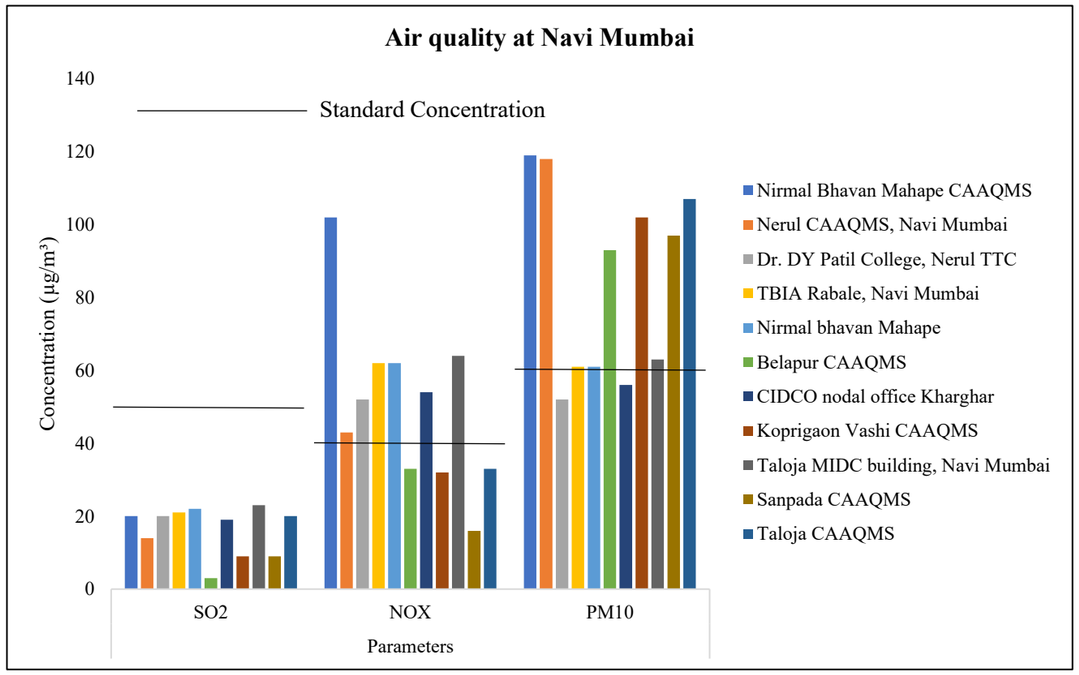


Figure 5.0 (b) Air monitoring results in Kolhapur, Mumbai, Nagpur and Nashik Regions of Maharashtra during 2023-24.







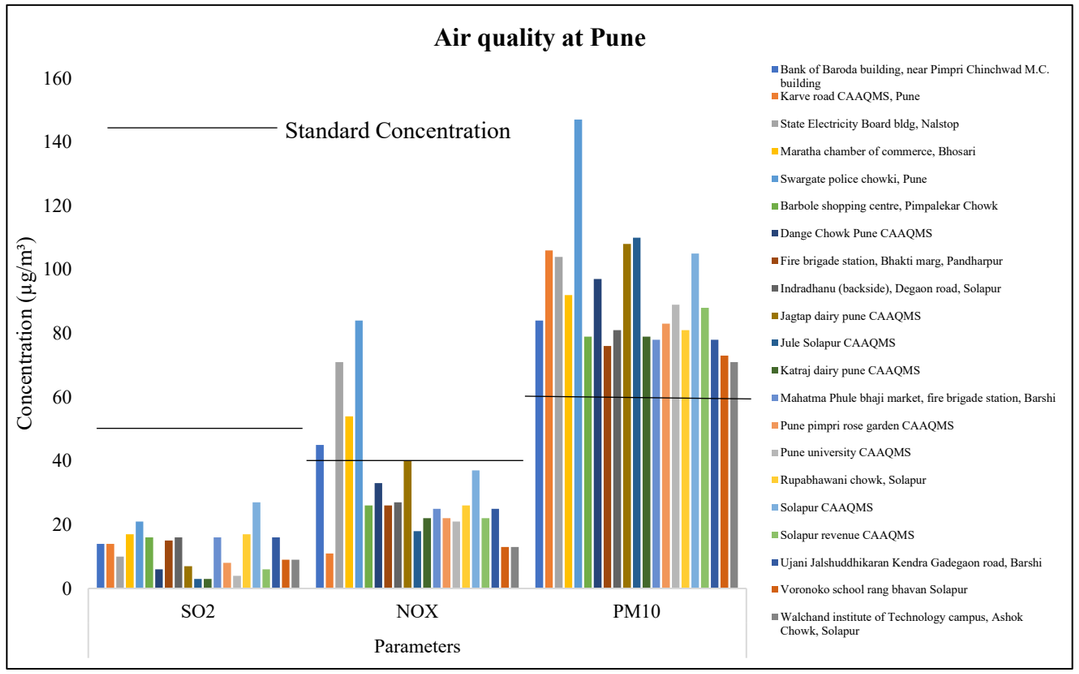
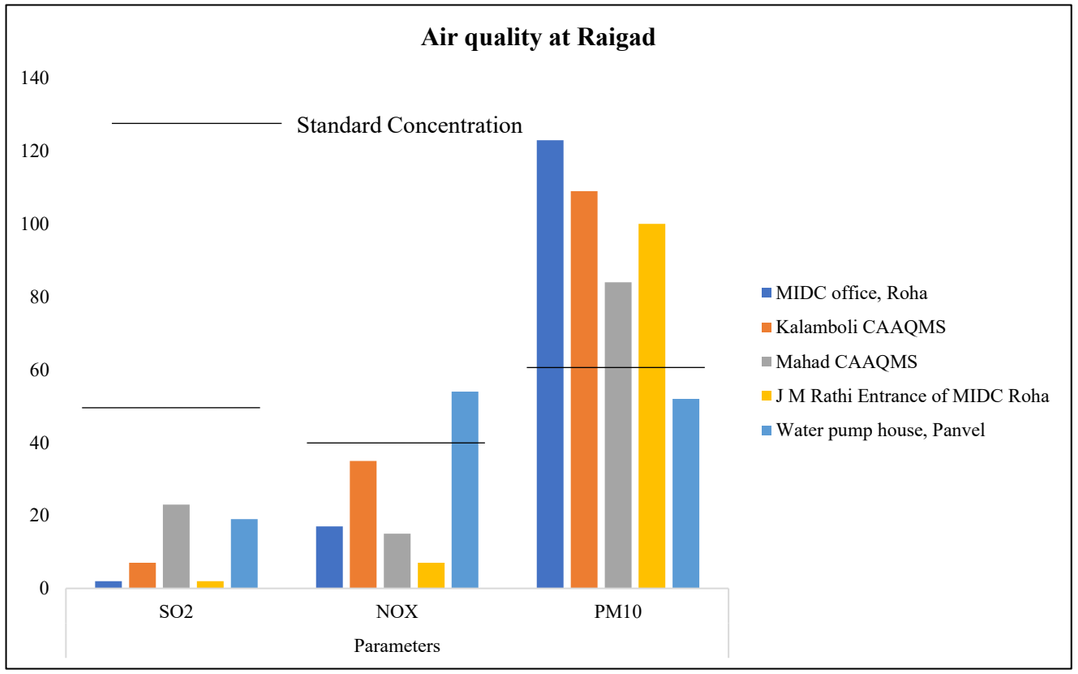
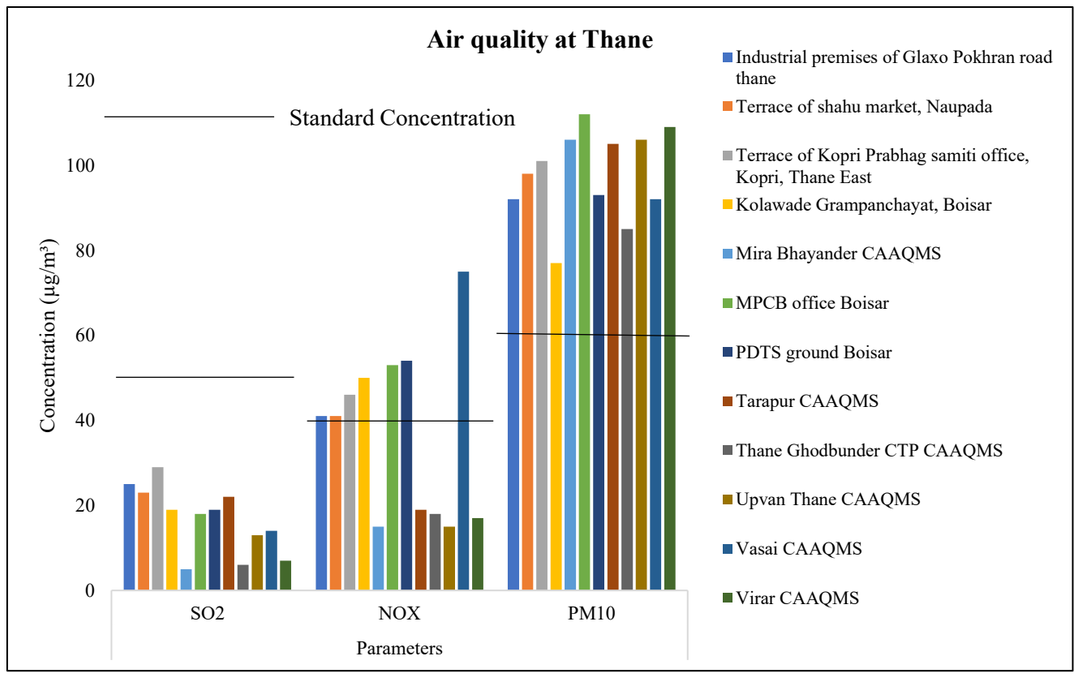


Figure 5.0 (c) Air monitoring results in Navi Mumbai, Pune, Raigad and Thane Regions of Maharashtra during 2023-24.





5.1.1 Amravati

The Amravati Region has nine air quality monitoring stations, as shown in **Table 5.1**. This table also shows the yearly average for all the measured air quality parameters. The levels of SO_2 and NO_X at all these stations are within the prescribed standards, which are 50 µg/m³ for SO_2 and 40 µg/m³ for NO_X.

The highest SO_2 level was found at the MIDC Water Work, Phase-II, MIDC Akola with a concentration of 18 µg/m³. The lowest SO_2 level was at Amravati Shivaji University CAAQMS, measuring 7 µg/m³. For NO_X, the lowest concentration was 13 µg/m³ at Godhadiwala Processing Private Limited and Rajkamal Chowk, Vanita Samaj bldg, Amravati, while the highest was 18 µg/m³ at MPCB Premises Amravati CAAQMS and MIDC Water Work, Phase-II, MIDC Akola.

Table 5.1 Statistical Monitoring of Annual Average Air Quality in Amravati Region.

	Parameters		
	SO_2	**NO_X**	**PM_{10}**
	Standard (µg/m³)		
	50	**40**	**60**
Govt. College of Engg., Amravati	12	14	66
Godhadiwala Processing Private Limited	11	13	66
Rajkamal chowk, vanita samaj bldg, Amravati	11	13	84
Akola CAAQMS	9	16	108
Amravati Shivaji College CAAQMS	7	15	106
College of engineering and technology	15	16	64
L.R.T. commerce college, Ratanlal plot civil line Akola	14	15	63
MIDC Water Work, Phase-II, MIDC Akola	18	18	67
MPCB Premises Amravati CAAQMS	11	18	96

The PM_{10} concentrations at all the monitoring stations are exceeding the set standard of 60 µg/m³. The maximum concentration for PM_{10} is 108 µg/m³ at Akola CAAQMS, whereas the minimum concentration is 63 µg/m³. The exceedance factor of PM_{10} was estimated and is given below.

Table 5.2 Exceedance factor of PM_{10} for Amravati Region.

Exceedance factor of PM_{10}	
Minimum	**Maximum**
1.05	1.8

5.1.2 Chhatrapati Sambhaji Nagar

There are 21 air quality monitoring stations in Chhatrapati Sambhaji Nagar Region. The annual average of all the parameters that were examined is shown in **Table 5.3**. The table shows that all of the monitoring station's SO_2 concentrations fall within the parameters for air quality. The

Industrial area CIDCO had the highest SO_2 concentration i.e. 24 µg/m^3. In contrast, Latur CAAQMS had the lowest value with a concentration of 5 µg/m^3.

Table 5.3 Statistical Monitoring of Annual Average Air Quality in Chhatrapati Sambhaji Nagar Region.

	Parameters		
	SO_2	NO_X	PM_{10}
	Standard(µg/m^3)		
	50	40	60
Collector Office, Chhatrapati Sambhaji Nagar	19	39	83
S.B. College, Chhatrapati Sambhaji Nagar	20	41	88
C.A.D.A. Office, Chhatrapati Sambhaji Nagar	20	41	89
Chhatrapati Sambhaji Nagar CAAQMS	9	10	78
Chhatrapati Sambhaji Nagar Devgiri college CAAQMS	16	20	112
Ganesh nagar	14	27	63
Industrial area CIDCO	24	37	82
Jalna CAAQMS	6	16	108
Krishidhan Seeds Ltd, Jalna	11	50	96
Latur CAAQMS	5	16	77
MIDC office Dharashiv	16	26	80
MIDC water work, Latur	8	14	51
Chhatrapati Sambhaji Nagar MPCB Bhavan CAAQMS	7	13	96
Municipal council Dharashiv	16	25	78
Mutha chowk, Vazirabad	20	32	64
Nanded CAAQMS	8	13	98
Parbhani CAAQMS	19	14	94
S P Office, Jalna	10	43	87
Terrace of Keshawraj Vidyalaya Shyam Nagar	8	15	53
Terrace of Siddheshwar Sahakari Bank Ganjgolai	8	14	52
Woman Government Hospital, Dharashiv	16	26	78

In **Table 5.3** the NO_X concentrations are exceeding the standard of 40 µg/m^3 at 'Krishidhan Seeds Ltd. Jalna', 'S P Office, Jalna', 'C.A.D.A. Office, Chhatrapati Sambhaji Nagar' and 'S.B. College, Chhatrapati Sambhaji Nagar' monitoring stations. Whereas, the PM_{10} concentrations are exceeding 60 µg/m^3 at all the monitoring locations except Terrace of Keshawraj Vidyalaya Shyam Nagar, MIDC water work Latur and Terrace of Siddheshwar Sahakari Bank Ganjgolai. The highest concentration for PM_{10} is 112 µg/m^3 whereas the lowest concentration is 51 µg/m^3. The highest concentration for NO_X was 50 µg/m^3 at Krishidhan Seeds Ltd and the lowest concentration was 10 µg/m^3 at Chhatrapati Sambhaji Nagar CAAQMS. The exceedance factors of PM_{10} and NO_X were calculated and the results are tabulated below.

Table 5.4 Exceedance factors of PM_{10} and NO_X for Chhatrapati Sambhaji Nagar Region.

Exceedance factors of PM_{10} and NOx			
PM_{10}		NOx	
Minimum	Maximum	Minimum	Maximum
1.05	1.87	1.03	1.25

5.1.3 Chandrapur

There are 13 air quality monitoring stations in the Chandrapur Region, spread across various sorts of areas. **Table 5.5** displays the yearly average of all the parameters that were looked at. The SO_2 and NO_X concentrations were found to be within the air quality guidelines. MIDC Khutala, Chandrapur CAAQMS showed maximum concentrations for both the parameters, i.e. 16 µg/m^3 and 29 µg/m^3. Whereas Udyog Bhavan Chandrapur CAAQMS showed a minimum value of 7 µg/m^3 for SO_2 and 17 µg/m^3 for NO_X.

Table 5.5 Statistical Monitoring of Annual Average Air Quality at Chandrapur Region.

	Parameters		
	SO_2	NO_X	PM_{10}
	Standard (µg/m^3)		
	50	40	60
MIDC Khutala, Chandrapur CAAQMS	16	29	104
Nagar parishad Chandrapur	9	24	89
MIDC Chandrapur	9	26	97
Grampanchayat Ghughus	9	24	244
Gadchandur gram panchayat	9	23	223
Municipal council Ballarshah	9	26	106
MIDC Tadali	9	23	150
Bhadravati	10	23	182
Udyog Bhavan Chandrapur CAAQMS	7	17	89
Dal mill, Wani	9	20	178
Gadchiroli	9	22	88
GP Chikhalgaon, Wani	9	20	160
Tahasil office, Wani	9	24	174

In **Table 5.5** the PM_{10} concentrations at all the monitoring stations are exceeding the set standard of 60 µg/m^3. The maximum concentration for PM_{10} is 244 µg/m^3 at Grampanchayat Ghugus while the minimum concentration is 88 µg/m^3 at Gadchiroli. From these values, the exceedance factor of PM_{10} was calculated. The results are shown in the table below.

Table 5.6 Exceedance factor of PM_{10} for Chandrapur Region.

Exceedance factor of PM_{10}	
Minimum	Maximum
1.47	4.07

5.1.4 Kalyan

The Kalyan Region has 15 air quality monitoring stations. **Table 5.7** represents the annual average of all the parameters analysed. From the table, it is observed that the concentrations of SO_2 at all the monitoring stations are within the air quality standard of 50 µg/m^3. The maximum

concentration for SO_2 was at Prematai hall, which was 29 µg/m^3. Whereas, the minimum value was at Bhiwandi CAAQMS with a concentration of 5 µg/m^3.

Table 5.7 Statistical Monitoring of Annual Average Air quality at Kalyan Region.

	Parameters		
	SO_2	NO_X	PM_{10}
	Standard(µg/m^3)		
	50	40	60
Kalyan CAAQMS	18	60	106
MPCB Office RO Kalyan	34	43	69
Prematai hall	29	42	63
Ambernath Municipal Corporation Building, Ambernath	23	60	211
Badlapur CAAQMS	11	24	124
Bhiwandi CAAQMS	5	24	110
BIWA house Badlapur	22	74	278
CETP Dombivali	24	64	224
Dombivali CAAQMS	21	21	133
IGM hospital premises	28	42	67
MIDC Office Dombivali	23	64	207
Octroi naka Ulhasnagar	20	67	279
Smt. C.H.M. College, Ulhasnagar	20	60	210
Terrace of Sampada Hall	27	39	62
Ulhasnagar CAAQMS	15	16	111

Table 5.7 shows that all monitoring station's PM_{10} concentrations are higher than the set standard of 60 µg/m^3. Whereas, the NO_X concentrations are within the standards of 40 µg/m^3 only at Bhiwandi CAAQMS, Badlapur CAAQMS, Dombivali CAAQMS and Terrace of Sampada Hall. The highest concentration of PM_{10} was 279 µg/m^3 at Octroi Naka, Ulhasnagar, while the lowest concentration was 62 µg/m^3 at Terrace of Sampada Hall. The exceedance factors of PM_{10} and NO_X were calculated using this data. The results are as follows:

Table 5.8 Exceedance factors of PM_{10} and NOx for Kalyan Region.

Exceedance factors of PM_{10} and NOx			
PM_{10}		NOx	
Minimum	Maximum	Minimum	Maximum
1.03	4.65	1.05	1.85

5.1.5 Kolhapur

The Kolhapur Region has 13 air quality monitoring stations. The yearly average of all the parameters that were considered is shown in **Table 5.9**. The SO_2 concentrations at each monitoring station are found to be within the limits of acceptable air quality.

The maximum concentration for SO_2 and NO_X was at 'Ruikar Trust, S.T. Stand, Kolhapur' which was 19 µg/m^3 and 48 µg/m^3 respectively. On the other hand, the minimum value for SO_2

was observed at Sinchan bhavan Kolhapur CAAQMS (2 µg/m^3) and minimum value for NO_X was at Sangli CAAQMS (16 µg/m^3).

Table 5.9 Statistical Monitoring of Annual Average Air Quality in Kolhapur Region.

	Parameters		
	SO_2	NO_X	PM_{10}
	Standard (µg/m^3)		
	50	40	60
University campus, Kolhapur	8	17	53
Ruikar trust S.T. Stand, Kolhapur	19	48	121
Mahadwar road, Kolhapur	12	23	73
Central Co-op Bank, Ratnagiri	12	31	75
Kupwad Sangli	10	40	90
Ratnagiri sub campus	13	29	74
Kolhapur Shivaji university CAAQMS	3	17	88
Sinchan bhavan Kolhapur CAAQMS	2	21	91
Terrace of municipal school Rajawada Chowk, Sangali	10	41	77
Terrace of SRO Sangli, Udyog Bhavan	8	34	74
Sangli CAAQMS	5	16	76
MES Ayurved Mahavidyalaya, Ghanekhunt, Lote	10	19	78
MIDC Pumping Station, Peer Lote	10	18	79

In **Table 5.9**, the PM_{10} concentration are exceeding the set standard at all the monitoring stations except the University Campus, Kolhapur. The maximum concentration for PM_{10} is 121 µg/m^3 at 'Ruikar Trust, S.T. stand, Kolhapur', whereas the minimum concentration is 53 µg/m^3 at University campus, Kolhapur. The NO_X value is exceeding the standard value of 40 µg/m^3 only at 'Ruikar Trust, S.T. Stand, Kolhapur' and 'Terrace of municipal school Rajawada Chowk, Sangli' monitoring stations. Hence, the PM_{10} and NO_X exceedance factors were determined and the results are given below.

Table 5.10 Exceedance factors of PM_{10} and NO_X for Kolhapur Region.

Exceedance factors of PM_{10} and NOx			
PM_{10}		NOx	
Minimum	Maximum	Minimum	Maximum
1.22	2.02	1.03	1.2

5.1.6 Mumbai

There are 15 monitoring stations across Mumbai Region. The annual average of all the parameters that have been assessed is given in **Table 5.11**. The table shows that all of the monitoring station's SO_2 concentrations fall within the air quality limits. At Kandivali east CAAQMS, Mumbai the concentration of SO_2 was maximum with 39 µg/m^3. In contrast, BKC CAAQMS, Mumbai had the lowest value with a concentration of 3 µg/m^3.

Table 5.11 Statistical Monitoring of Annual Average Air Quality in Mumbai Region.

	Parameters		
	SO_2	NO_X	PM_{10}
	Standard (µg/m³)		
	50	40	60
Kandivali east CAAQMS, Mumbai	39	54	106
Mulund east CAAQMS, Mumbai	11	70	81
Borivali CAAQMS, Mumbai	13	13	74
Vile Parle CAAQMS, Mumbai	33	16	94
Kurla east CAAQMS, Mumbai	25	31	119
Powai IIT CAAQMS, Mumbai	20	33	80
Airport CAAQMS, Mumbai	13	105	102
Colaba CAAQMS, Mumbai	13	15	76
Sion east CAAQMS, Mumbai	17	102	102
Worli CAAQMS, Mumbai	13	30	77
Bandra CAAQMS, Mumbai	14	45	94
BKC CAAQMS, Mumbai	3	30	104
Chembur CAAQMS, Mumbai	5	25	88
Malad CAAQMS, Mumbai	9	18	86
Manual sion	4	44	37

The PM_{10} concentrations at all the monitoring stations except Manual Sion, were exceeding the standard value of 60 µg/m³. The NO_X concentration was also exceeding the standard value (40 µg/m³) at six monitoring stations. The highest concentration for PM_{10} is 119 µg/m³ at Kurla East CAAQMS whereas the lowest concentration is 37 µg/m³ at Manual sion. The highest concentration for NO_X was 105 µg/m³ and the lowest concentration was 13 µg/m³. The exceedance factors of PM_{10} and NO_X were calculated. The results are given below.

Table 5.12 Exceedance factors of PM_{10} and NO_X for Mumbai Region.

Exceedance factors of PM_{10} and NOx			
PM_{10}		NOx	
Minimum	Maximum	Minimum	Maximum
1.23	1.98	1.1	2.63

5.1.7 Nagpur

The Nagpur Region has 14 air quality monitoring stations. **Table 5.13** represents the annual average of all the parameters analysed. From the table, it is observed that the concentrations of SO_2 at all the monitoring stations are within the air quality standard. The Nagpur Town Hall CAAQMS had the maximum concentration for SO_2 among all the monitoring stations (33 µg/m³). 'MPCB office premises, civil lines' had the minimum value, with a concentration of 5 µg/m³ for SO_2.

Table 5.13 Statistical Monitoring of Annual Average Air Quality in Nagpur Region.

	Parameters		
	SO_2	NO_X	PM_{10}
	Standard (µg/m³)		
	50	40	60
MPCB office premises, civil lines, Nagpur	5	27	65
Nagpur CAAQMS	13	27	94
IOE North Ambazari Road, Nagpur	7	40	95
MIDC office Hingana road, Nagpur	7	42	111
Govt. Polytechnic Sadar, Nagpur	9	41	93
Water treatment facility, Ram Nagar, good shed road, Kamptee	7	27	101
Shri Sant Gajanan seva samiti, Dattawadi, Nagpur	6	24	95
DIC	7	12	28
DMIETR	7	12	27
MIDC Wardha	7	12	28
Nagpur LIT CAAQMS	16	15	97
Nagpur town hall CAAQMS	33	16	120
Nagpur Visvesvaraya National Institute of Technology CAAQMS	18	19	92
Sub-regional office, Bhandara (Terrace Floor)	7	22	49

From **Table 5.13**, the PM_{10} concentration is not exceeding the standard value of 60 µg/m³ at four monitoring stations. They are DIC, DMIETR, MIDC and Sub-regional office, Bhandara (Terrace Floor). The maximum PM_{10} concentration is 120 µg/m³ while the minimum concentration is 27 µg/m³. MIDC office Hingana road, Nagpur showed the highest concentration for NO_X (42 µg/m³) among all the monitoring stations, whereas DIC, DMIETR and MIDC showed the least concentration (12 µg/m³). The concentration of NO_X was observed to be exceeding the standard value of 40 µg/m³ at MIDC office Hingana road, Nagpur and Govt. Polytechnic Sadar, Nagpur. Hence, the exceedance factors of PM_{10} and NO_X were calculated. The results are shown in the table below.

Table 5.14 Exceedance factors of PM_{10} and NOx for Nagpur Region.

Exceedance factors of PM_{10} and NOx			
PM_{10}		NOx	
Minimum	Maximum	Minimum	Maximum
1.08	2.00	1.03	1.05

5.1.8 Nashik

There are 18 air quality monitoring stations in the Nashik Region. The yearly average of the parameters analysed is shown in **Table 5.15**. The table shows that all of the monitoring station's SO_2 and NO_X concentrations are within the standard value of 50 and 40 µg/m³ respectively.

Nashik CAAQMS showed the least annual average concentration of 3 µg/m³ for SO_2 and 5 µg/m³ for NO_X. In contrast, the highest concentration of SO_2 (14 µg/m³) was observed at MIDC

office. The maximum concentration was at RTO colony tank Nashik and Nashik Municipal Council Bldg. Nashik for NO_X (31 µg/m^3).

Table 5.15 Statistical Monitoring of Annual Average Air Quality in Nashik Region.

	Parameters		
	SO_2	NO_X	PM_{10}
	Standard (µg/m^3)		
	50	40	60
MPCB sub-RO Udyog Bhavan, Nashik	5	30	62
Nashik CAAQMS	3	5	68
VIP industrial area MIDC Satpur, Nashik	6	30	62
RTO colony tank Nashik	6	31	64
Nashik Municipal Council Bldg. Nashik	6	31	62
BJ market, Jalgaon	13	21	80
Ahmednagar CAAQMS	13	27	99
Aima Ambad, Nashik CAAQMS	7	16	103
Dhule CAAQMS	9	10	109
Girna water tank	13	21	80
Guru Gobind Singh, Nashik CAAQMS	8	18	74
Jalgaon CAAQMS	8	17	115
Malegaon CAAQMS	6	14	107
MIDC office Jalgaon	14	21	82
Bhusaval Municipal council office	9	19	94
Bhusaval Municipal council water supply office	9	17	70
Municipal high school, Bhusaval	9	19	126
Panchavati CAAQMS, Nashik	4	17	67

Table 5.15 shows that the PM_{10} concentration are exceeding the standard value of 60 µg/m^3 at all monitoring stations. The maximum concentration for PM_{10} is 126 µg/m^3 at Bhusaval Municipal high school and the minimum concentration is 62 µg/m^3 at MPCB sub-RO udyog Bhavan, VIP industrial area MIDC Satpur and Nashik Municipal Council Bldg. Nashik respectively. The exceedance factor of PM_{10} was estimated and the results are tabulated below.

Table 5.16 Exceedance factor of PM_{10} for Nashik Region.

Exceedance factor of PM_{10}	
Minimum	Maximum
1.03	2.1

5.1.9 Navi Mumbai

There are 11 air quality monitoring stations in the Navi Mumbai Region. **Table 5.17** represents the annual average of all the parameters assessed. From the table, it is observed that the concentrations of SO_2 at all the monitoring stations are within the air quality standard. The maximum concentration for SO_2 was at Taloja MIDC building, Navi Mumbai, which was 23 µg/m^3. Whereas the minimum value was at Belapur CAAQMS, with a concentration of 3 µg/m^3.

Table 5.17 Statistical Monitoring of Annual Average Air Quality in Navi Mumbai Region.

	Parameters		
	SO_2	NO_X	PM_{10}
	Standard (µg/m^3)		
	50	40	60
Nirmal Bhavan Mahape CAAQMS	20	102	119
Nerul CAAQMS, Navi Mumbai	14	43	118
Dr. DY Patil College, Nerul TTC	20	52	52
TBIA Rabale, Navi Mumbai	21	62	61
Nirmal bhavan Mahape	22	62	61
Belapur CAAQMS	3	33	93
CIDCO nodal office Kharghar	19	54	56
Koprigaon Vashi CAAQMS	9	32	102
Taloja MIDC building, Navi Mumbai	23	64	63
Sanpada CAAQMS	9	16	97
Taloja CAAQMS	20	33	107

From the above table, it can be observed that the PM_{10} and NO_X concentrations are exceeding the standards. The maximum concentration for PM_{10} is 119 µg/m^3 while for NO_X, it is 102 µg/m^3. The minimum concentration for NO_X and PM_{10} was 16 µg/m^3 and 52 µg/m^3 respectively. The exceedance factors of PM_{10} and NO_X were calculated and the results are as follows:

Table 5.18 Exceedance factors of PM_{10} and NO_X for Navi Mumbai Region.

Exceedance factors of PM_{10} and NOx			
PM_{10}		NOx	
Minimum	Maximum	Minimum	Maximum
1.02	1.98	1.08	2.55

5.1.10 Pune

The Pune Region has 21 air quality monitoring stations. **Table 5.19** represents the annual average of all the parameters analysed. From the table, it is observed that the concentrations of SO_2 at all the monitoring stations are within the standard concentration of 50 µg/m^3. The maximum concentration for SO_2 was at Solapur CAAQMS (27 µg/m^3) and the minimum value was at Jule Solapur CAAQMS and Katraj Dairy Pune CAAQMS with a concentration of 3 µg/m^3.

Table 5.19 Statistical Monitoring of Annual Average Air Quality in Pune Region.

	Parameters		
	SO_2	NO_X	PM_{10}
	Standard ($\mu g/m^3$)		
	50	40	60
Bank of Baroda building, near Pimpri Chinchwad M.C. building	14	45	84
Karve road CAAQMS, Pune	14	11	106
State Electricity Board bldg, Nalstop	10	71	104
Maratha chamber of commerce, Bhosari	17	54	92
Swargate police chowki, Pune	21	84	147
Barbole shopping centre, Pimpalekar Chowk	16	26	79
Dange Chowk Pune CAAQMS	6	33	97
Fire brigade station, Bhakti marg, Pandharpur	15	26	76
Indradhanu (backside), Degaon road, Solapur	16	27	81
Jagtap dairy pune CAAQMS	7	40	108
Jule Solapur CAAQMS	3	18	110
Katraj dairy pune CAAQMS	3	22	79
Mahatma Phule bhaji market, fire brigade station, Barshi	16	25	78
Pune pimpri rose garden CAAQMS	8	22	83
Pune university CAAQMS	4	21	88
Rupabhawani chowk, Solapur	17	26	81
Solapur CAAQMS	27	37	105
Solapur revenue CAAQMS	6	22	88
Ujani Jalshuddhikaran Kendra Gadegaon Road, Barshi	16	25	78
Voronoko school rang bhavan Solapur	9	13	73
Walchand institute of Technology campus, Ashok Chowk, Solapur	9	13	71

The PM_{10} and NO_X concentrations are surpassing the standard limits of 60 $\mu g/m^3$ and 40 $\mu g/m^3$ respectively, at various locations. Swargate police chowki, Pune showed maximum values for PM_{10} and NO_X with a concentration of 147 $\mu g/m^3$ and 84 $\mu g/m^3$ respectively. The minimum concentration for NO_X and PM_{10} were 11 $\mu g/m^3$ and 71 $\mu g/m^3$ at Karve road CAAQMS, Pune and Walchand institute of technology campus, Ashok Chowk, Solapur, respectively. The exceedance factors of PM_{10} and NO_X were calculated and are tabulated below.

Table 5.20 Exceedance factors of PM_{10} and NOx for Pune Region.

Exceedance factors of PM_{10} and NOx			
PM_{10}		NOx	
Minimum	Maximum	Minimum	Maximum
1.18	2.45	1.13	2.1

5.1.11 Raigad

'MIDC office, Roha', 'Kalamboli CAAQMS', 'Mahad CAAQMS', 'J M Rathi Entrance of MIDC Roha' and 'Water Pump House, Panvel' are the five air quality monitoring stations in Raigad Region. **Table 5.21** represents the annual average of all the parameters analysed. From

the table, it is observed that the concentrations of SO_2 at all the five monitoring stations are within the air quality standard. The Mahad CAAQMS had the maximum concentration for SO_2 among all the monitoring stations (23 µg/m^3). MIDC office, Roha and J M Rathi Entrance of MIDC Roha had the minimum value with a concentration of 2 µg/m^3.

Table 5.21 Statistical Monitoring of Annual Average Air Quality in Raigad Region.

	Parameters		
	SO_2	NO_X	PM_{10}
	Standard (µg/m^3)		
	50	40	60
MIDC office, Roha	2	17	123
Kalamboli CAAQMS	7	35	109
Mahad CAAQMS	23	15	84
J M Rathi Entrance of MIDC Roha	2	7	100
Water Pump House, Panvel	19	54	52

The NO_X concentration are surpassing the standard limit of 40 µg/m^3 only at Water Pump House, Panvel. Whereas, the PM_{10} concentrations is within the standard limit of 60 µg/m^3 only at Water supply plant, Panvel. MIDC office, Roha showed the highest concentration for PM_{10} (123 µg/m^3) among all the monitoring stations, whereas the Water Pump House, Panvel showed the least concentration (52 µg/m^3). The maximum concentration for NO_X was observed at Water Pump House, Panvel, with a concentration of 54 µg/m^3 and minimum concentration was at J M Rathi Entrance of MIDC Roha (7 µg/m^3). The exceedance factors of PM_{10} and NO_X were calculated and the results are as follows:

Table 5.22 Exceedance factors of PM_{10} and NO_X for Raigad Region.

Exceedance factors of PM_{10} and NOx			
PM_{10}		NOx	
Minimum	Maximum	Minimum	Maximum
1.4	2.05	-	1.35

5.1.12 Thane

The Thane Region has 12 air quality monitoring stations. **Table 5.23** represents the annual average of all the parameters analysed. From the table, it is observed that the concentrations of SO_2 at all the monitoring stations are within the air quality standard. The maximum concentration for SO_2 was at Terrace of Kopri Prabhag Samiti, Kopri, Thane east which was 29 µg/m^3. Whereas Mira-Bhayander CAAQMS showed minimum concentration of 5 µg/m^3.

Table 5.23 Statistical Monitoring of Annual Average Air Quality in Thane Region.

	Parameters		
	SO_2	NO_X	PM_{10}
	Standard (µg/m³)		
	50	40	60
Industrial premises of Glaxo Pokhran Road Thane	25	41	92
Terrace of shahu market, Naupada	23	41	98
Terrace of Kopri Prabhag samiti office, Kopri, Thane East	29	46	101
Kolawade Grampanchayat, Boisar	19	50	77
Mira Bhayander CAAQMS	5	15	106
MPCB office Boisar	18	53	112
PDTS ground Boisar	19	54	93
Tarapur CAAQMS	22	19	105
Thane Ghodbunder CTP CAAQMS	6	18	85
Upvan Thane CAAQMS	13	15	106
Vasai CAAQMS	14	75	92
Virar CAAQMS	7	17	109

From the above table, it can be observed that the concentrations of PM_{10} are exceeding the standard value of 60 µg/m³ at all the 12 monitoring stations. Whereas, the NO_X concentration is exceeding 40 µg/m³ standard value at seven locations. The maximum concentration for NO_X was 75 µg/m³ and the minimum concentration was 15 µg/m³. While, the maximum concentration for PM_{10} is 112 µg/m³ and the minimum concentration is 77 µg/m³. The exceedance factors of PM_{10} and NO_X were calculated from these values. The results are as follows:

Table 5.24 Exceedance factors of PM_{10} and NOx for Thane Region.

Exceedance factors of PM_{10} and NOx			
PM_{10}		NOx	
Minimum	Maximum	Minimum	Maximum
1.28	1.87	1.03	1.88

5.2 Conclusion for Air Quality in the State of Maharashtra

The MPCB regularly monitors pollutant levels through a medium of an established network of Ambient Air Quality Monitoring Stations (AAQMS) installed in various regions across Maharashtra. These AAQMS are installed under the National Air Monitoring Program (NAMP) and State Air Monitoring Program (SAMP). In addition, the MPCB has also installed several Continuous Ambient Air Monitoring Stations (CAAQMS). The observations recorded by these air quality monitoring stations are categorized into AQI categories and illustrated in **Figure 5.1** as percentage share. A total of 36,908 observations were recorded, out of which 5,931 observations fell into the 'Good' category and 15,469 observations were categorized as

'Satisfactory'. The 'Moderate' AQI category comprised of 14,049 observations. The 'Poor' and 'Very Poor' categories accounted for approximately 461 and 277 observations respectively. The Severe category accounted to only 66 observations.

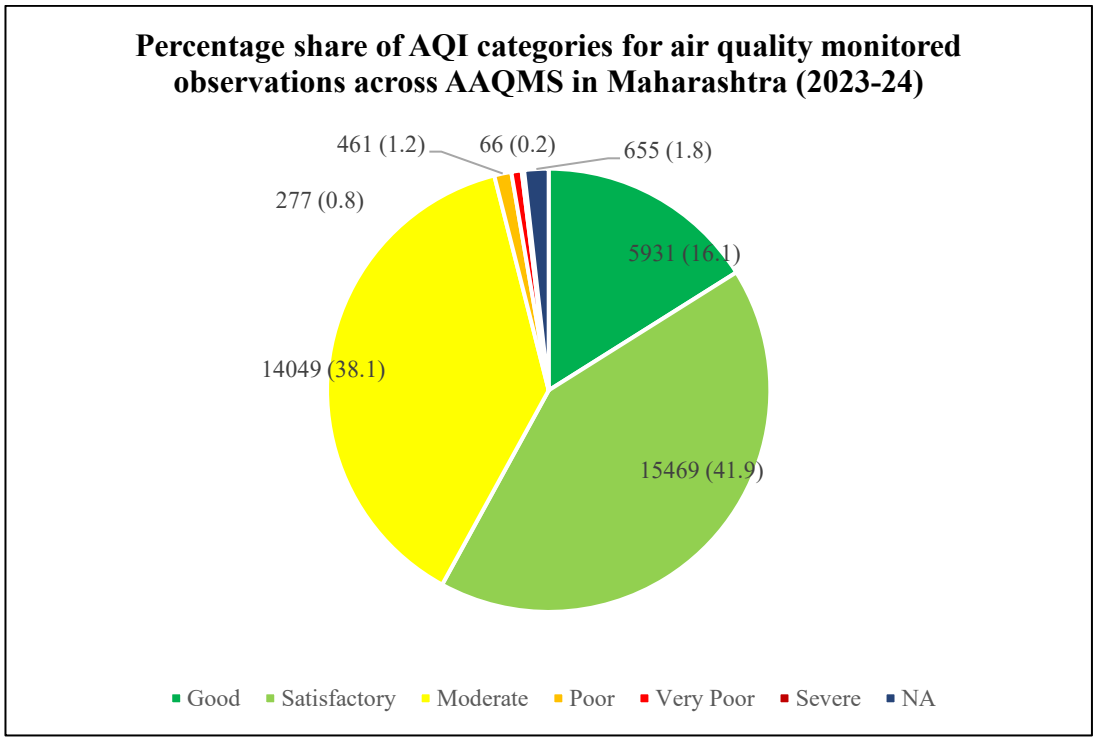


Figure 5.1 Percentage share of AQI categories for air quality of monitored observations across all AAQMS in Maharashtra (2023-24).

5.2.1 Trend Analysis of AQI over five years

The trend chart for the years 2020-24 was calculated (**Figure 5.2**). The percentage share of Good category has slightly increased in the current financial year when compared to 2022-23. Similar results are observed in the Satisfactory category. Comparing the percentage share for the past five financial years, the Moderate category has seen a sharp increase in the percentage share since 2022-23. The poor category saw a sudden surge in the percentage share in 2021-22, declining gradually in the next financial years. The number of observations wherein no data was recorded has significantly increased in 2023-24 when compared to 2022-23.

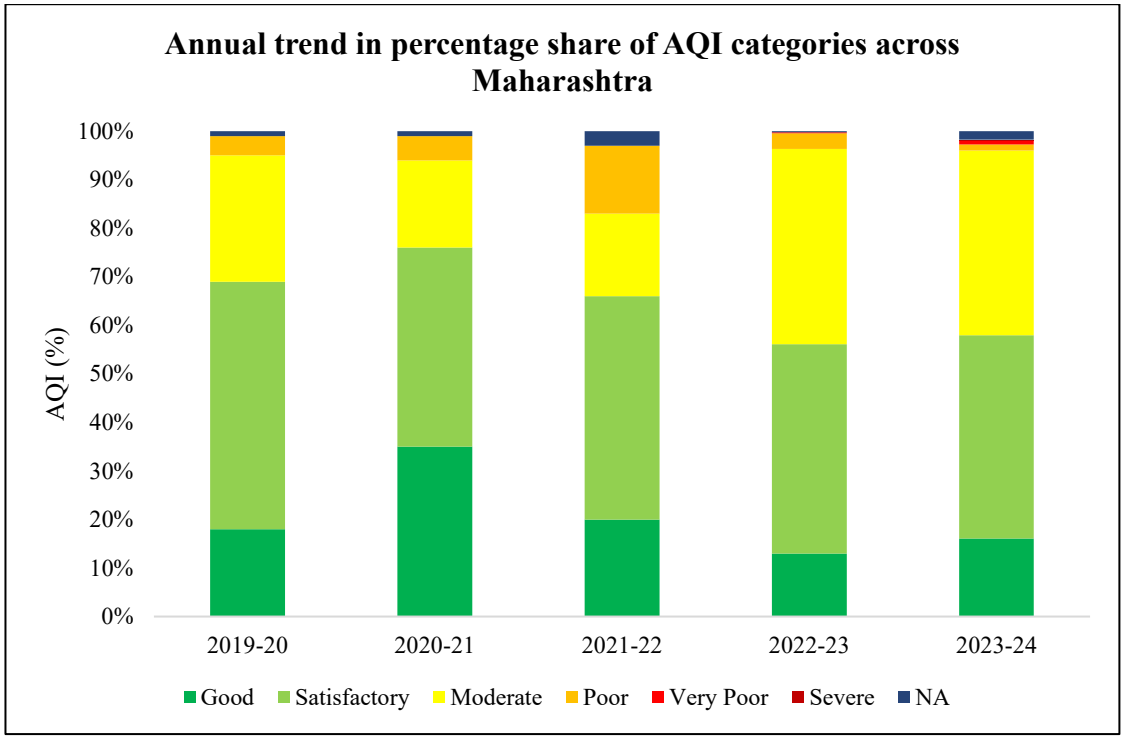


Figure 5.2 Trends in year-wise percentage share of AQI categories across Maharashtra.

5.3 Water Quality in Maharashtra

Water is the driving force of all nature and the most precious resource on our planet. It is often referred to as the 'elixir of life' for good reason. We, as human beings, are composed of around 60% water and virtually every living organism on Earth relies on it for survival. Water is not just essential for life; it plays a critical role in shaping our world, impacting ecosystems, economies and cultures. Hence, keeping our water resources clean is our duty.

However, water pollution is a pressing environmental issue that affects regions around the world, including the Indian State of Maharashtra. Maharashtra, known for its diverse geography, bustling cities and thriving industries, faces several water pollutions challenges. Water pollution represents a looming public health crisis. To mitigate the impact on health, concerted efforts are required at the governmental, industrial, community and individual levels. Access to clean water and safe sanitation is a fundamental human right and safeguarding these resources is essential for the well-being of current and future generations.

In 1997, the World Health Organization (WHO) defined water pollution as any change in the physical, chemical and biological properties of water that has a harmful effect on living things. Water quality in Maharashtra can vary significantly depending on the region, water sources and various factors such as industrial pollution, agricultural runoff and population density. Overall,

Maharashtra faces several challenges related to water quality, including contamination of surface water and groundwater.

In order to have continuous vigilance check on water quality across Maharashtra, MPCB being the state nodal agency under CPCB (Central Pollution Control Board), has installed 294 WQMS (Water Quality Monitoring Stations) across the State which are regularly monitored under two programs of NWMP (National Water Quality Monitoring Program) and SWMP (State Water Quality Monitoring Program). Surface water samples are monitored once every month whereas the ground water samples are monitored six monthly.

Number of Water Quality Monitoring Stations (WQMS) in Maharashtra - **294**
Number of WQMS in Maharashtra under NWMP – **250**
Number of WQMS in Maharashtra under SWMP – **44**

5.3.1 Water Quality Index

A Water Quality Index (WQI) is a numerical expression that summarizes the water quality of a particular water body based on various water quality parameters. It provides a simple way to assess and communicate the overall health or suitability of water for various purposes, such as drinking, recreation or ecological health. WQIs are used by environmental agencies, researchers and policymakers to monitor and manage water resources. The objective of developing an index is to simplify the complex water quality parametric data into comprehensive information for easy understanding. Upon determining the Water Quality Index (WQI), water quality is described for easy understanding and interpretation. In 1970, the National Sanitation Foundation, USA developed the Water Quality Index (NSFWQI), a standardized method for comparing the water quality of various water bodies. NSFWQI is one of the most respected and utilized water quality indexes in the United States. The WQI is calculated based on four water quality parameters selected for surface water include Dissolved Oxygen, Fecal Coliform (FC), BOD, pH, and nine parameters for ground water namely pH, Total Hardness (TH), Calcium, Magnesium, Total dissolved solids (TDS), Chloride, Nitrate, Fluoride and Sulphate.

5.3.1.1 WQI for Surface Water

The modified weights of the four parameters are given in **Table 5.25**. CPCB updated the weights from NSFWQI and assigned relative weights to ensure uniformity when comparing throughout the nation. The equation to calculate the sub-indices for WQI is mentioned in **Table 5.26**. The WQI is represented based on colour code for easy understanding, the details are given in **Table 5.27**.

Table 5.25 Modified Weights for Computation of WQI Based on DO, FC, pH and BOD.

Parameters	Original Weights from NSF WQI	Modified Weights by CPCB
Dissolved Oxygen (DO)	0.17	0.31
Fecal Coli form (FC)	0.15	0.28
pH	0.12	0.22
BOD	0.1	0.19
Total	**0.54**	**1**

Table 5.26 Sub-Index Equation Used to Calculate NSF WQI for DO, FC, pH and BOD.

Water Quality Parameters (Units)	Range Applicable	Equation
Dissolved Oxygen (DO) (% Saturation)	0-40	0.18 + 0.66 × % Saturation DO
	40-100	(-13.55) + 1.17 × % Saturation DO
	100-140	163.34 - 0.62 × % Saturation DO
Fecal Coliform (FC) (Counts/100 ml)	1-1000	97.2 - 26.6 x log FC
	1000-100000	42.33 – 7.75 x log FC
	>100000	2
pH	02-05	16.1 + 7.35 × (pH)
	05-7.3	(-142.67) + 33.5 × (pH)
	7.3-10	316.96 - 29.85 × (pH)
	10-12	96.17 - 8.0 × (pH)
	<2, >12	0
BOD (mg/l)	0-10	96.67 - 7 × (BOD)
	10-30	38.9 - 1.23 × (BOD
	>30	2

Table 5.27 Surface water Classification based on Water Quality Index.

WQI Value	Water Quality	Class by CPCB	Class by MPCB	Remarks	Colour code used in this report
63-100	Good to Excellent	A	A-I	Non-Polluted	
50-63	Medium to Good	B	Not prescribed	Non-Polluted	
38-50	Bad	C	A-II	Polluted	
38 and less	Bad to Very Bad	D, E	A-III, A-IV	Heavily Polluted	

5.3.1.2 WQI for Ground Water

The MPCB monitors ground water quality twice a year for the parameters described in **Table 5.28**. Based on the stringency of the parameters and its relative importance in the overall quality of water for drinking purposes each parameter has been assigned specific weight by CPCB. These weights indicate the relative harmfulness when present in water. The WQI is represented based on colour code for easy understanding, the details are given in **Table 5.29**.

Table 5.28 Relative Weights of Each Parameter for WQI of Ground water.

	Indian Standards for Drinking Water Quality		Weight (WI)			
Chemical Parameters	**Acceptable Limits**	**Permissible Limits**	**Weight (WI)**	**Relative weight**	**Weight w/o Iron, Manganese and Bicarbonate**	**Relative Weight w/o Iron, Manganese and Bicarbonate**
pH	6.5 - 8.5	No relaxation	4	0.09756	4	0.13333
Total Hardness (TH)	300	600	2	0.04878	2	0.06667
Calcium	75	200	2	0.04878	2	0.06667
Magnesium	30	No relaxation	2	0.04878	2	0.06667
Bicarbonate	244	732	3	0.07317	-	-
Chloride	250	1000	3	0.07317	3	0.1
Total Dissolved Solids (TDS)	500	2000	4	0.09756	4	0.13333
Fluoride	1	1.5	4	0.09756	4	0.13333
Manganese	0.1	0.3	4	0.09756	-	-
Nitrate	45	No relaxation	5	0.12195	5	0.16667
Iron	0.3	No relaxation	4	0.09756	-	-
Sulphate	200	400	4	0.09756	4	0.13333
Total			**41**	**1**	**30**	**1**

Table 5.29 Ground water Classification Based on Water Quality Index.

WQI Value	Water Quality	Colour code used in this report
<50	Excellent	
50-100	Good Water	
100-200	Poor Water	
200-300	Very Poor Water	
>300	Water Unsuitable for Drinking	

5.3.2 Analysis of Surface Water Quality with Statistical Details

As per provisions made by Water Quality Assessment Authority constituted under Sub Sections (1) and (3) of Section 3 of the Environment (Protection) Act, 1986 (Act No. 29 of 1986) water quality in Maharashtra is monitored by various agencies namely Hydrology Project (SW), Groundwater Surveys and Development Agency (GSDA), Central Pollution Control Board (CPCB), Maharashtra Pollution Control Board (MPCB), Central Water Commission (CWC) and Central Ground Water Board (CGWB). Water quality testing under CPCB's NWMP in Maharashtra is monitored by MPCB (State nodal agency). Maharashtra has the highest number of monitoring stations under NWMP across all States in India. MPCB possesses infrastructure to monitor 44 parameters covering field observations, general parameters, core parameters and trace metals. The samples are monitored at monthly and six-monthly frequencies for surface

water and groundwater stations respectively. To have continuous vigilance checks on water quality, MPCB has installed WQMS (Water Quality Monitoring Stations) across the State.

Quality of surface water is monitored per month across all stations. The spatial presence of the stations is presented basin wise in the respective sections below. Basin-wise water quality index is presented in this section for the basins of Tapi, Krishna, Godavari, Saline (Sea and Creek) and West Flowing Rivers.

5.3.2.1 Godavari Basin 1

The Water Quality Index (WQI) monthly trend of Godavari Basin 1 for the year 2023-24 is depicted in **Figure 5.3.** The Godavari Basin 1 is spread across in eight districts of Maharashtra. In most of the months, the Water Quality Index (WQI) fell within the good to excellent range, except for Chhatrapati Sambhaji Nagar, Jalna, Beed and Parbhani. In Jalna, the water quality ranged from Medium to Good during August and November. In Beed, the WQI was Bad in November and ranged from Medium to Good in August and September. For Parbhani, the water quality was 'Medium to Good' in November. The WQI was Medium to Good in Chhatrapati Sambhaji Nagar during August and October. Water quality was not assessed in Latur district.

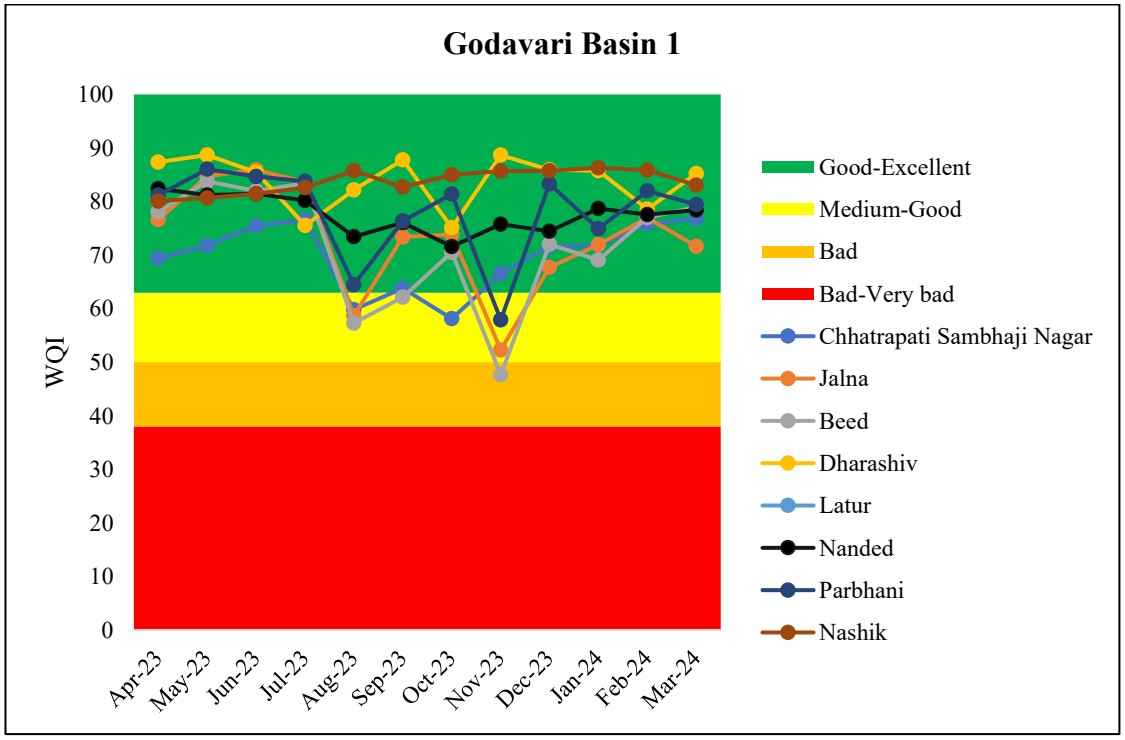


Figure 5.3 The intra-basin performance of Godavari Basin 1 across eight districts in Maharashtra F.Y. 2023-24.

5.3.2.2 Krishna Basin

The monthly trend in WQI for the six districts in the Krishna basin in 2023-24 is displayed in **Figure 5.4**. The Water Quality Index (WQI) was good to excellent across all districts throughout the year. It indicates that the water was non-polluted. However, in Pune district, it ranged from medium to good in May and from November to March. In Ahmednagar district, water quality was assessed for the months of January to March. The WQI was classified as Medium to Good in March and Excellent in January and February.

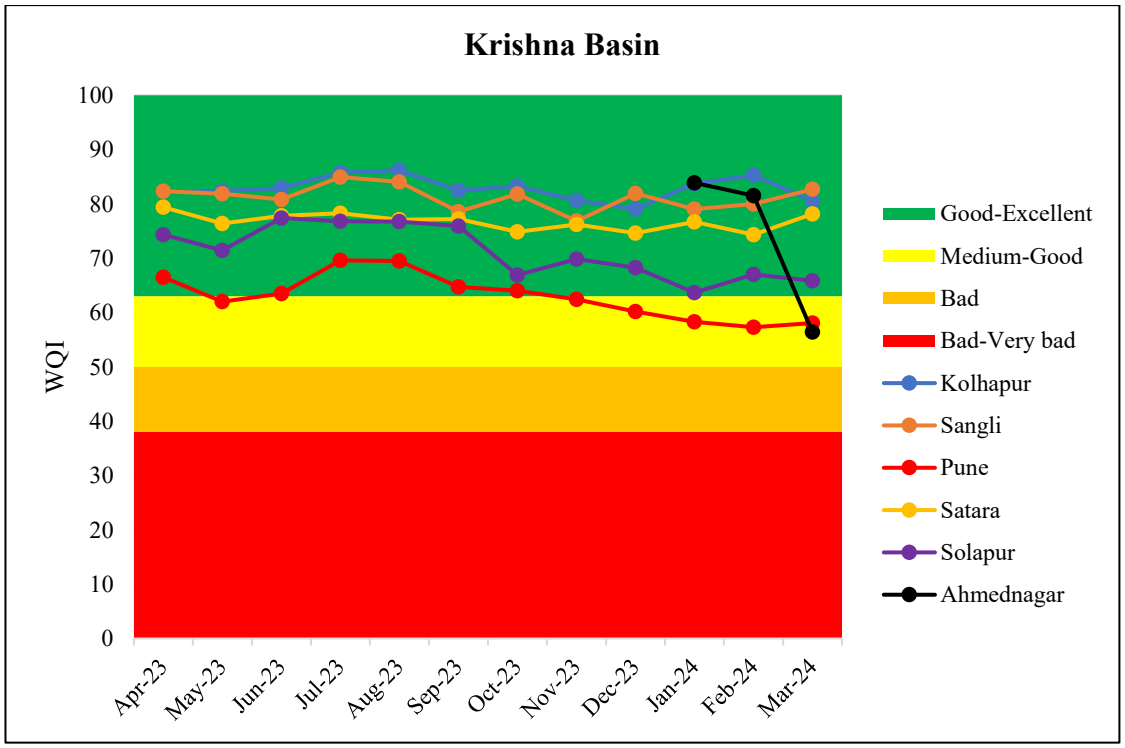


Figure 5.4 The intra-basin performance of Krishna Basin across six districts in Maharashtra F.Y. 2023-24.

5.3.2.3 Godavari Basin 2

Figure 5.5 indicates the monthly trend in WQI along Godavari Basin 2 in seven districts - Akola, Bhandara, Buldhana, Chandrapur, Nagpur, Wardha, and Yavatmal. The graph shows that all of the districts in this basin, WQIs were in the category 'Good to Excellent' which signifies that the water quality was non-polluted for all the months, except for Nagpur. In the month of July, the WQI is in 'Medium to Good'**.** Data was not recorded in Wardha in April to June, Akola and Buldhana districts (April to July, February and March).

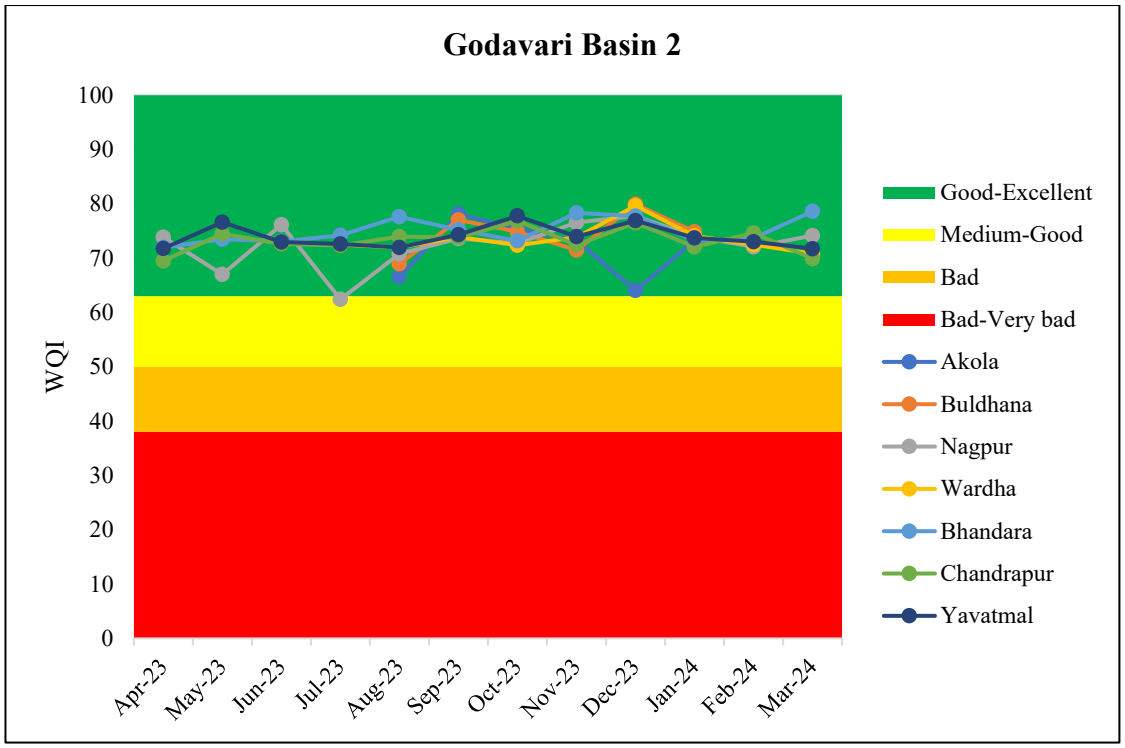


Figure 5.5 The intra-basin performance of Godavari Basin 2 across seven districts in Maharashtra F.Y. 2023-24.

5.3.2.4 Tapi Basin

Figure 5.6 shows the monthly trend in WQI along Tapi basin across six districts during the F.Y 2023-24. It can be observed that the WQI in all the six districts was 'Good to Excellent' throughout the year. The water quality was non-polluted during these months.

WQI was not recorded in Amravati district from April to July and December to March. In Akola, WQI was not recorded from April to July, February and March.

In the case of Dhule district, WQI was not recorded during April to June, February and March. WQI was not recorded in April to July, September, November to March in Nashik district.

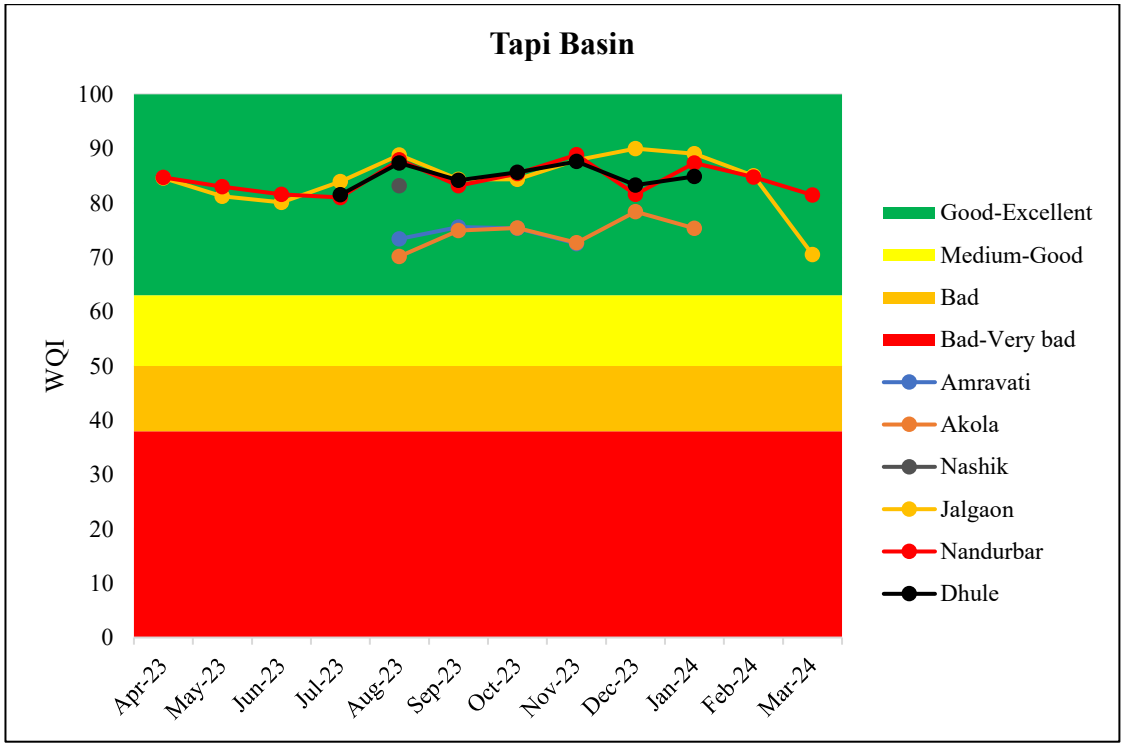


Figure 5.6 The intra-basin performance of Tapi Basin across six districts in Maharashtra F.Y. 2023-24.

5.3.2.5 Coastal Basin

5.3.2.5.1 West Flowing Rivers

In **Figure 5.7**, the monthly trend in WQI for the year 2023-24 is displayed along the West Flowing Rivers across five districts. In Ratnagiri, Raigad, Palghar and Thane district, water quality was reported as non-polluted throughout the year and the WQI was rated as 'Good to Excellent' for all the months. Water quality was not assessed in June at Thane and Palghar districts.

In Mumbai, the water quality was not assessed during June and December. The WQI was observed to be 'Bad' in the months of April and August, indicating that the water was polluted. For the rest of the year, WQI was recorded as 'Bad to Very bad'. The water was heavily polluted during these months.

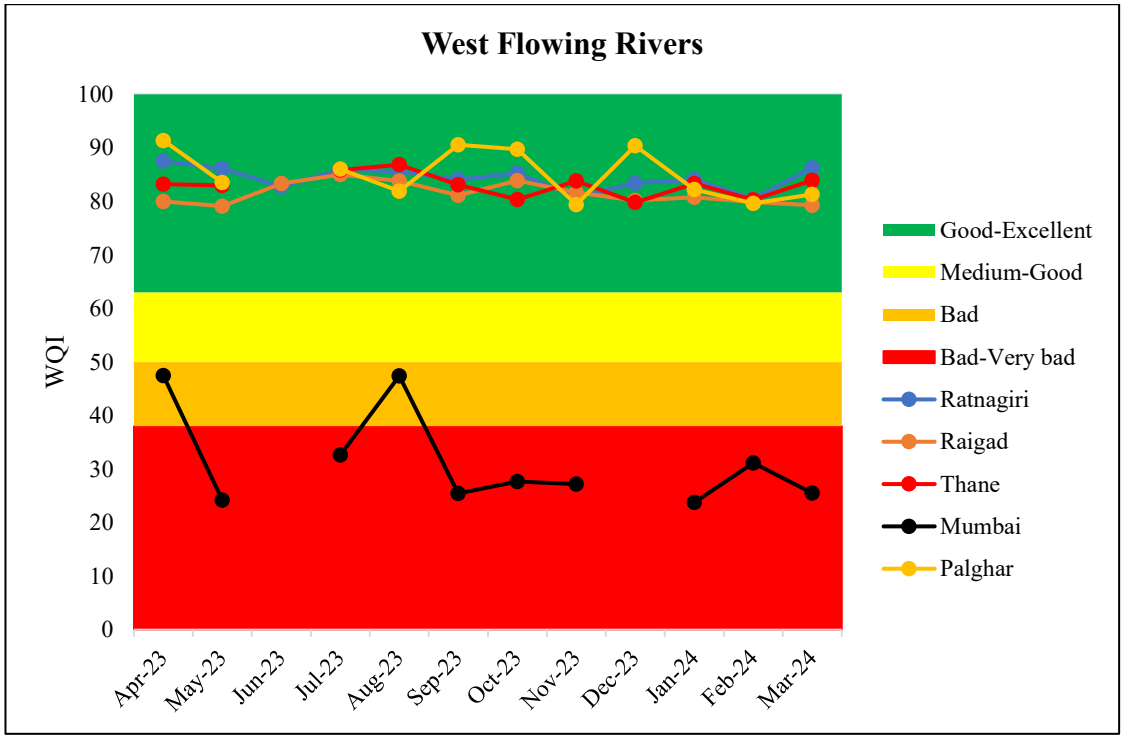


Figure 5.7 The intra-basin performance of West Flowing Rivers across five districts in Maharashtra F.Y. 2023-24.

5.3.2.5.2 Saline (Sea and Creek)

Figure 5.8 shows the monthly trend in WQI along the Saline (Sea and Creek) basin across four districts during the year 2023-24. The WQI for the Ratnagiri district was 'Good to Excellent' for the entire period from April to March. It signifies that the water was non-polluted.

In Raigad, the WQI was recorded as 'Good to Excellent' during September, October and February. The water quality was 'Medium to Good' in April to May, July, August, November to January and March. In Thane district, the WQI was recorded as 'Good to Excellent' during the months of September and October. The WQI was recorded as 'Medium to Good' for rest of the months.

For Mumbai district, the WQI was recorded as 'Good to Excellent' in the month of September. The WQI was recorded as 'Medium to Good' during April, August, October to December and February. The WQI was recorded as 'Bad' during May, July, January and March. This indicates that the water was polluted during this period. Data was not recorded for the month of June at Raigad, Thane and Mumbai.

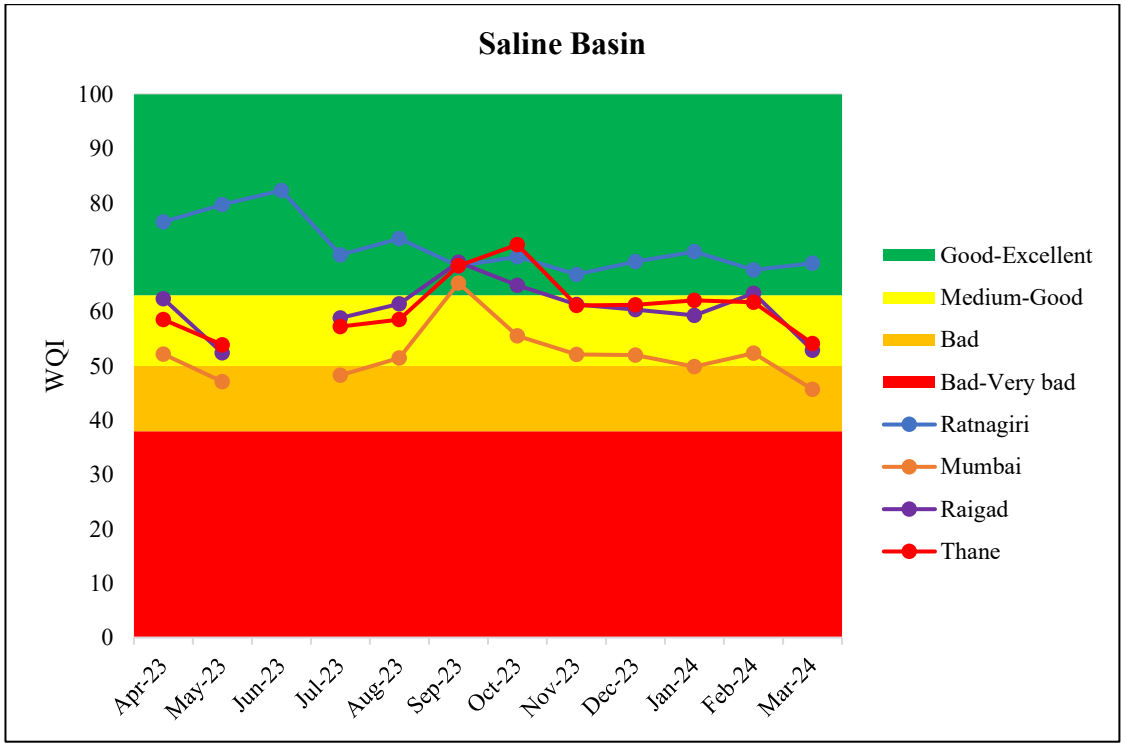


Figure 5.8 The intra-basin performance of Saline Basin across four districts in Maharashtra F.Y. 2023-24.

5.3.3 Analysis of Ground Water Quality with Statistical Details

In Maharashtra, CGWB (Central Ground Water Board), GSDA (Groundwater Survey and Development Agency) and MPCB monitor the ground water quality across various districts of the State. The water quality for groundwater across various Regions in the State is represented in **Table 5.30**, wherein WQI for 66 Ground water WQMS in Maharashtra were analysed. In F.Y. 2023-2024, nine ground water records were classified as 'Water Unsuitable for Drinking' (Station code 2007, 2008, 2831, 2833, 2821, 2822, 2823 and 1990). 21 records of ground water quality across 15 monitoring stations were observed to be 'Excellent' (Station code 2006, 2829, 2832, 2833, 2834, 2835, 219, 220, 1992, 2820, 2204, 1999, 1989, 217 and 218). There are 13 monitoring stations wherein no data has been recorded in both, April and October. Those stations are 2001, 2824, 2202, 1984, 1986, 1988, 221, 2818, 1998, 2827, 212, 213, 214.

Ground water classification based on Water Quality Index.

WQI Value	Water Quality	Colour code used in this report
<50	Excellent	
50-100	Good Water	
100-200	Poor Water	
200-300	Very Poor Water	
>300	Water Unsuitable for Drinking	

Table 5.30 WQI for Ground water in various Regions.

Apr-23	-	82.57	156.78	75.77	188.88	-	72.03	88.45	82.07	87.20
Oct-23	-	80.65	164.14	217.34	218.37	-	203.34	107.77	133.62	75.49
Station code	**2001**	**2002**	**1993**	**2200**	**2201**	**2824**	**2825**	**1994**	**2003**	**2828**
Region	**Amravati**		**Chhatrapati Sambhaji Nagar**					**Chandrapur**		

Apr-23	138.27	105.82	70.00	60.99	60.70	-	66.08	140.19
Oct-23	138.56	144.40	26.38	424.08	301.13	-	40.79	60.72
Station code	**2004**	**2005**	**2006**	**2007**	**2008**	**2202**	**2829**	**2830**
Region	**Kolhapur**							

Apr-23	29.14	25.07	21	20	67.68	24.79	459.93	38.28	263.32
Oct-23	28.75	21.58	21	21	343.74	24.36	28.30	62.55	256.24
Station code	**2834**	**2835**	**219**	**220**	**2831**	**2832**	**2833**	**1992**	**2819**
Region	**Kolhapur**							**Pune**	

Apr-23	-	158.35	-	83.45	-	49.42	548.70	278.89	491.29
Oct-23	-	171.15	-	63.28	-	145.74	538.47	326.24	-
Station code	**1984**	**1985**	**1986**	**1987**	**1988**	**2820**	**2821**	**2822**	**2823**
Region	**Thane**					**Pune**			

Apr-23	-	90.89	76.82	-	-	-	-	49	58
Oct-23	-	216.03	139.71	-	57.25	329.20	47.71	37	42
Station code	**221**	**1991**	**2816**	**2818**	**2817**	**1990**	**2204**	**217**	**218**
Region	**Nashik**							**Raigad**	

Apr-23	104.15	100.20	-	-	66.49	66.09	86.18	43.13	-
Oct-23	128.99	90.93	-	62.56	87.35	92.28	71.46	50.16	-
Station code	**1995**	**1996**	**1998**	**2000**	**1997**	**2203**	**2826**	**1999**	**2827**
Region	**Nagpur**								

Apr-23	89	99	93	-	-
Oct-23	-	-	-	-	-
Station code	**209**	**210**	**211**	**212**	**213**
Region	**Nagpur**				

Apr-23	229	112	121	123	-	106	49.93
Oct-23	177	86	95	91	-	64	283.68
Station code	**205**	**206**	**207**	**208**	**214**	**215**	**1989**
Region	**Kalyan**				**Navi Mumbai**		

5.3.4 Trend Analysis of WQI across basins over five years

5.3.4.1 WQI Trend analysis for Tapi Basin

Figure 5.9 displays the WQI trend for the Tapi Basin for the years 2019-20, 2020-21, 2022-23 and 2023-24 across Akola, Amravati, Dhule, Jalgaon, Nandurbar and Nashik districts. The average water quality was Good to Excellent for all the five years from 2019-20 to 2023-24 across all the districts except 2020-21 in Nashik. The average WQI of Nashik district for the year 2020-21 was medium to good, indicating that the water quality is non-polluted. There has been a slight improvement in the WQI values of 2023-24 as compared to the WQI of the year 2022-23.

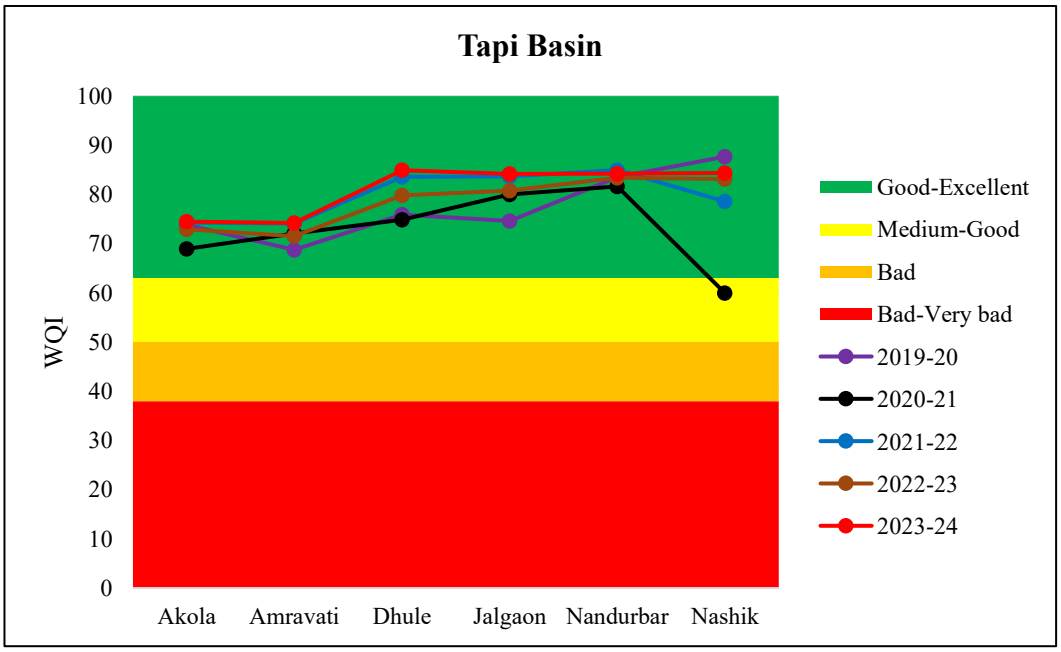


Figure 5.9 Trend Analysis for Tapi Basin.

5.3.4.2 WQI Trend Analysis for Godavari Basin 1

Figure 5.10 shows the trend of WQI over the years 2019-20 to 2023-24 for Godavari Basin 1. The water quality was analysed across eight districts - Chhatrapati Sambhaji Nagar, Beed, Jalna, Latur, Nanded, Nashik, Dharashiv and Parbhani.

The WQI was in the range 'Good to Excellent' across all the districts. Thus, water quality for the years 2019-20 to 2022-23 remained non-polluted. The average WQI of Latur district was not recorded in the year 2020-21, 2021-22 and 2023-24. Whereas for the year 2021-22, WQI of only Nashik and Dharashiv districts have been recorded.

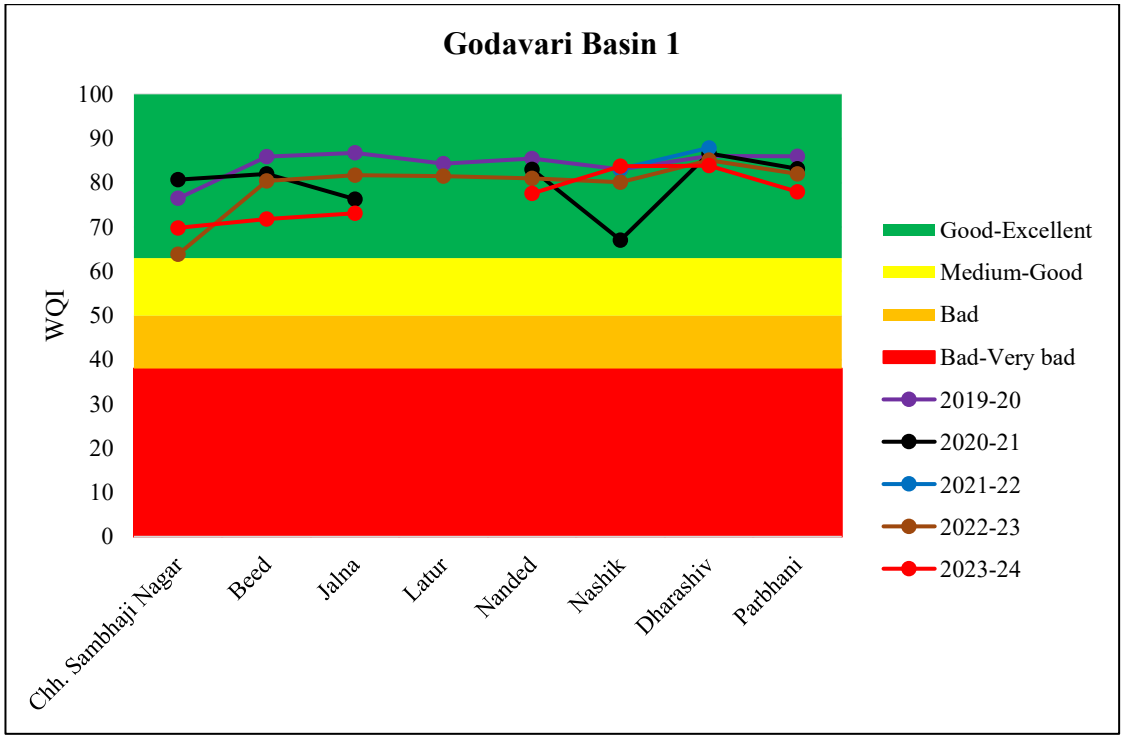


Figure 5.10 Trend Analysis for Godavari Basin 1.

5.3.4.3 WQI Trend Analysis for Godavari Basin 2

From **Figure 5.11**, the trend of WQI over the years 2019-20, 2020-21, 2021-22, 2022-23 and 2023-24 for Godavari Basin 2 can be observed. The water quality was analysed across seven districts of Godavari Basin 2, which are; Akola, Bhandara, Buldhana, Chandrapur, Nagpur, Wardha and Yavatmal. The mean WQI was recorded as 'Good to Excellent' in all the years across all districts except Nagpur. The mean WQI was recorded in the 'Good to Excellent' category in Nagpur district for all the years except 2019-20 to 2021-22. Thus, the water quality was non-polluted throughout. No significant change has been observed in the WQI of 2023-24 when compared to the WQI of 2022-23.

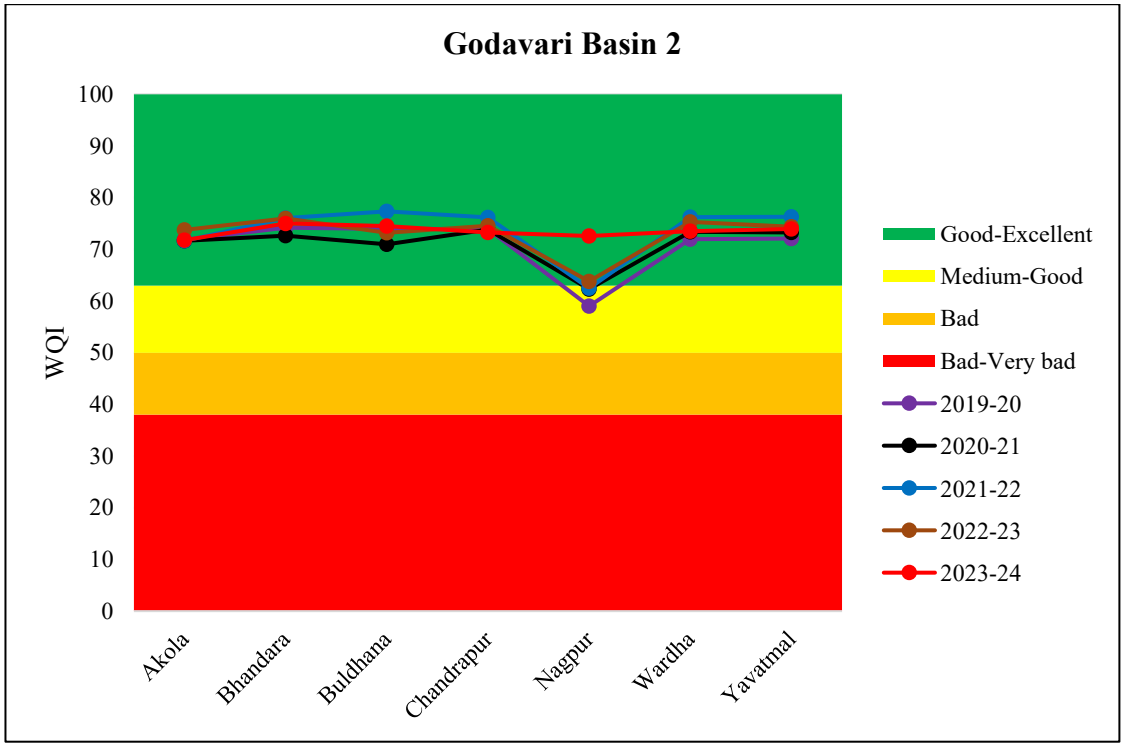


Figure 5.11 Trend Analysis for Godavari Basin 2.

5.3.4.4 WQI Trend Analysis for Krishna Basin

Figure 5.12 shows the trend of WQI over five years; 2019-20, 2020-21, 2021-22, 2022-23 and 2023-24 for Krishna Basin. The water quality was analysed across Ahmednagar, Kolhapur, Pune, Sangli, Satara and Solapur districts.

In the year 2019-20, the water quality was 'Good to Excellent' in Kolhapur, Sangli, Satara, Sangli and Solapur districts. In Ahmednagar and Pune districts, the average WQI recorded was categorised as 'Bad to Very bad' and 'Medium to Good' respectively.

For the years 2020-21, 2021-22 and 2022-23, the WQI has been classified as 'Good to Excellent' in all the districts except Ahmednagar. The water quality in Ahmednagar district was 'Medium to Good'. In 2023-24, the WQI across all districts was in the 'Good to Excellent' category, which indicates that the water quality was non-polluted.

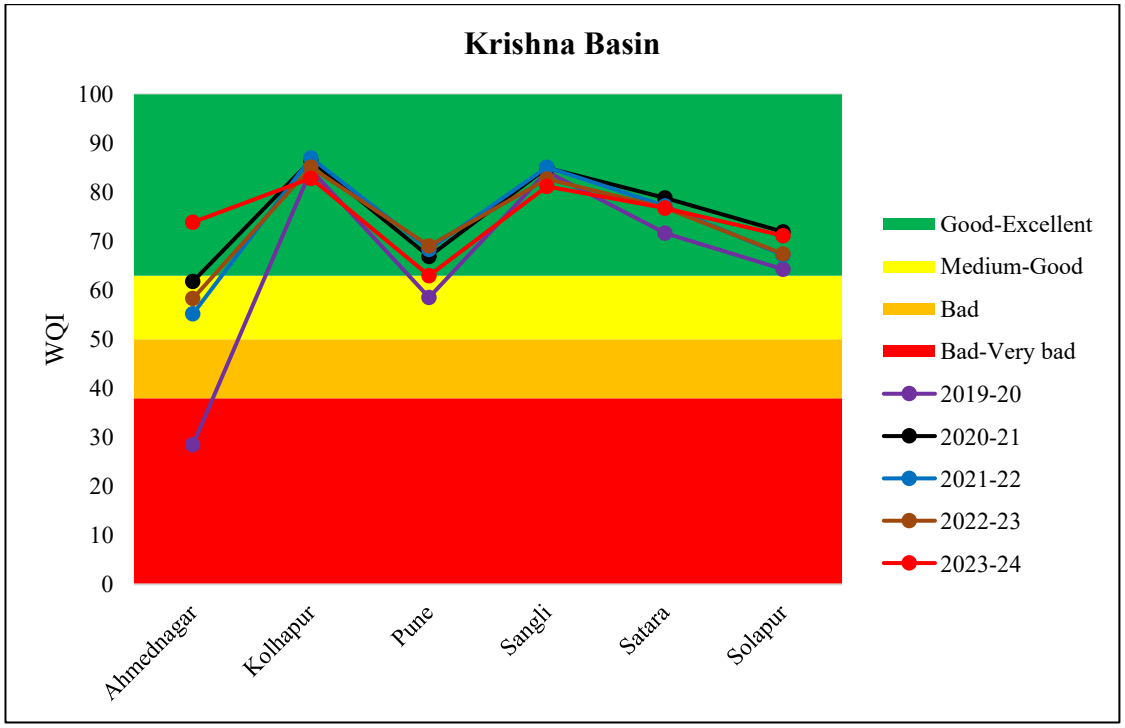


Figure 5.12 Trend analysis for Krishna Basin.

5.3.4.5 WQI Trend Analysis for West Flowing Rivers

Figure 5.13 shows the trend of WQI over the years 2019-20 to 2023-24 for West Flowing Rivers across five districts; Mumbai, Raigad, Ratnagiri, Thane and Palghar. The average WQI values of all the districts was 'Good to Excellent' for all the five years except Mumbai. In Mumbai district, the average water quality has been 'Bad' in 2019-20, 2020-21, 'Medium to Good' in 2021-22 and 'Bad to Very bad' in 2022-23 and 2023-24.

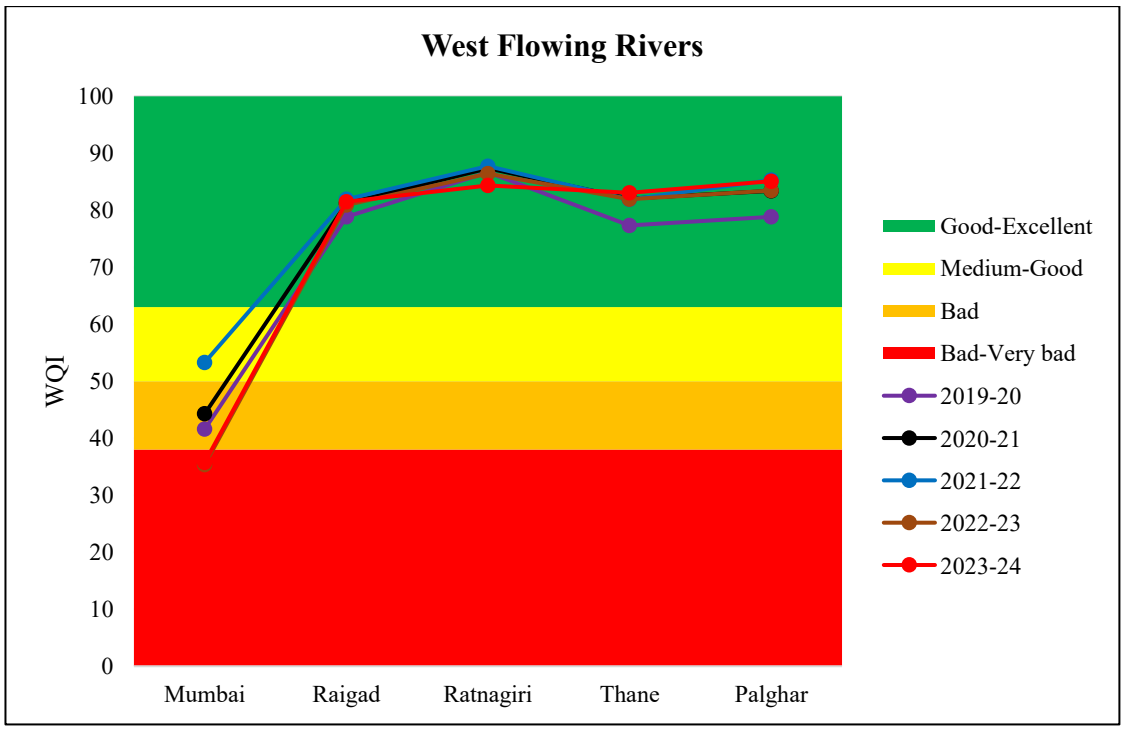


Figure 5.13 Trend Analysis for West Flowing Rivers.

5.3.4.6 WQI Trend Analysis for Saline (Sea and Creek)

The trend of WQI over five years from 2019-20 to 2023-24 for Saline (Sea and Creek) is displayed in **Figure 5.14**. The mean WQI was recorded as 'Good to Excellent' for all the five years only in Ratnagiri district. In 2019-20, the WQI was 'Medium to Good' category in Mumbai and Thane districts. Whereas it was 'Bad to Very bad' in Palghar district, which implies that the water quality was heavily polluted. The WQI in 2020-21 was 'Good to Excellent' only in Ratnagiri district, it was 'Bad to Very bad' in Palghar district and 'Medium to Good' in rest of the districts.

The mean WQI for 2021-22 was recorded as 'Medium to Good' in Mumbai, Raigad and Thane districts, indicating that the water quality was non-polluted. In the year 2022-23, the WQI was 'Good to Excellent' in Raigad, Ratnagiri districts and 'Medium to Good' in Mumbai and Thane districts. In Mumbai and Thane districts, the mean WQI for 2023-24 was 'Medium to Good' suggesting that the water quality was non-polluted. The WQI values have not been recorded in Palghar district since 2021-22.

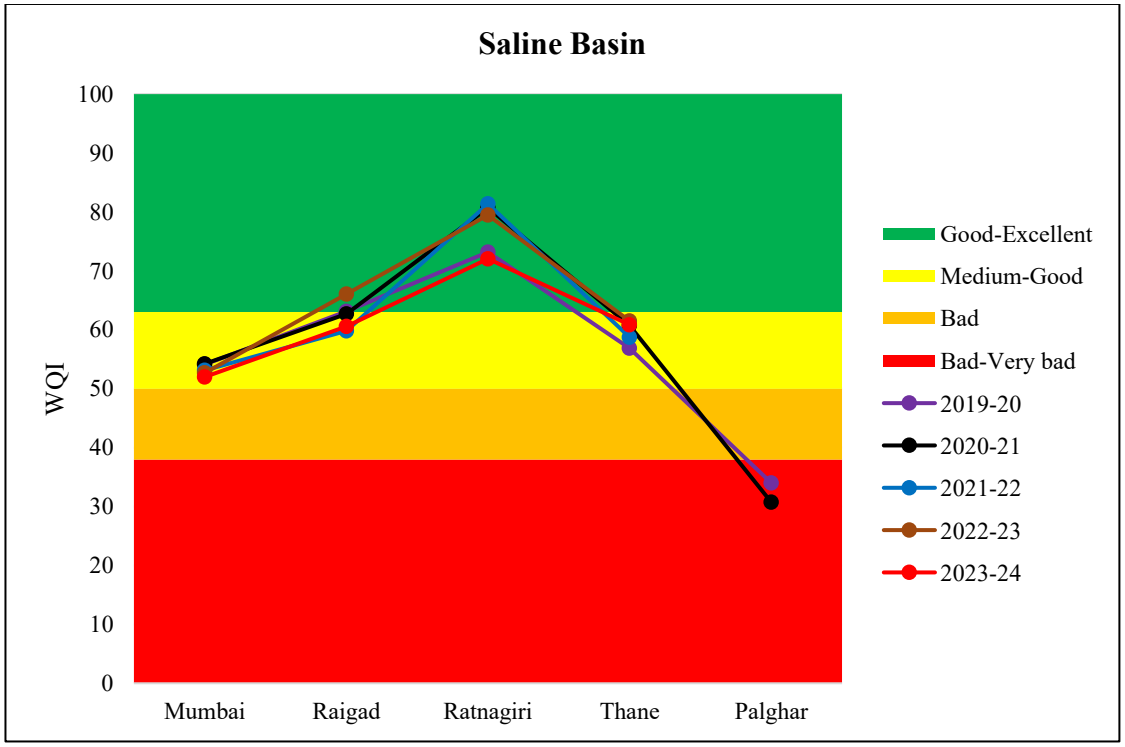


Figure 5.14 Trend Analysis for Saline (Sea and Creek).

5.4 Industrial Pollution

In the cities, the number of small-scale companies has significantly increased due to urbanization and the desire for better living conditions. These sectors produce a vast array of consumer goods and are vital to the market economy. However, many small-scale enterprises have found it difficult to achieve environmental compliance because of their unplanned growth, lack of accessible treatment equipment and variety of trading practices. It was these limitations that gave rise to the idea of Common Effluent Treatment Plants (CETPs). CETPs provide a collective solution for treating effluents generated by clusters of industries.

The Ministry of Environment, Forest and Climate Change (MoEFCC) issued notifications in 1989 that prohibited or limited the operation of specific industries. To make decisions about the location of these industries easier, the notifications have presented the idea of categorizing industries as 'Red', 'Orange', 'Green' and 'White'. The use of this concept was then expanded not only for the goal of locating industries but also for the purpose of managing consent and developing standards connected to the surveillance and inspection of industries. The size of the industries and resource consumption have been the main factors in categorizing processes thus far. The major criterion did not take into consideration pollution from emissions and effluent discharge, nor did it consider the potential impact on health.

The following 'Range of Pollution Index' criteria have been decided upon following brainstorming sessions with CPCB, SPCBs and MoEFCC for the classification of industrial sectors.

- Industrial Sectors having Pollution Index score of 60 and above - Red category.
- Industrial Sectors having Pollution Index score of 41 to 59 - Orange category.
- Industrial Sectors having Pollution Index score of 21 to 40 - Green category.
- Industrial Sectors having Pollution Index score including and up to 20 - White category.

Based on this categorization, the number of industries in Maharashtra is given in **Table 5.31**.

Table 5.31 Categorization of industries in Maharashtra.

	Large	Medium	Small
Red	4243	820	15783
Orange	3667	1414	27251
Green	1177	935	47923
White	25200		

The number of industries from different categories in each region is provided in **Table 5.32**.

Table 5.32 Categorization of industries in the State.

Amravati		
LSI	MSI	SSI
40	6	275
27	18	2240
	14	4850
White Total - 1452		

Chhatrapati Sambhaji Nagar		
LSI	MSI	SSI
349	41	747
133	107	2756
82	86	6345
White Total - 813		

Chandrapur		
LSI	MSI	SSI
133	31	253
19	44	472
14	12	673
White Total - 371		

Kolhapur		
LSI	MSI	SSI
314	104	1802
106	86	4608
40	40	8328
White Total - 7145		

Mumbai		
LSI	MSI	SSI
360	34	806
602	230	1191
39	47	2664
White Total - 262		

Nagpur		
LSI	MSI	SSI
309	64	1221
117	99	2999
26	28	2851
White Total - 705		

Navi Mumbai		
LSI	MSI	SSI
253	69	1253
185	118	1394
74	78	2043
White Total - 1111		

Pune		
LSI	MSI	SSI
1302	194	3159
1754	392	5233
596	404	8653
White Total - 5112		

Raigad		
LSI	MSI	SSI
298	53	604
110	54	697
48	38	789
White Total - 198		

Kalyan		
LSI	MSI	SSI
193	71	2228
112	76	1395
39	34	2203
White Total - 1541		

Nashik		
LSI	MSI	SSI
480	92	2072
212	148	3294
175	124	6425
White Total - 5878		

Thane		
LSI	MSI	SSI
212	61	1363
290	42	972
44	30	2099
White Total - 612		

5.4.1 Analysis and Performance of CETP with Statistical Details

Common Effluent Treatment Plants serve as a step toward a cleaner environment and provide services to society in addition to assisting companies in easily controlling pollution. The concept of CETP has many advantages. Pollutant concentrations in wastewater from a select few industries are frequently high, making it technically and economically challenging to bring them down to the appropriate level.

The section below provides region-specific data on the number of industries falling under each category, the quantity of effluent produced, the amount treated and the performance of CETPs operating in these locations. The tables in the following paragraphs show the average values recorded by individual CETPs for BOD and COD during the year 2023-24. Standards

determined by the CPCB have been considered for evaluation of performance of CETPs and are as follows:

BOD → Inland surface water - 30 mg/l

Land for irrigation - 100 mg/l

Marine coastal areas - 100 mg/l

COD → Inland surface water - 250 mg/l

Marine coastal areas - 250 mg/l

The total number of CETPs in Maharashtra: **26**

The total number of operational CETPs in Maharashtra: **25**

The total number of under-constructions CETPs in Maharashtra: **2**

The total number of non-operational CETPs in Maharashtra: **1**

Number of Industries in the State: **1,28,413**

Total capacity of CETPs : **220.85 MLD**.

Quantity of effluent load from the CETPs: **170.46 MLD**

5.4.1.1 Amravati

Additional Amravati Industrial Area CETP is the only CETP in Amravati Region, functioning with a treatment capacity of 5 MLD and effluent load of 1.5 MLD. **Table 5.33** displays the annual performance of the CETP and **Figure 5.15**.

Table 5.33 Statistical Analysis Data for CETP Performance in Amravati Region.

Parameters in mg/l	Inlet		Outlet	
	BOD (Mean)	COD (Mean)	BOD (Mean)	COD (Mean)
Additional Amravati Industrial Area	363.35	976.03	4.49	14.4

Additional Amravati Industrial Area,

- Capacity - 5 MLD
- Effluent load - 1.5 MLD
- Mode of disposal - On land for irrigation
- Performance - 98.76% BOD reduction and 98.52% COD reduction

The discharge limits of 100 mg/l for BOD were attained.

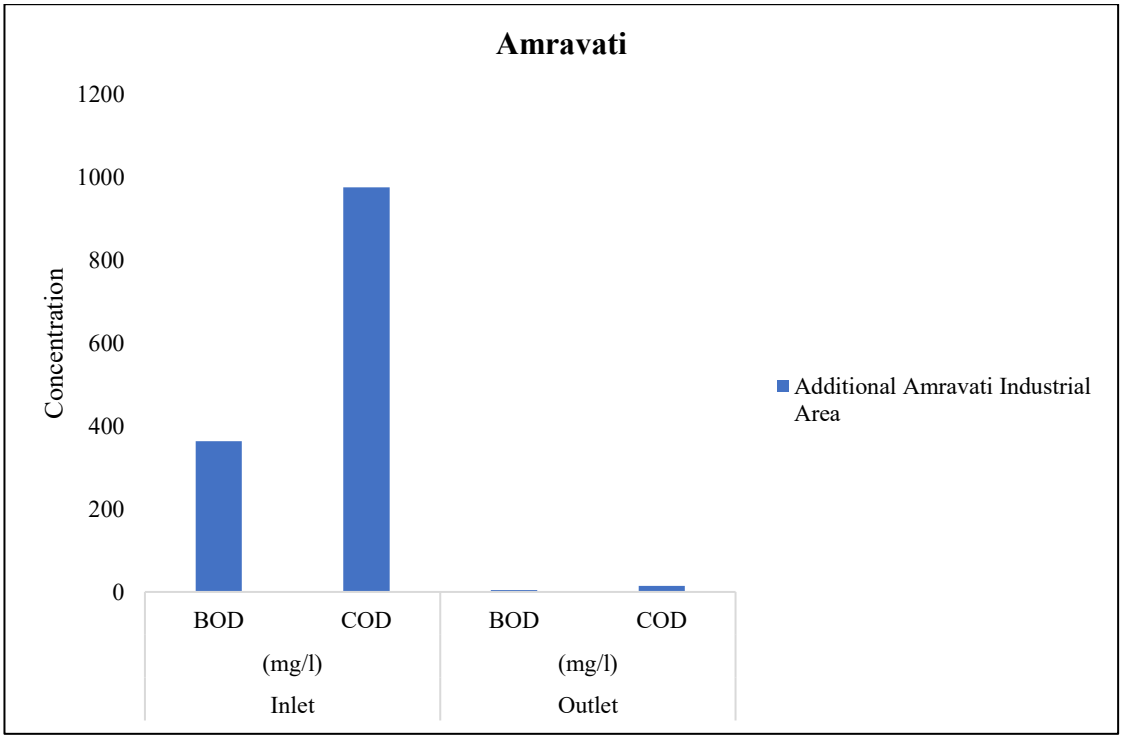


Figure 5.15 BOD and COD values of Amravati Region.

5.4.1.2 Chhatrapati Sambhaji Nagar

Chhatrapati Sambhaji Nagar Region has one CETP; SMS Waluj, with a treatment capacity of 10 MLD. The performance of the STP is presented in **Table 5.34** and **Figure 5.16** provides a graphical representation of the same.

Table 5.34 Statistical Analysis Data for CETP Performance in Chhatrapati Sambhaji Nagar Region.

Parameters in mg/l	Inlet		Outlet	
	BOD (Mean)	COD (Mean)	BOD (Mean)	COD (Mean)
SMS Waluj CETP Pvt Ltd	529.35	1561.3	33.87	118.42

SMS Waluj CETP Pvt. Ltd.,

- Capacity - 10 MLD
- Mode of disposal - Into Inland surface water
- Performance - 93.60% BOD reduction and 92.42% COD reduction

The outlet value of BOD exceeded the set standard range.

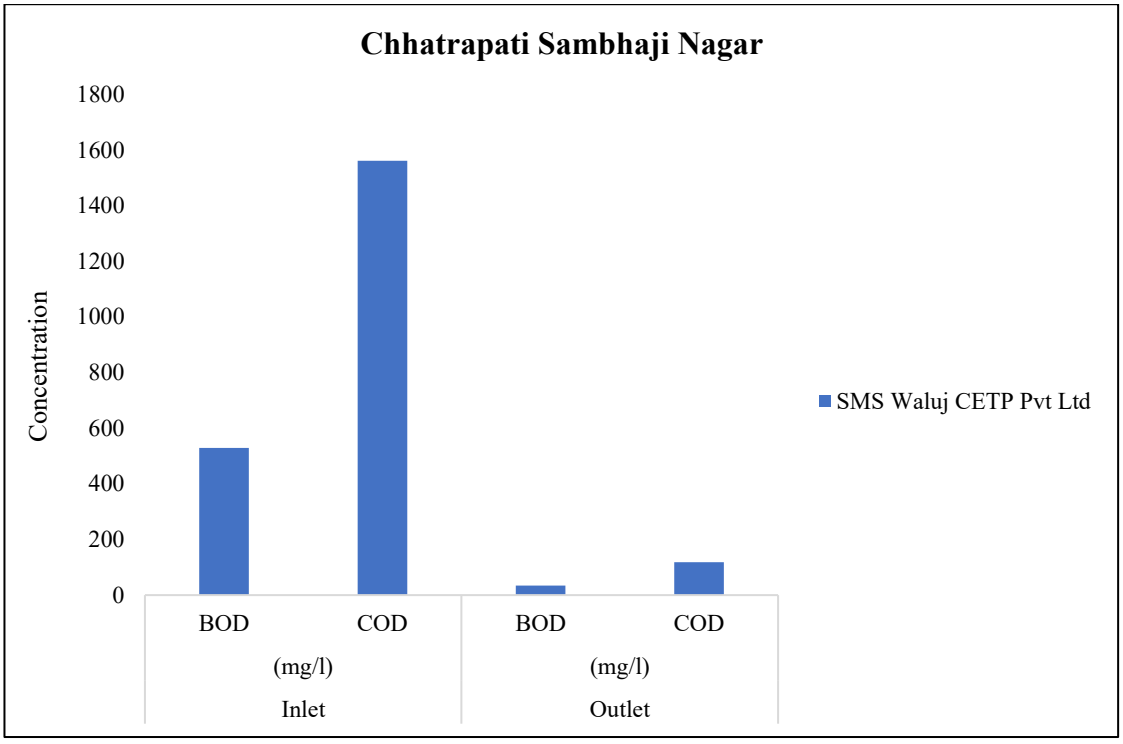


Figure 5.16 BOD and COD values of Chhatrapati Sambhaji Nagar Region.

5.4.1.3 Kalyan

There are five operational CETPs in Raigad Region with a total treatment capacity of 26.55 MLD and effluent load of 23.69 MLD. The Additional Ambernath CETP is not in operation. **Table 5.35** provides details of the annual average of the parameters analysed and **Figure 5.17** gives a graphical representation of the same.

Table 5.35 Statistical Analysis Data for CETP Performance in Kalyan Region.

Parameters in mg/l	Inlet		Outlet	
	BOD (Mean)	COD (Mean)	BOD (Mean)	COD (Mean)
ACMA - CETP-Co-operative Society Ltd	243.75	888.56	32.35	150.85
Badlapur CETP Association	406.83	1380.71	55.69	238.68
Chikhloli-Morivali Effluent Treatment	310.40	1039.90	37.78	153.13
Dombivli Better Environment System Association	496.06	1582.39	55.53	216.55
Dombivli CETP (Chemical) (Phase-II)	557.65	1985.67	64.67	271.17

ACMA CETP Co-operative Society Ltd,

- Capacity - 0.25 MLD
- Effluent load - 0.051 MLD
- Mode of disposal - Into Inland surface water
- Performance - 86.73% BOD reduction and 83.02% COD reduction

The average outlet value of BOD was exceeding the discharge limit of 30 mg/l.

Badlapur CETP Association,

- Capacity - 8 MLD
- Effluent load - 7 MLD
- Mode of disposal - Into Inland surface water
- Performance – 86.31% BOD reduction and 82.71% COD reduction

The average outlet value of BOD was exceeding the discharge limit of 30 mg/l.

Chikhloli-Morivali Effluent Treatment,

- Capacity - 0.8 MLD
- Effluent load - 0.14 MLD
- Mode of disposal - Into Marine coastal areas
- Performance - 87.83% BOD reduction and 85.27% COD reduction

The discharge limits of 100 mg/l for BOD and 250 mg/l for COD were attained.

Dombivli Better Environment System Association,

- Capacity - 16 MLD
- Effluent load - 15 MLD
- Mode of disposal - Into Marine coastal areas
- Performance - 88.81% BOD reduction and 86.32% COD reduction

The discharge limits of 100 mg/l for BOD and 250 mg/l for COD were attained.

Dombivli CETP (Chemical) (Phase-II),

- Capacity - 1.5 MLD
- Effluent load - 1.5 MLD
- Mode of disposal - Into Inland surface water
- Performance - 88.40% BOD reduction and 86.34% COD reduction

The discharge limits of 30 mg/l for BOD and 250 mg/l for COD were attained.

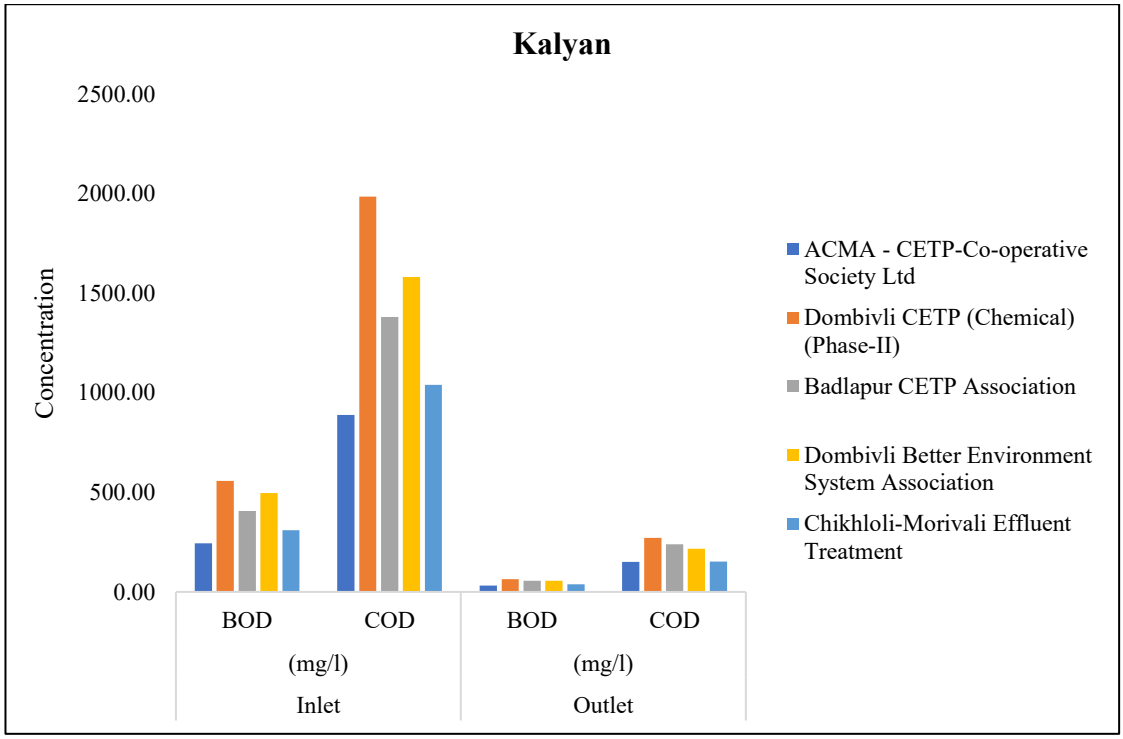


Figure 5.17 BOD and COD values of Kalyan Region.

5.4.1.4 Kolhapur

There are five CETPs in this Region with a combined treatment capacity of 29.8 MLD. Ichalkaranji Textile Development Cluster Ltd. (1 MLD) and (12 MLD) are under construction. The overall effluent load at the CETPs was 15.4 MLD. The average performance of each CETP is presented in **Table 5.36** and **Figure 5.18**.

Table 5.36 Statistical Analysis Data for CETP Performance in Kolhapur Region.

Parameters in mg/l	Inlet		Outlet	
	BOD (Mean)	COD (Mean)	BOD (Mean)	COD (Mean)
L.K. Akiwate Industrial Co-op., Estate Ltd.	741.6	2415.19	130.36	403.55
Lote Parshuram Environment Protection Co-op. Society	538.52	1582.32	51.76	167.34
Kagal-Hatkanangale CETP	63.32	186.04	40.84	133.57
Ichalkaranji Textile Development Cluster Ltd. (12 MLD)	573.17	1800.1	29.91	124.51
Ichalkaranji Textile Development Cluster Ltd. (1 MLD)	489.47	1400.07	36.04	135.02

L. K. Akiwate Industrial Co-op. Estate Ltd,

- Capacity - 0.8 MLD
- Effluent load - 0.8 MLD
- Mode of disposal - Into marine coastal areas
- Performance - 82.42% BOD reduction and 83.29% COD reduction

The discharge limits of 100 mg/l for BOD and 250 mg/l for COD were exceeded.

Lote Parshuram Environment Protection Co-op Society,

- Capacity - 6 MLD
- Effluent load - 4.6 MLD
- Mode of disposal - Into marine coastal areas
- Performance - 90.39% BOD reduction and 89.42% COD reduction

The discharge limits of 100 mg/l for BOD and 250 mg/l for COD were attained.

Kagal-Hatkanangale CETP,

- Capacity - 10 MLD
- Effluent load - 10 MLD
- Mode of disposal - On Land for irrigation
- Performance - 35.50% BOD reduction and 28.20% COD reduction

The average outlet value for BOD was within the prescribed discharge limits of 100 mg/l.

Ichalkaranji Textile Development Cluster Ltd. (1 MLD) (under construction),

- Capacity - 1 MLD
- Mode of disposal - Into Inland surface water
- Performance - 92.64% BOD reduction and 90.36% COD reduction

The outlet value exceeded the discharge limit of 30 mg/l for BOD.

Ichalkaranji Textile Development Cluster Ltd. (12 MLD) (under construction),

- Capacity - 12 MLD
- Mode of disposal - Into Inland surface water
- Performance - 94.78% BOD reduction and 93.08% COD reduction

The discharge limits of 30 mg/l for BOD and 250 mg/l for COD were attained.

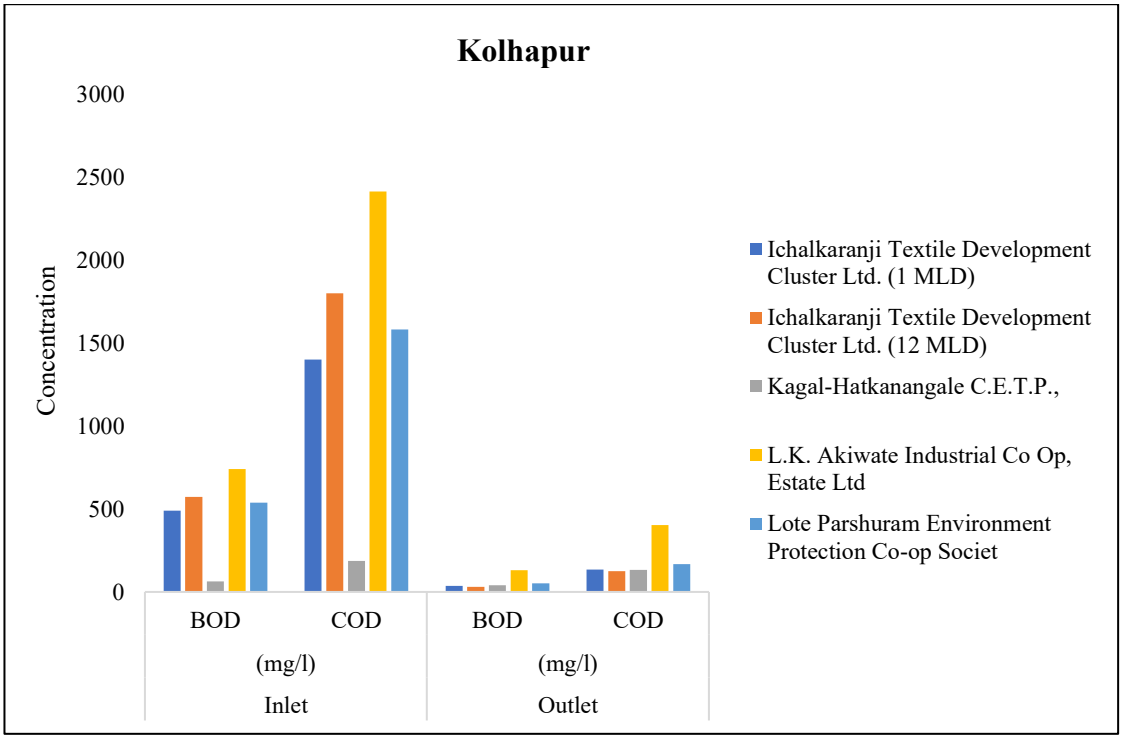


Figure 5.18 BOD and COD values of Kolhapur Region.

5.4.1.5 Navi Mumbai

There are two CETPs in Navi Mumbai Region for F.Y. 2023-24 with a combined treatment capacity of 49.5 MLD. and effluent load received by these CETPs is 41 MLD. **Table 5.37** shows the parameters analysed for the performance of each CETP and **Figure 5.19** illustrates it.

Table 5.37 Statistical Analysis Data for CETP Performance in Navi Mumbai Region.

Parameters in mg/l	Inlet		Outlet	
	BOD (Mean)	COD (Mean)	BOD (Mean)	COD (Mean)
Taloja CETP Co-operative Society	2527.5	8666.87	344.5	1007.5
Thane-Belapur Association	499.67	1745.55	48.96	218.96

Taloja CETP Co-operative Society,

- Capacity - 22.5 MLD
- Effluent load - 16 MLD
- Mode of disposal - Into marine coastal areas
- Performance - 86.37% BOD reduction and 88.38% COD reduction

The discharge limits of 100 mg/l for BOD and 250 mg/l for COD were exceeded.

Thane - Belapur Association,

- Capacity - 27 MLD
- Effluent load - 25 MLD
- Mode of disposal - Into marine coastal areas
- Performance - 90.20% BOD reduction and 87.46% COD reduction

The discharge limits of 100 mg/l for BOD and 250 mg/l for COD were attained.

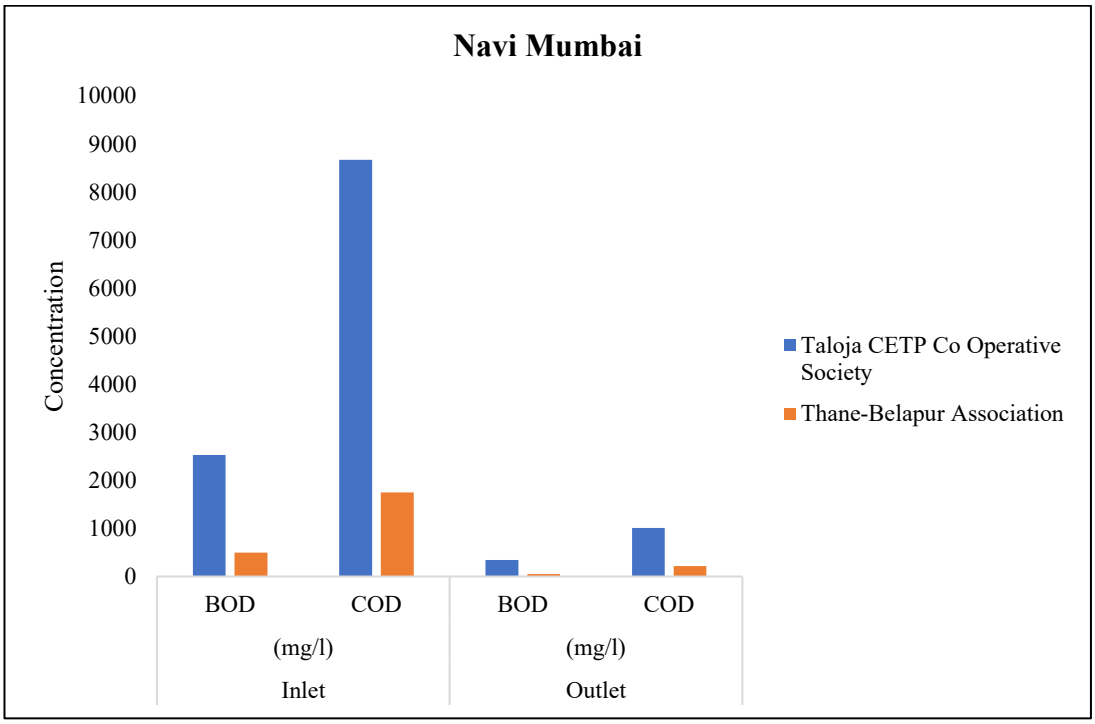


Figure 5.19 BOD and COD values of Navi Mumbai Region.

5.4.1.6 Nagpur

In Nagpur Region, Butibori CETP Pvt. Ltd. is the only CETP, functioning with a treatment capacity of 5 MLD. The effluent load received by this CETP was 4.5 MLD. The annual performance of the CETP is given in **Table 5.38** and **Figure 5.20**.

Table 5.38 Statistical Analysis Data for CETP Performance in Nagpur Region.

Parameters in mg/l	Inlet		Outlet	
	BOD (Mean)	COD (Mean)	BOD (Mean)	COD (Mean)
Butibori CETP Pvt. Ltd.	374.9	1005.45	18.36	52.58

Butibori CETP Pvt. Ltd.,

- Capacity - 5 MLD
- Effluent load - 4.5 MLD
- Mode of disposal - Into Inland surface water
- Performance - 95.10% BOD reduction and 94.77% COD reduction

The discharge limits of 30 mg/l for BOD and 250 mg/l for COD were attained.

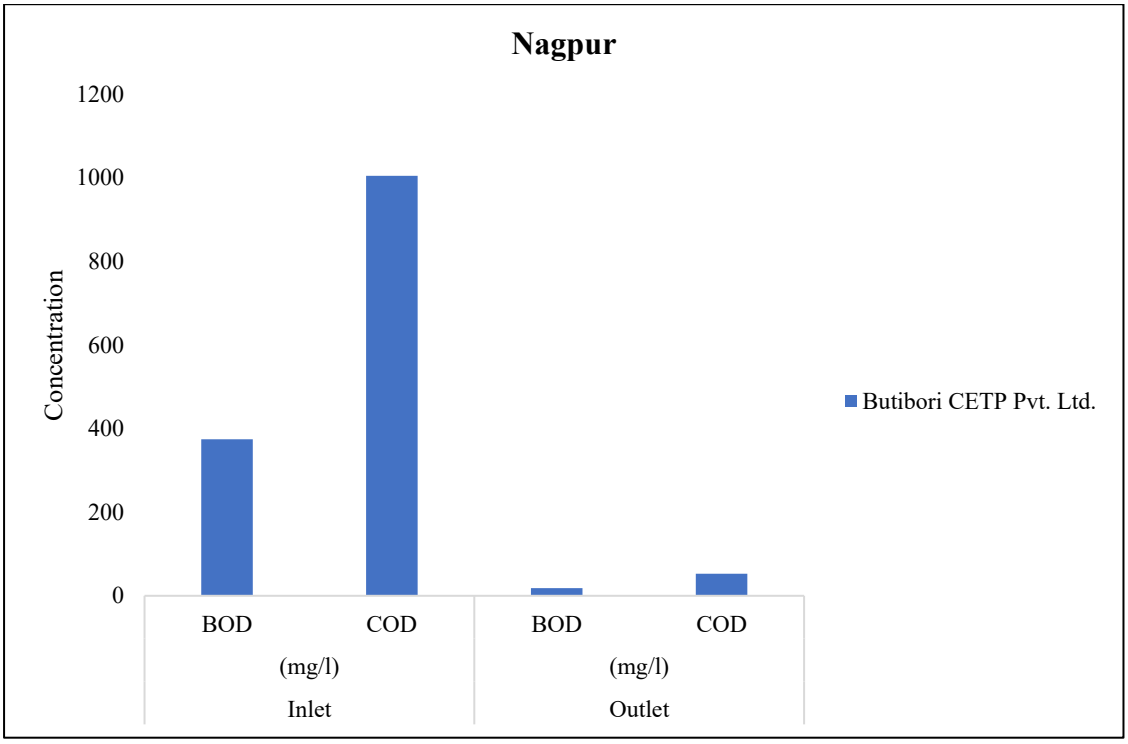


Figure 5.20 BOD and COD values of Nagpur Region.

5.4.1.7 Pune

There are five functional CETPs in this region with a total treatment capacity of 12.5 MLD. The total effluent load received was 6.37 MLD cumulatively. The performance of all the CETPs in Pune Region is displayed in **Table 5.39** and illustrated in **Figure 5.21**.

Table 5.39 Statistical Analysis Data for CETP Performance in Pune Region.

Parameters in mg/l	Inlet		Outlet	
	BOD (Mean)	COD (Mean)	BOD (Mean)	COD (Mean)
Greenfield CETP Pvt. Ltd.	225.44	609.53	107.62	283.49
Hydro Air Tectonics (PCD)	9.44	27.53	13.71	41.57
Akkalkot CETP	277	734.5	117.14	312.33
Kurkumbh Environment Protection Co-op. Society	358.07	949.92	100.28	262.32
Ranjangaon CETP	91.86	242.67	70.75	187.76

Greenfield CETP Pvt. Ltd.,

- Capacity - 1.5 MLD
- Effluent load - 0.5 MLD
- Mode of disposal - Into marine coastal areas
- Performance - 52.26% BOD reduction and 53.49% COD reduction

The discharge limits of 100 mg/l for BOD and 250 mg/l for COD were exceeded.

Hydro Air Tectonics,

- Capacity - 4 MLD
- Effluent load - 4 MLD
- Mode of disposal - On Land for irrigation

The discharge limit of 100 mg/l for BOD was attained.

Akkalkot CETP,

- Capacity - 3 MLD
- Mode of disposal - Into Inland surface water
- Performance - 57.71% BOD reduction and 57.48% COD reduction

The discharge limits of 30 mg/l for BOD and 250 mg/l for COD were exceeded.

Kurkumbh Environment Protection Co-op. Society,

- Capacity - 1 MLD
- Effluent load - 0.37 MLD
- Mode of disposal - On land for irrigation
- Performance - 71.99% BOD reduction and 72.39% COD reduction

The discharge limits of 100 mg/l for BOD was attained.

Ranjangaon CETP,

- Capacity - 3 MLD
- Effluent load - 1.5 MLD
- Mode of disposal - On land for irrigation
- Performance - 22.98% BOD reduction and 22.63% COD reduction

The discharge limits of 100 mg/l for BOD was attained.

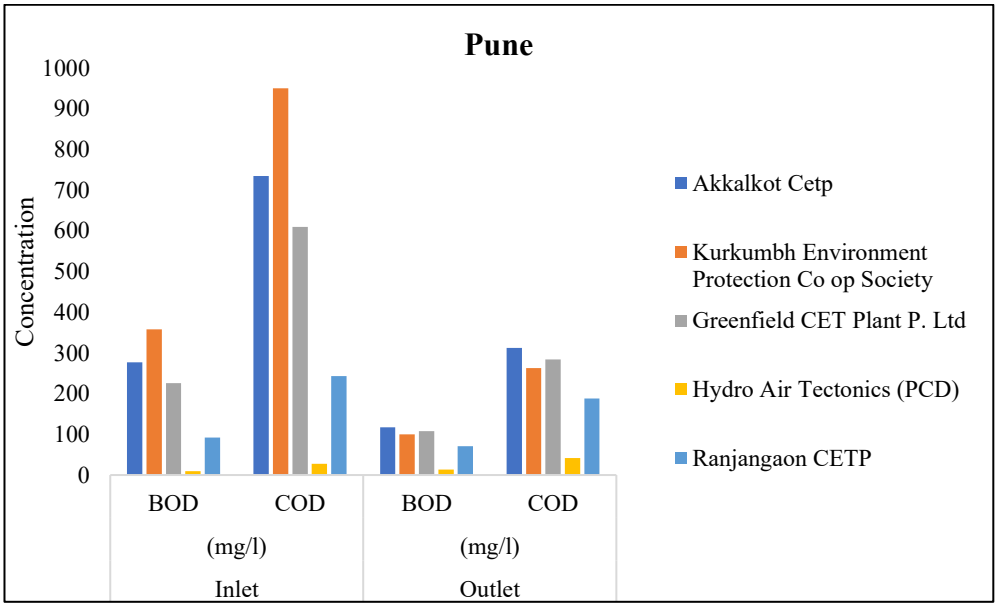


Figure 5.21 BOD and COD values of Pune Region.

5.4.1.8 Raigad

Raigad Region has three CETPs with a combined treatment capacity of 32.5 MLD and received total effluent load of 33 MLD. **Table 5.40** provides the details of performance of each CETP and graphical representation of the same is given in **Figure 5.22**.

Table 5.40 Statistical Analysis Data for CETP Performance in Raigad Region.

Parameters in mg/l	Inlet		Outlet	
	BOD (Mean)	COD (Mean)	BOD (Mean)	COD (Mean)
MMA-CETP Co Operative Society Ltd.	191.26	576.32	68.37	212.56
PRIA CETP (I) Ltd.	174.64	500.02	57.98	196.52
RIA CETP Co-op. Society Ltd.	824.53	2343.92	94.02	384.49

MMA-CETP Co Operative Society Ltd,

- Capacity - 7.5 MLD
- Effluent load - 8.5 MLD
- Mode of disposal - Into marine coastal areas
- Performance - 64.25% BOD reduction and 63.12% COD reduction

The discharge limits of 100 mg/l for BOD and 250 mg/l for COD were attained.

PRIA CETP (I) Ltd.,

- Capacity - 15 MLD
- Effluent load - 15 MLD
- Mode of disposal - Into marine coastal areas
- Performance - 66.80% BOD reduction and 60.70% COD reduction

The discharge limits of 100 mg/l for BOD and 250 mg/l for COD were attained.

RIA-CETP Co-op. Society Ltd,

- Capacity - 10 MLD
- Effluent load - 9.5 MLD
- Mode of disposal - Into marine coastal areas
- Performance - 88.60% BOD reduction and 83.60% COD reduction

The discharge limits of 250 mg/l for COD was exceeded.

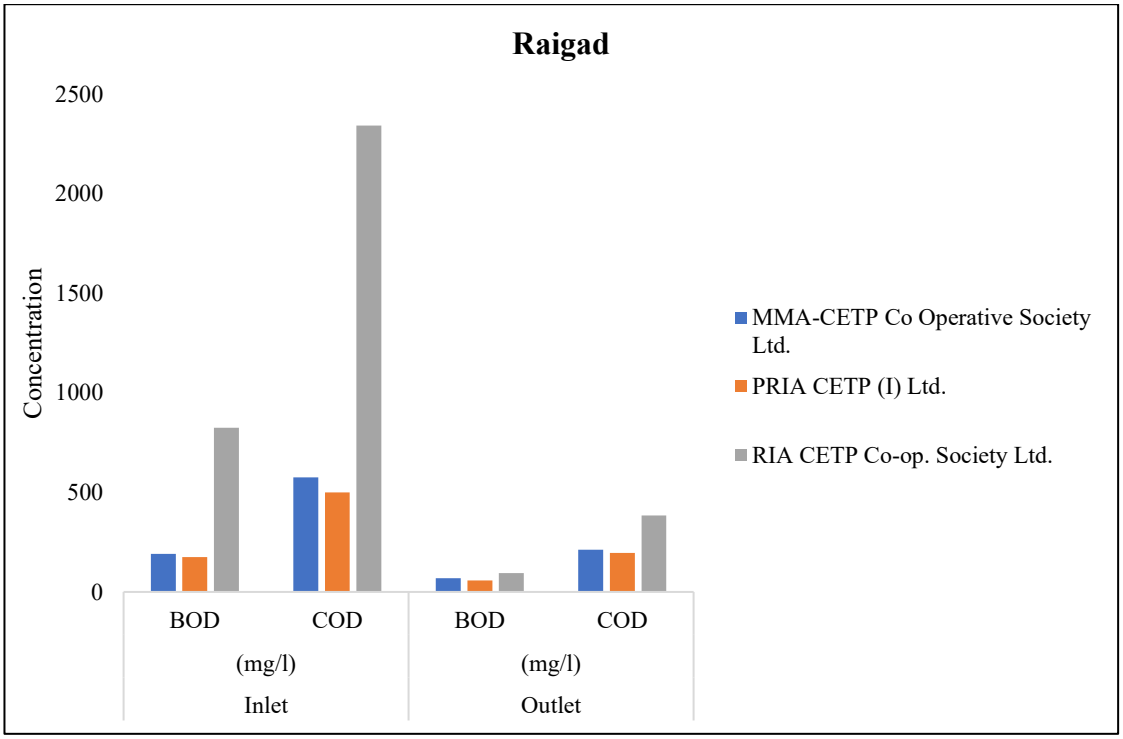


Figure 5.22 BOD and COD values of Raigad Region.

5.4.1.9 Thane

There are two CETPs in Thane Region with a cumulative capacity 50 MLD. 45 MLD of combined effluent load was received by these CETPs. The details of annual performance of each CETP is given in **Table 5.41** and represented in **Figure 5.23**.

Table 5.41 Statistical Analysis Data for CETP Performance in Thane Region.

Parameters in mg/l	Inlet		Outlet	
	BOD (Mean)	COD (Mean)	BOD (Mean)	COD (Mean)
Tarapur Environment Protection Society CETP, Phase-II, Dist. Thane	534.03	1421.61	109.08	290.68
Tarapur Environment Protection Society CETP, Plot No. AM-29.	0	0	0	0

Tarapur Environment Protection Society CETP, Phase-II, Dist. Thane,

- Capacity - 25 MLD
- Effluent load - 25 MLD
- Performance - 79.57% BOD reduction and 79.55% COD reduction

Tarapur Environment Protection Society CETP, Plot No. AM-29,

- Capacity - 25 MLD
- Effluent load - 20 MLD
- Mode of Disposal - Into Marine Coastal areas

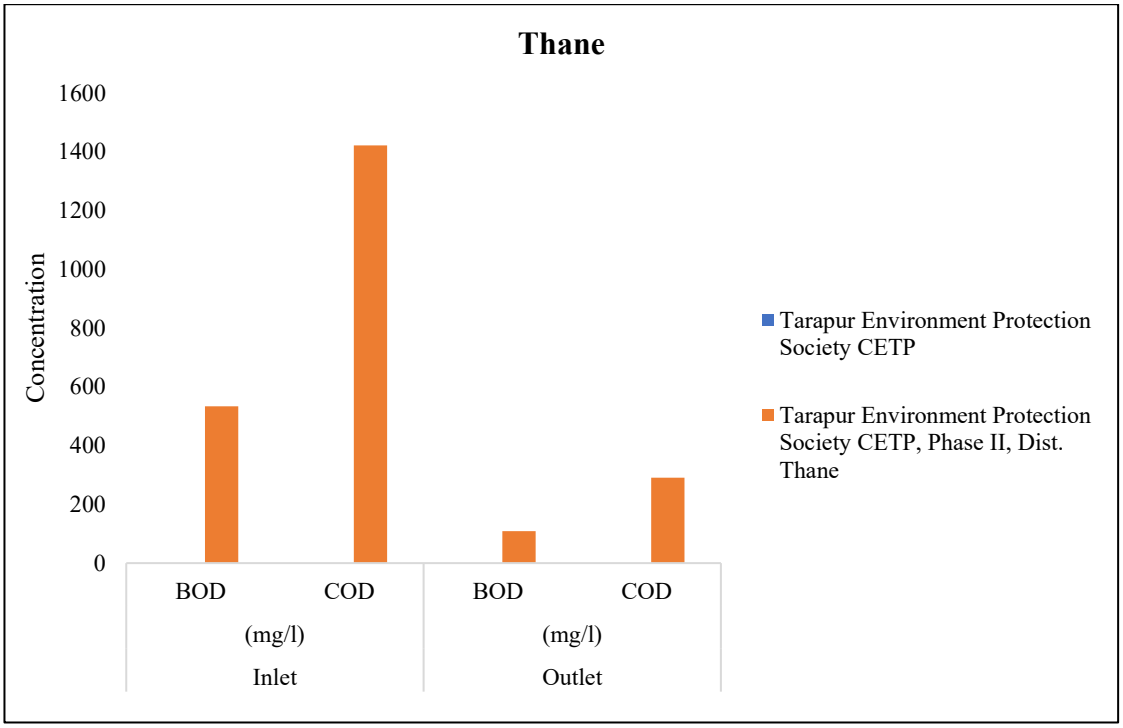


Figure 5.23 BOD and COD values of Thane Region.

5.5 Domestic Wastewater Treatment

A sewage treatment plant is a crucial facility designed to process and treat wastewater from residential, commercial and industrial sources. This process involves the removal of contaminants and pollutants from sewage to produce treated effluent and solid sludge. Primary treatment typically includes the physical removal of large debris and sediment, followed by secondary treatment, where biological processes break down organic matter. Advanced treatment methods, such as tertiary treatment, may be employed to further enhance water quality. Sewage treatment plants play a vital role in safeguarding public health, protecting the environment and ensuring the responsible disposal or reuse of treated water in various applications.

5.5.1 Analysis of Performance of Sewage Treatment Plants with Statistical Details

Details of STPs according to Regions in the State of Maharashtra are presented in the following sections and the performance of STPs is analysed based on standards of 10 mg/l for Biochemical Oxygen Demand (BOD) and 20 mg/l for Total Suspended solids (TSS) as prescribed by CPCB in the Environment (Protection) Rules, 1986 in Schedule-VI.

Sewage generated and treated in Urban Local Bodies of the State during 2023-24;

- Total sewage generation: **6311.14 MLD**
- Total treatment capacity (operational STPs): **6951.31 MLD**
- Total STPs: **156**
- Total Operational STPs: **152**
- Total Non-operational, under construction STPs: **4**
- Total Additional STPs: **9**

5.5.1.1 Amravati

In the Amravati Region, there are seven STPs for F.Y 2023-24 with total treatment capacity of 128.5 MLD. The combined effluent generated was 163.6 MLD. Whereas, the amount of sewage received and treated was 121.1 MLD in this region. **Table 5.42** shows the average annual performance and analysis of all STPs offered in the Amravati Region.

Table 5.42 Mean of Annual Performance of STPs in Amravati Region.

Location of STP	Parameters (mg/l)					
	pH		BOD (Mean)		SS (Mean)	
	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet
STP-I Lalkhadi	-	7.70	-	6.5	-	28
STP-II Lalkhadi	-	7.80	-	12.9	-	54
STP Washim	-	8.1	-	51.4	-	118
Siloda, Akola	-	8	-	7.5	-	40
PKV Akola	-	8	-	12.9	-	34
Phase-I, Shegaon	-	8	-	9.6	-	44
Phase-II, Shegaon	-	11.9	-	65	-	65

From the above table, the outlet values for BOD were within the prescribed discharge standard of 10 mg/l only at STP-I Lalkhadi, Phase-I Shegaon, and Siloda Akola. The outlet values for Suspended solids (SS) were exceeding the standard of 20 mg/l at all the STPs.

5.5.1.2 Chhatrapati Sambhaji Nagar

There are 11 STPs in Chhatrapati Sambhaji Nagar Region of total treatment capacity 393 MLD. 'Hingoli Municipal Council' and 'Waravanti, Latur' are the new STPs for F.Y. 2023-24. The installation of Jalna Municipal Council STP is currently in progress, while the STP at Salim Ali Lake is being upgraded. The total sewage received by all STPs was 140.4 MLD, all of which was treated. The amount of sewage generated in this region was 301.21 MLD. The average annual performance and analysis of all STPs provided in Chhatrapati Sambhaji Nagar Region is represented in **Table 5.43.**

Table 5.43 Mean of Annual Performance of STPs in Chhatrapati Sambhaji Nagar Region.

Location of STP	Parameters (mg/l)					
	pH		BOD (Mean)		SS (Mean)	
	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet
Kanchanwadi, Chhatrapati Sambhaji Nagar	-	7.94	-	19.98	-	435.8
Padegaon, Chhatrapati Sambhaji Nagar	-	8.14	-	33.42	-	495.6
Salim Ali Lake, Chhatrapati Sambhaji Nagar	Presently upgradation of STP is in progress and sewage is diverted to Kanchanwadi STP which has sufficient capacity.					
At Zalta, Chhatrapati Sambhaji Nagar	-	7.96	-	30.2	-	582.4
Bondar	-	8.2	-	54.5	-	33.5
Elichpur	-	7.8	-	34.1	-	42.5
Sangvi	-	8.1	-	35	-	36.3
Hingoli Municipal Council	-	-	-	-	-	-
At Partur Nagar Parishad, Tq. Partur, Dist. Jalna	-	-	-	-	-	-
Work of installation of STP at Jalna Municipal council is under process	-	-	-	-	-	-
Waravanti, Latur	Nil	Nil	Nil	Nil	Nil	Nil

It can be observed from **Table 5.43** that the outlet values of BOD and SS were exceeding the set standards at all the STPs.

5.5.1.3 Chandrapur

The Chandrapur Municipal Corporation operates two STPs. The combined treatment capacity of these sewage treatment plants is 70 MLD. During the year 2023-24, the total quantity of domestic effluent received and treated was 35.5 MLD. The annual performance and analysis of all STPs is provided in Chandrapur Region are represented in **Table 5.44.**

Table 5.44 Mean of Annual Performance of STPs in Chandrapur Region.

Location of STP	Parameters (mg/l)					
	pH		BOD (Mean)		SS (Mean)	
	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet
Pathanpura	7.53	8.1	16.98	7.13	110.18	18.45
Rehmat Nagar	7.69	7.72	12.53	7.4	62.09	42.27

Table 5.44 shows that the outlet values of pH, BOD, and SS values at Pathanpura STP in Chandrapur Region meet the prescribed discharge standards. However, the SS outlet value at Rehmat Nagar was 42.27 mg/l, surpassing the standard value of 20 mg/l. The performance of each STP is given below;

Pathanpura

- Capacity - 45 MLD
- Effluent load - 24.5 MLD
- Performance - 58.01% BOD reduction and 83.25% SS reduction

Rehmat Nagar

- Capacity - 25 MLD
- Effluent load - 11 MLD
- Performance - 40.94% BOD reduction and 31.92% SS reduction

5.5.1.4 Kalyan

The Kalyan Region has a total of 17 STPs for the year 2023-24 with a combined treatment capacity of 343.48 MLD. 'Vadavali STP', 'Wadeghar STP', 'Private STP' and 'Ulhasnagar Khadegolivali' are the additional STPs for the current financial year. Total effluent received by the STPs was 206 MLD and all was treated. **Table 5.45** provides a detailed information about all the STPs in the Region.

Table 5.45 Mean of Annual Performance of STPs in the Kalyan Region.

Location of STP	Parameters (mg/l)					
	pH		BOD (Mean)		S.S. (Mean)	
	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet
Barve STP	-	7.3	-	8.8	-	8.8
Adharwadi STP	-	7.3	-	4	-	16.4
Chinchapada STP	-	7.3	-	10.4	-	15.7
Titwala (E) STP	-	7.5	-	3.7	-	8.9
Titwala (W) STP	-	7.9	-	5.6	-	10.6
Vadavali STP	-	7.9	-	5.2	-	11
Wadeghar STP	-	7.8	-	3.7	-	8
Private STP	-	-	-	-	-	-
Bhiwandi Nizampur City Municipal Corporation	-	7.4	-	39.33	-	20.63
	-	7.8	-	66.46	-	13.22
Vadalgaon	7.3	7.7	58	21	74	37
Chikloli	7.1	7.3	57	41	50	20
Badlapur	7.3	7.4	230	19	295	11
Ulhasnagar Vadolgaon	7.4	7.5	67	27	37	16
Ulhasnagar Shantinagar-1	7	7.4	30	6.8	139	9
Ulhasnagar Shantinagar-2	7.1	7.6	32	5	10	89
Ulhasnagar Khadegolivali	7	7.3	31	23	28	17

From **Table 5.45**, the outlet values for BOD exceeded the prescribed discharge standard at Bhiwandi Nizampur, Vadalgaon, Chikloli, Badlapur, Ulhasnagar Vadolgaon and Ulhasnagar Khadegolivali STPs. The outlet values of SS were greater than the prescribed discharge standard

at Bhiwandi Nizampur City Municipal Corporation, Vadalgaon, and Ulhasnagar Shantinagar-2 and STPs. The performance of each STP is given below;

Vadalgaon

- Capacity - 45 MLD
- Effluent load - 24 MLD
- Performance - 63.79% BOD reduction and 50% SS reduction

Chikloli

- Capacity - 9 MLD
- Performance - 28.07% BOD reduction and 60% SS reduction

Badlapur

- Capacity - 22 MLD
- Effluent load - 21.5 MLD
- Performance - 91.74% BOD reduction and 96.27% SS reduction

Ulhasnagar Vadolgaon

- Capacity - 20.72 MLD
- Effluent load - 41 MLD
- Performance - 59.70% BOD reduction and 56.76% SS reduction

Ulhasnagar Shantinagar-1

- Capacity - 15 MLD
- Performance - 77.33% BOD reduction and 93.53% SS reduction

Ulhasnagar Shantinagar-2

- Capacity - 31.26 MLD
- Performance - 84.38% BOD reduction

Ulhasnagar Khadegolivali

- Capacity - 8 MLD
- Performance - 25.81% BOD reduction and 39.29% SS reduction

5.5.1.5 Kolhapur

Kolhapur Region has seven operational STPs for the year 2023-24 with a combined treatment capacity of 176.7 MLD. Kasaba Bawada STP of treatment capacity 4 MLD is newly functional from current financial year. The total sewage generated in the Region was 296.2 MLD and the

total sewage load was 186.4 MLD, all of which was treated. The mean of annual performance and analysis of all STPs provided in Kolhapur Region are represented in **Table 5.46**.

Table 5.46 Mean of Annual Performance of STPs in Kolhapur Region.

Location of STP	Parameters (mg/l)					
	pH		BOD (Mean)		SS (Mean)	
	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet
Kasaba Bawada	-	7.64	-	10.33	-	15
Kasaba Bawada	-	-	-	-	-	-
Dudhali	-	7.7	-	6.68	-	14
Ichalkaranji	-	7.21	-	37.13	-	24.94
STP at Dhulgaon	-	7.2	-	7	-	18
Miraj STP	-	7.5	-	44	-	18.5
100 ft Road STP	-	7.3	-	58	-	18

Table 5.46 shows that the outlet values of BOD met the prescribed discharge standards of 10 mg/l only at Dudhali and Dhulgaon STPs. It exceeded the standard value at all the other STPs. For SS, the outlet values at all STPs did not exceed the prescribed standards of 20 mg/l, except for Ichalkaranji STP.

5.5.1.6 Mumbai

In the Mumbai Region, there are eight operational STPs with a cumulative treatment capacity of 2835 MLD. The total sewage generated was 1853.79 MLD and the total sewage load received was 1421.79 MLD. All of the 1421.79 MLD effluent was treated collectively by the STPs. The average annual performance and analysis of all STPs provided in this region are represented in **Table 5.47.**

Table 5.47 Mean of Annual Performance of STPs in Mumbai Region.

Location of STP	Parameters (mg/l)					
	pH		BOD (Mean)		SS (Mean)	
	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet
Colaba	7.0	7.3	71.79	21.75	43.33	16.50
Worli	7.0	6.9	131.58	100.42	62.66	62.33
Bandra	7.1	7.0	51.30	58.80	38.92	59.41
Versova	7.1	7.2	93.50	9.72	62.08	15.67
Bhandup	7.0	7.2	81.90	16.55	40.67	13.08
Ghatkopar	7.1	7.2	73.70	17.54	31.92	18.17
Malad	7.0	7.1	11.95	5.27	81.58	9.17
Charkop	7.1	7.0	95.00	10.30	61.41	10.83

From **Table 5.47**, it can be observed that outlet values for BOD were not exceeding the prescribed discharge standard of 10 mg/l only at Versova and Malad STPs. The outlet values for

SS were exceeding the standard of 20 mg/l at Worli and Bandra STPs. The performance of each STP is given below;

Colaba

- Capacity - 37 MLD
- Effluent load - 22.51 MLD
- Performance - 69.70% BOD reduction and 61.92% SS reduction

Worli

- Capacity - 757 MLD
- Effluent load - 374.78 MLD
- Performance - 23.69% BOD reduction and 0.53% SS reduction

Bandra

- Capacity - 797 MLD
- Effluent load - 450 MLD

Versova

- Capacity - 180 MLD
- Effluent load - 95 MLD
- Performance - 89.60% BOD reduction and 74.76% SS reduction

Bhandup

- Capacity - 432 MLD
- Effluent load - 148 MLD
- Performance - 79.79% BOD reduction and 67.84% SS reduction

Ghatkopar

- Capacity - 386 MLD
- Effluent load - 129 MLD
- Performance - 76.20% BOD reduction and 43.08% SS reduction

Malad

- Capacity - 240 MLD
- Effluent load - 198 MLD
- Performance - 55.90% BOD reduction and 88.76% SS reduction

Charkop

- Capacity - 6 MLD
- Effluent load - 4.5 MLD
- Performance - 89.16% BOD reduction and 82.36% SS reduction

5.5.1.7 Nagpur

There are 13 STPs in Nagpur Region with a cumulative capacity of 417 MLD. The total sewage generated was 533.6 MLD out of which, 417 MLD of sewage was treated. The annual performance and analysis of all STPs are represented in **Table 5.48.**

Table 5.48 Mean of Annual Performance of STPs in the Nagpur Region.

Location of STP	Parameters (mg/l)					
	pH		BOD (Mean)		SS (Mean)	
	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet
Bhandewadi	7.6	7.7	96	4.9	186	27
Bhandewadi	7.5	8	64	3.8	196	26
Mankapur	7.6	-	20	-	165	-
Mokshadham	7.7	8	19	12	69	82
Kachimet	7.4	7.8	60	10.6	168	46
Sonegaon	7.1	7.6	82	18	130	86
Hazari Pahad	7.8	7.6	13	96	186	186
Somalwada-1	7.6	7.8	12	4	119	29
Somalwada-2	7.4	7.7	160	12	309	71
Ambazari	7.9	9.2	18	5.8	76	48
Dabha	7.8	7.5	96	11	359	39
Ittabhatti	7.4	8.1	98	4	372	26
Hingangaht Municipal Council	-	-	-	-	-	-

Table 5.48 shows that outlet values for BOD were not exceeding the discharge standard of 10 mg/l at Somalwada-1, Ambazari, Ittabhatti and both the Bhandewadi STPs. Whereas, the outlet values for SS exceeded the prescribed standard of 20 mg/l at all STPs. The performance of each STP is given below;

Bhandewadi

- Capacity - 200 MLD
- Effluent load – 200 MLD
- Performance - 94.90% BOD reduction and 85.48% SS reduction

Bhandewadi

- Capacity - 130 MLD

- Effluent load - 130 MLD
- Performance - 94.06% BOD reduction and 86.73% SS reduction

Mokshadham

- Capacity - 5 MLD
- Effluent load - 5 MLD
- Performance - 36.84% BOD reduction

Kachimet

- Capacity - 1 MLD
- Effluent load - 1 MLD
- Performance - 82.33% BOD reduction and 72.62% SS reduction

Sonegaon

- Capacity - 0.3 MLD
- Effluent load - 0.3 MLD
- Performance - 78.05% BOD reduction and 33.85% SS reduction

Hazari Pahad

- Capacity - 4 MLD
- Effluent load- 4 MLD
- Performance - 0% SS reduction

Somalwada-1

- Capacity - 20 MLD
- Effluent load- 20 MLD
- Performance - 66.67% BOD reduction and 75.63% SS reduction

Somalwada-2

- Capacity - 20 MLD
- Effluent load- 20 MLD
- Performance - 92.50% BOD reduction and 77.02% SS reduction

Ambazari

- Capacity - 3.2 MLD
- Effluent load- 3.2 MLD
- Performance - 67.78% BOD reduction and 36.84% SS reduction

Dabha,

- Capacity - 5 MLD
- Effluent load - 5 MLD
- Performance - 88.54% BOD reduction and 89.14% SS reduction

Ittabhatti,

- Capacity - 10 MLD
- Effluent load - 10 MLD
- Performance - 95.92% BOD reduction and 93.01% SS reduction

5.5.1.8 Nashik

There are 15 STPs in Nashik region with total treatment capacity of 394.5 MLD. The total sewage generated was 414.94 MLD. In F.Y 2023-24, 378.94 MLD effluent was received and treated by the STPs in total. **Table 5.49** shows the average annual performance of the STPs in Nashik Region.

Table 5.49 Mean of Annual Performance of STPs in Nashik Region.

	Parameters (mg/l)					
	pH		BOD (Mean)		S.S. (Mean)	
	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet
Chehedi STP	NA	7.7	NA	31.1	NA	26.1
Chehedi STP	NA	7.7	NA	23.1	NA	18.2
Panchak	NA	7.8	NA	29.4	NA	24.8
Panchak	NA	7.8	NA	30.8	NA	23.6
Panchak	NA	7.9	NA	29.3	NA	26.2
Tapvan	NA	7.8	NA	28.5	NA	23
Tapvan	NA	7.8	NA	27.6	NA	22.2
Agar Takali	NA	7.7	NA	32.6	NA	24.2
Agar Takali	NA	7.8	NA	29.3	NA	23.8
Gangapur	NA	7.9	NA	30	NA	23.2
Pimpalgaon Kam	NA	7.9	NA	25.4	NA	22.4
Municipal Council Trimbak	-	-	-	-	-	-
Municipal Council Shirpur	-	7.8	-	16	-	18
Municipal Council Nandurbar	-	7.7	-	8.08	-	26
Dhule Municipal Corporation	-	-	-	-	-	-

From **Table 5.49**, it can be observed that the BOD outlet values have exceeded their prescribed limits at all STPs except Municipal Council Nandurbar. Whereas, the outlet values for SS have surpassed their prescribed limits at all STPs except Municipal Council, Shirpur and Chehedi STP.

5.5.1.9 Navi Mumbai

The Navi Mumbai Region has seven STPs for F.Y. 2023-24. Their cumulative treatment capacity is 454 MLD. 214 MLD effluent was received and treated by the STPs collectively. The mean of annual performance and analysis of all the STPs are given in **Table 5.50**.

Table 5.50 Mean of Annual Performance of STPs in Navi Mumbai Region.

Location of STP	Parameters (mg/l)					
	pH		BOD (Mean)		SS (Mean)	
	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet
Koparkhairane	7.1	7.5	89.4	5.4	52.9	8.8
Ghansoli	6.9	6.4	109	5.4	49.8	9.2
Airoli	7.2	7.6	79.7	5.2	43.1	8.4
STP CBD Belapur Sector -12	6.9	7.3	90.6	9.9	56.1	10.1
STP Nerul Sector -50	6.9	7.4	116	4.08	87.6	8.3
STP Sanpada Sector -20	6.8	7.4	108.7	4.45	53.1	8.8
STP Vashi, Sector 18	6.9	7.4	138.6	7.2	60.9	10.4

As observed in **Table 5.50**, the outlet BOD and SS values do not exceed the standards for all STPs in Navi Mumbai Region. The performance of each STP is given below;

Koparkhairane

- Capacity - 87.5 MLD
- Effluent load - 44 MLD
- Performance - 93.96% BOD reduction and 83.36% SS reduction

Ghansoli

- Capacity - 30 MLD
- Effluent load - 19 MLD
- Performance - 95.05% BOD reduction and 81.53% SS reduction

Airoli

- Capacity - 80 MLD
- Effluent load - 31 MLD
- Performance - 93.48% BOD reduction and 80.51% SS reduction

STP CBD Belapur Sector -12

- Capacity - 19 MLD
- Effluent load - 12 MLD
- Performance - 89.07% BOD reduction and 82% SS reduction

STP Nerul Sector -50

- Capacity - 100 MLD
- Effluent load - 40 MLD
- Performance - 96.48% BOD reduction and 90.53% SS reduction

STP Sanpada Sector -20

- Capacity - 37.5 MLD
- Effluent load - 29 MLD
- Performance - 95.91% BOD reduction and 83.43% SS reduction

STP Vashi, Sector 18

- Capacity - 100 MLD
- Effluent load - 39 MLD
- Performance - 94.81% BOD reduction and 82.92% SS reduction

5.5.1.10 Pune

There are 43 STPs in this Region as of the year 2023-24. 'Bhosari' and 'Kudalwadi' are additional STPs in the current financial year. The STPs have a combined treatment capacity of 1029.7 MLD. 938.8 MLD effluent was collectively received by the STPs and all was treated. **Table 5.51** represents the average annual performance of all the STPs in Pune Region.

Table 5.51 Mean of Annual Performance of STPs in Pune Region.

Location of STP	Parameters (mg/l)					
	pH		BOD (Mean)		SS (Mean)	
	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet
Erandwane STP	7.5	7.6	42	19.5	24	16.3
Bopodi STP	-	7.9	-	19.3	-	23
Tanajiwadi	7.8	7.7	33	20.6	20	15.2
Bhairoba STP	7.1	7.7	232.5	47.8	193	50.8
Mundhawa STP	-	8.2	-	15	-	15
Vithalwadi STP	-	7.9	-	18	-	14.3
Baner STP	-	7.6	-	23	-	24.75
Kharadi STP	7.7	7.6	75.4	15.9	81	22.7
New Naidu STP	-	7.4	-	17.3	-	16.3
Lonavala	-	7.2	-	34	-	14
Shirur	-	-	-	-	-	-
Pune Cantonment Board	-	8.2	-	42	-	26
Khadaki Cantonment Board	-	7.3	-	290	-	78
	-	7.7	-	110	-	22
Chikhali Phase I	-	7.7	-	24.1	-	19.1
Chikhali Phase II	-	7.7	-	24.9	-	18.9
Akurdi	-	7.7	-	23.5	-	20.4

Ravet	-	7.8	-	23.0	-	18.5
Chinchwad Phase I (Bhatnagar)	-	8.0	-	22.7	-	18.3
Chinchwad Phase II	-	7.6	-	25.3	-	19.9
Kasarwadi I	-	7.8	-	27.0	-	22.6
Kasarwadi II	-	7.5	-	26.6	-	19.3
Kasarwadi III	-	7.6	-	24	-	20.8
Charholi Phase I	-	7.7	-	27.4	-	21.8
Charholi Phase II	-	7.7	-	26.4	-	23.3
Sangvi Phase I	-	7.6	-	28.4	-	19.9
Sangvi Phase II (Dapodi)	-	7.6	-	25.6	-	22.9
Pimple Nilekh	-	8.0	-	33.3	-	22
Bhosari		8.3		17.0		19.3
Kudalwadi		7.8		24.8		15.0
Karad Municipal Council STP	-	7.2	-	31	-	25.78
Malkapur Municipal Council	-	7.8	-	18.64	-	17.6
Malkapur at Sr. No. 10 STP	-	7.6	-	16.79	-	16.66
Mahabaleshwar Municipal Council STP 1	-	7.53	-	28.78	-	17.9
Mahabaleshwar Municipal Council STP 2	-	7.31	-	30.3	-	25.2
Panchagani Municipal Council STP 1	-	7.96	-	18.22	-	19.4
Panchagani Municipal Council STP 2	-	7.48	-	18.84	-	15.4
Panchagani Municipal Council STP 3	-	7.74	-	17.39	-	14.6
Degaon STP	7.4	7.99	110	8.07	116	11.33
Kumathe STP	7.4	8.01	140	8.3	104	10.78
Pratap Nagar STP	7.7	7.87	145	8.21	206	11.33
Gopalpur STP	7.9	7.81	250	35.95	386	23.67
Pandharpur STP (65 Acre)	7.38	8.14	135	24.87	9	21.83

It can be observed from **Table 5.51** that only Degaon, Kumathe and Pratap Nagar STPs are within the standard limit of 10 mg/l for BOD. The outlet values of SS were greater than the prescribed discharge standard of 20 mg/l at 18 STPs mentioned in the above table. The performance of each STP is given below;

Erandwane STP

- Capacity - 50 MLD
- Effluent load - 50 MLD
- Performance - 53.57% BOD reduction and 32.08% SS reduction

Tanajiwadi

- Capacity - 17 MLD
- Effluent load - 17 MLD
- Performance - 37.58% BOD reduction and 24.00% SS reduction

Bhairoba STP

- Capacity - 130 MLD
- Effluent load - 130 MLD
- Performance - 79.44% BOD reduction and 73.68% SS reduction

Kharadi STP

- Capacity - 40 MLD
- Effluent load - 40 MLD
- Performance – 78.91% BOD reduction and 71.98% SS reduction

Degaon STP

- Capacity - 75 MLD
- Effluent load - 68 MLD
- Performance - 92.66% BOD reduction and 90.23% SS reduction

Kumathe STP

- Capacity - 12.5 MLD
- Effluent load - 12.5 MLD
- Performance - 94.07% BOD reduction and 89.63% SS reduction

Pratap Nagar STP

- Capacity - 15 MLD
- Effluent load - 15 MLD
- Performance - 94.34% BOD reduction and 94.50% SS reduction

Gopalpur STP

- Capacity - 15.5 MLD
- Effluent load - 15.5 MLD
- Performance - 85.62% BOD reduction and 93.87% SS reduction

Pandharpur STP (65 Acre)

- Capacity - 2.5 MLD
- Effluent load - 2.5 MLD
- Performance - 81.58% BOD reduction

5.5.1.11 Raigad

For the F.Y. 2023-24, Raigad Region has eight functional STPs. The total treatment capacity of the STPs is 313 MLD and 188.5 MLD sewage was generated in this region. The total sewage load received by the STPs was 164 MLD, all of which was treated. The mean of annual performance and analysis of all STPs provided in the Region are represented in **Table 5.52**.

Table 5.52 Mean of Annual Performance of STPs in the Raigad Region.

Location of STP	pH	BOD (Mean)	SS (Mean)
	Outlet	Outlet	Outlet
CIDCO STP, Sector - 16, Kharghar	7.4	5.5	10.1
CIDCO STP, Sector - 12, Kalamboli	7.3	15.8	13.6
CIDCO STP, Sector - 32, Kamothe	7.24	14.7	18.29
PMC STP, Panvel	7.4	13.6	13
CIDCO STP, Sector-6, Ulwe	7.3	17.7	16.1
CIDCO STP Kalundare	7.6	7.7	11.1
CIDCO STP Karanjade	7.4	24.7	11.5
CIDCO STP Taloja Phase 1 & 2	7.5	16.5	14

From the above table, BOD outlet values are within the standard range of 10 mg/l only at CIDCO STP, Sector - 16, Kharghar and CIDCO STP Kalundare. The SS outlet values does not exceed the standards at any locations. There are six Municipal councils in Sub Regional Office Raigad II. The Roha Municipal Council has proposed to install 5 MLD STP. Presently, the Municipal Council is in the process to obtain approval from the Government for the installation of STP. The other Municipal councils have not provided STP for the treatment of sewage.

5.5.1.12 Thane

There are 18 STPs in the Thane Region as of the year 2023-24 with a combined treatment capacity of 396.43 MLD. The Kharegaon STP is presently not in operation. The total sewage generated was 394 MLD, while the total sewage load received by the STPs was 258.25 MLD and all was treated. **Table 5.53** provides the details of the performance of the STPs in Thane Region.

Table 5.53 Mean of Annual Performance of STPs in the Thane Region.

Location of STP	Parameters (mg/l)					
	pH		BOD (Mean)		SS (Mean)	
	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet
Kopri	-	7.7	-	9	-	11.71
Mumbra	-	7.75	-	10.5	-	10.83
Vartak Nagar	-	-	-	-	-	-
Vitava	-	7.81	-	7.28	-	11.14
Kharegaon	Said STP is Non-Operational. Construction work of STP is completed. STP will be commissioned by Jan-2025.					

Everest World, Kolshet	-	7.8	-	9.45	-	10.14
Lodha	-	7.78	-	10	-	10.85
Nagla Bunder	-	7.74	-	9.28	-	10.42
Hiranandani	Trial run started from April 2023					
Shanti Nagar, Mira Road	-	7.2	-	130	-	57
Shanti Park, Mira Road	-	7.2	-	13	-	12
Kanakiya, Mira Road	-	7.2	-	18	-	10
Sr. No. 233, Bhayandar (E)	-	7.3	-	28	-	23
Golden nest road, Bhayandar	-	7.5	-	70	-	23
Bhayander (W), Near Garden Court	-	7.2	-	60	-	14
Mhada Colony	-	7.3	-	60	-	14
Reservation No. 170, Kanugo, Mira	-	7.3	-	28	-	10
Bolinj STP, Virar (W)	-	7.4	-	30	-	80

From the above table, the BOD outlet values were within the prescribed standard of 10 mg/l at Kopri, Vitava, Everest World Kolshet, Lodha and Nagla Bunder STPs. It exceeded the standard value at rest of the STPs. The SS outlet values did not meet the prescribed standard of 20 mg/l at Shanti Nagar-Mira Road, Sr. No. 233 Bhayander (E), Golden nest road Bhayander and Bolinj Virar (W) STPs.

5.6 Solid Waste Management in Maharashtra

Municipal Solid Waste (MSW) Management involves the collection, transportation, disposal and recycling of everyday waste produced by households, businesses and institutions within a community. It encompasses various types of waste, such as paper, plastic, organic matter and non-recyclable materials. Effective waste management is crucial for preventing environmental pollution, conserving resources and minimizing the impact on public health. Strategies include source separation, recycling programs, waste-to-energy initiatives and responsible landfill practices. Sustainable Municipal Solid Waste Management not only addresses the immediate challenge of waste disposal but also promotes a circular economy by encouraging reduced consumption, reuse and recycling to create a more environmentally friendly and resilient community.

Solid Waste Management Rules, 2016, came into force as per the notification published by Ministry of Environment and Forest, New Delhi on 8th April, 2016; superseding the Municipal Solid Waste (Management and Handling) Rules, 2000.

The inventory of solid waste generation and disposal from the State during the year 2023 is presented in following sections. **Table 5.54** shows total number of Local Bodies and Cantonment Board in the State responsible for generation of the waste. **Table 5.55** represents quantity of solid waste generated from these local bodies whereas **Table 5.56** represents treatment percentage of generated waste.

Table 5.54 Total number of local bodies - 411 and Cantonment Board - 07.

1.	Municipal Corporations	28
2.	'A' Class Municipal Council	16
3.	'B' Class Municipal Council	74
4.	'C' Class Municipal Council	151
5.	Nagar Panchayat	142
6.	Cantonment Board	07
	Total	**418**

Table 5.55 Solid Waste Generation.

Local Body	No. of ULBs	Quantity (MT/Day)	Percentage (%)
Municipal Corporation	28	17,718.82	70.10
'A' Class Municipal Councils	16	882.44	3.49
'B' Class Municipal Councils	74	1,362.45	5.39
'C' Class Municipal Councils	151	4,598.06	18.19
Nagar Panchayats	142	568.78	2.25
Cantonment Board	07	147.61	0.58
Gross Total	**418**	**25,278.16**	**100.00**

Table 5.56 Solid Waste Treatment.

Local Body	No. of ULBs	Quantity (MT/Day)	Percentage (%)
Municipal Corporation	28	16,189.6	78.86
'A' Class Municipal Councils	16	698.73	3.40
'B' Class Municipal Councils	74	1,192.8	5.81
'C' Class Municipal Councils	151	1,900.66	9.26
Nagar Panchayats	142	417.66	2.03
Cantonment Board	07	130.61	0.64
Gross Total	**418**	**20,530.06**	**100.00**

5.6.1 Analysis of Municipal Solid Waste Management with Statistical details (Region wise)

The detailed report on the quantity of different categories of MSW generated and treated in all the Regions of Maharashtra during the year 2023-24 is given in **Table 5.57**.

Table 5.57 Region-wise Statistical analysis of MSW (Generation and Treatment).

Sr. No.	Region	MSW Generation (MT/Day)	MSW treated (MT/Day)	Treatment (%)
1.	Chhatrapati Sambhaji Nagar	5,256.6	3,282.98	62.45
2.	Nashik	2,260.29	1,857.32	82.17
3.	Pune	3,191.06	2,792.77	87.51
4.	Chandrapur	501.07	434.81	86.77
5.	Nagpur	1,642.87	1,338.31	81.46
6.	Kolhapur	761.11	525.00	68.97
7.	Amravati	809.92	705.11	87.05
8.	Raigad	120.26	109.15	90.76

9.	Thane	2,148.96	1,942.73	90.40
10.	Kalyan	1,166.00	893.85	76.65
11.	Navi Mumbai	730.00	672.00	92.05
12.	Mumbai	6,690.00	5,976.00	89.32
Total		**25,278.16**	**20,530.05**	**81.21**

5.6.2 Trend Analysis of Municipal Solid Waste Generation and Treatment over five years.

Analysis of the trends of Municipal Solid Waste generation and treatment in all Regions over the years 2019-20, 2020-21, 2021-22, 2022-23 and 2023-24 has been carried out to study and compare the trends of generation and treatment of MSW over duration of five years. **Figures 5.24** and **5.25** graphically represent the trends of average MSW generation and treatment over the span of five years in all Regions.

From **Figure 5.24** the generation of MSW shows an increase in trend over the five years in most of the Regions in the State. The MSW generation has increased remarkably in Chhatrapati Sambhaji Nagar region for the current financial year. Along with this, Nashik, Nagpur and Mumbai regions show a slight increase in the amount of waste generated since 2019. In contrast, regions like Pune, Kalyan and Raigad show a sudden decline in the MSW generated in the current financial year.

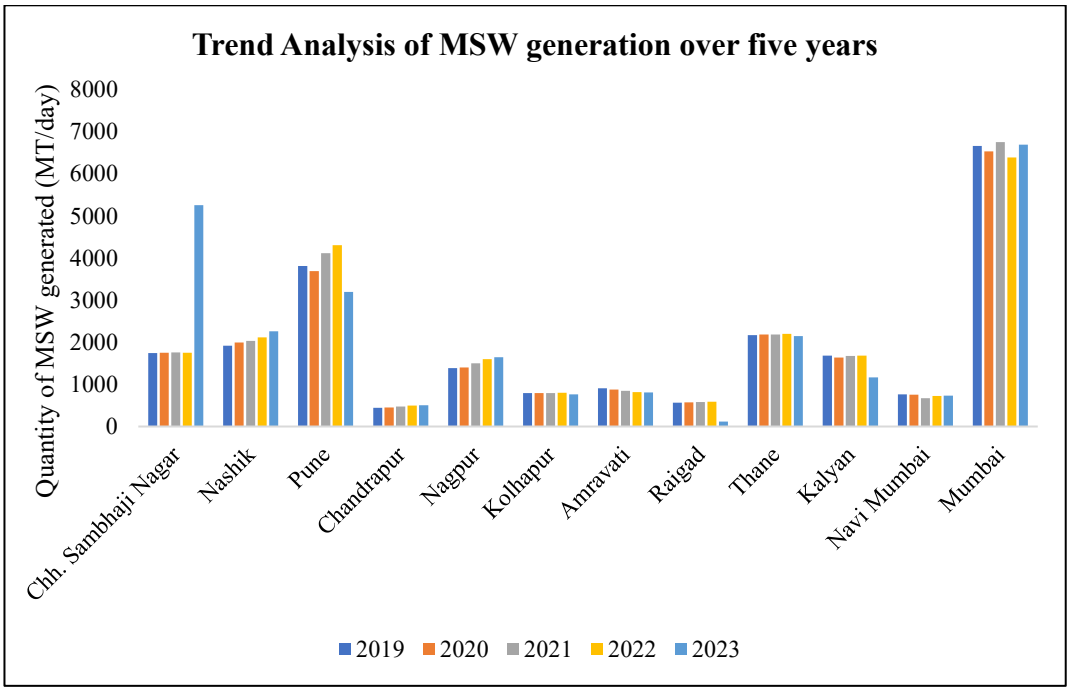


Figure 5.24 Trend Analysis of MSW generation over five years.

5.6.3 Trend Analysis of MSW treatment over five years

Trends analysis of MSW treatment over past five years in the State of Maharashtra, from **Figure 5.25**, reveals the quantity of MSW treated. The graph shows an increase in the trend in most of the regions in Maharashtra. In contrast, decline in MSW treatment has been observed in Pune and Raigad regions in the current financial year. MSW treatment has increased sharply in Chhatrapati Sambhaji Nagar. Nashik, Amravati, Thane and Mumbai regions also show an increase in the amount of MSW treated. Rest of the regions show a declining trend in MSW treatment since 2019.

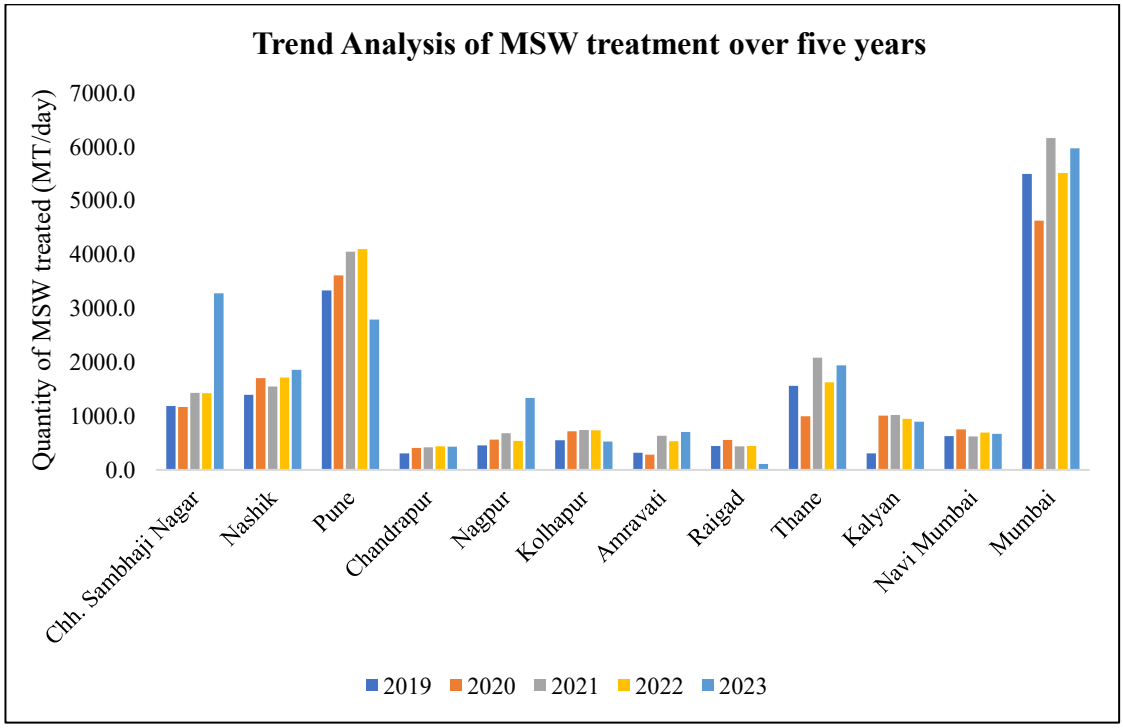


Figure 5.25 Trend Analysis of MSW treatment over five years.

5.7 Hazardous Waste Generation during the year 2023-24

5.7.1. Status of Common Hazardous Waste Treatment, Storage and Disposal Facility.

There are total four Common Hazardous Waste Treatment, Storage and Disposal Facilities (CHWTSDF) installed and operating successfully in the State of Maharashtra. Two facilities namely Mumbai Waste Management (MWM), Taloja and Trans Thane Waste Management Association (TTCWMA), Mahape, are located under Navi Mumbai Region. Maharashtra Enviro Power Ltd. (MEPL), Ranjangaon is located under Pune Region and Maharashtra Enviro Power Ltd. (MEPL), Butibori Industrial Area is located under Nagpur Region. **Table 5.58** represents the details of these four CHWTSDFs.

Table 5.58 Summary of Individual Capacities of CHWTSDFs.

Name of Facility	M/s. Mumbai Waste Management Limited, Plot no. P-32, MIDC, Taloja	M/s. Trans Thane Waste Management Association P-128, Shil-Mahape Road, Next to L&T Infotech Ltd.	M/s. Maharashtra Enviro Power Ltd. Ranjangaon	M/s. Maharashtra Enviro Power Ltd. (SPV of M/s. Shaktikumar M. Sancheti Ltd.) Butibori
Capacity of the Facility	SLF - 3,50,000 MT/ Year	SLF – 21,600 MT/Year	SLF – 60,000 MT/Year	SLF - 60,000 MT/Year
	INC - Two each of 1.5 TPH	0	INC - 3.0 TPH & Liquid INC – 1TPH	INC - 1.0 TPH

There are various industries that generate hazardous waste. Methods like Secured Landfill Facility (SLF) and Incineration (INC) are used to treat this hazardous waste. 4,52,162 MT/A of hazardous waste was received cumulatively by the four CHWTSDFs, out of which 3,89,137MT/A of hazardous waste is treated by SLF method and 63,025 MT/A by INC method. The details of the amount of hazardous waste received and treated by the two methods at each disposal site is provided in **Table 5.59**.

Table 5.59 Summary of Hazardous Waste received at disposal sites in 2023-24.

Site	SLF (MT/A)	INC (MT/A)	Total (MT/A)
MWML - Taloja	2,51,599	31,772	2,83,371
TTCWMA - Mahape	22,570.33	-	22,570
MEPL - Ranjangaon	92,350.99	28,990.77	1,21,342
MEPL - Butibori	22,216.86	2,261.81	24,489
Total	**3,89,137**	**63,025**	**4,52,162**

5.7.2. Trend analysis of Hazardous Waste received at disposal sites over five years.

Analysis of the trends of hazardous waste received at all disposal sites in the State over the years 2019-20, 2020-21, 2021-22, 2022-23 and 2023-24 has been carried out. **Figure 5.26** illustrates the quantity of hazardous waste received at the four CHWTSDFs in Maharashtra over the past five years.

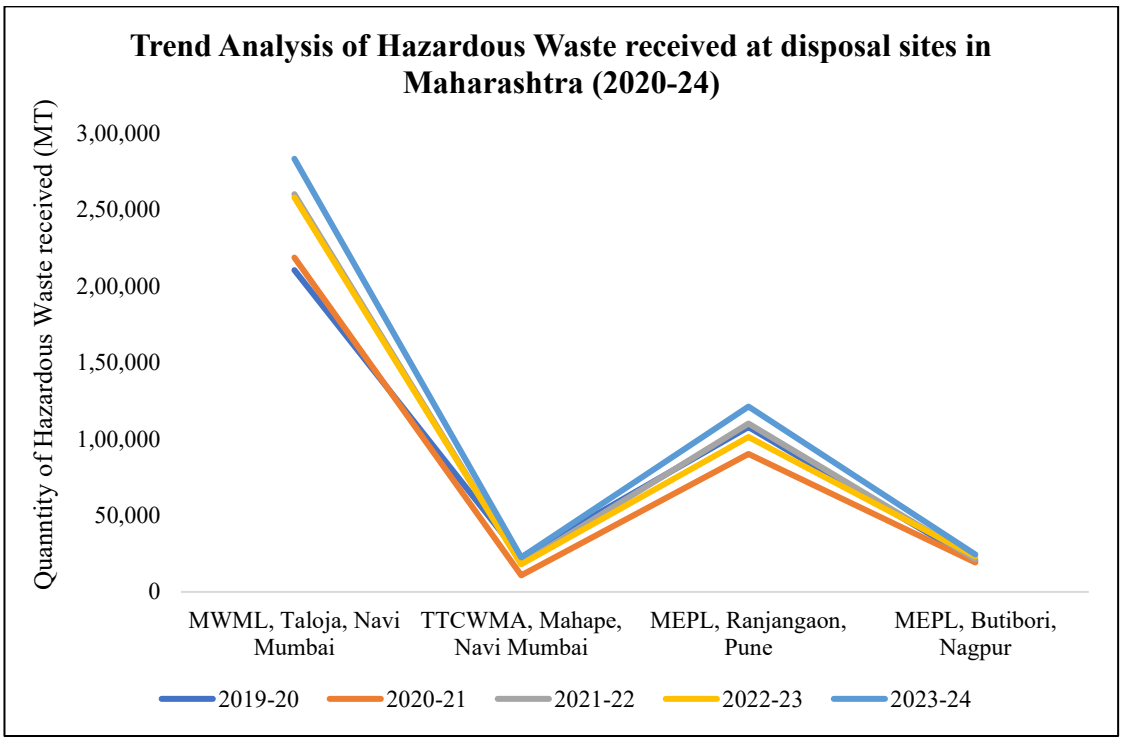


Figure 5.26 Trend Analysis of Hazardous Waste received at disposal sites over five years.

From the above figure, it can be observed that the hazardous waste received at MWML, Taloja was the least during the years 2019-20 but increased gradually till 2023-24. The quantity of hazardous waste received at this site was maximum in the current financial year. At TTCWMA, the quantity of hazardous waste received during the years 2021-22 and 2022-23 was almost similar, with a slight increase during this year. The highest amount of waste received at TTCWMA was in the year 2019-20.

The quantity of hazardous waste received at MEPL, Ranjangaon has also increased in the current year, compared to the waste received previously. The amount of hazardous waste received at MEPL, Butibori has seen an increasing trend since 2020-21, but the highest quantity of waste received at this site was in the year 2023-24. The quantity of hazardous waste received at these sites over last five years is also represented in tabular form in **Table 5.60**.

Table 5.60 Hazardous Waste inventory at disposal site for past five years.

Facility Name	2019-20	2020-21	2021-22	2022-23	2023-24
MWML, Taloja, Navi Mumbai	2,10,528	2,18,757	2,60,230	2,58,047	2,83,371
TTCWMA, Mahape, Navi Mumbai	22,695	10,829	18,417	18,082.78	22,570
MEPL, Ranjangaon, Pune	1,07,765	90,325	1,10,063	1,01,261.84	1,21,342
MEPL, Butibori, Nagpur	20,200	19,326	21,396	23,308.73	24,479

5.8 Biomedical Waste

5.8.1 Implementation of Biomedical Waste Management Rules, 2016

- The MoEFCC has notified Biomedical Waste Management Rules, 2016 on 28th March, 2016.
- As per new Biomedical Waste Management Rules, 2016, all Hospitals, Nursing homes, Clinics, Dispensaries, Veterinary institutions, Animal houses, Pathological laboratories, Blood banks, Clinical establishments, Research or Educational institutions, Health camps, Medical or Surgical camps, Vaccination camps, Blood donation camps, First-aid rooms in schools, Forensic laboratories and Research laboratories are included under the purview of these rules.
- It is mandatory for all non-bedded HCEs to obtain one-time BMW authorization from the MPCB.
- Under the Government mission of 'Ease of Doing Business' and on account of efforts taken to ensure transparent operation, this office has developed a protocol for an online consent and BMW authorization. Real-time grant of provisional authorization is subject to online submission of application with necessary documents and fees.
- The MPCB has been implementing Biomedical Waste Management Rules, 2016 in the State. Presently, there are 30 Common Waste Treatment and Disposal Facilities in operation in the State of Maharashtra.

5.8.2 Status of Biomedical Waste Treatment Facilities (as of 31st December, 2023)

- Total number of Health Care Facilities/Occupiers: 76,413
  i. Bedded hospitals and nursing homes (bedded): 22,783
  ii. Clinics, dispensaries: 43,896
  iii. Veterinary institutions: 261
  iv. Animal houses: 22
  v. Pathological laboratories: 8,426
  vi. Blood bank: 219
  vii. Clinical establishment: 608
  viii. Research institution: 91
  ix. AYUSH: 107
- Total No. of beds: 3,58,789
- Status of authorization
  i. Total number of occupiers applied for authorization: 2,173
  ii. Total number of occupiers granted authorization: 2,186

iii. Total number of application under consideration: 53
iv. Total number of applications rejected: 396
v. Total number of occupiers in operation without applying for authorization: 3,788

- Quantity of bio-medical waste generation (in kg/day): 77,862
  i. Bio-medical waste generation by bedded hospitals (in kg/day): 59,523
  ii. Bio-medical waste generation by non-bedded hospitals (in kg/day): 17,620
  iii. Any other: 718

- Bio-medical waste treatment and disposal (in kg/day): 77,861
  i. By captive bio-medical waste treatment and disposal by health care facilities
    a) Number of health care facilities having captive treatment and disposal facilities: 255
    b) Total bio-medical waste treated and disposed by captive treatment facilities in kg/day: 528
  ii. BMW treatment and disposal by Common BMW Treatment Facilities
    a) Number of common bio-medical waste treatment facilities in operation: 30
    b) Number of common bio-medical waste treatment facilities under construction: 8
    c) Total bio-medical waste treated in kg/day: 77,333
    d) Total treated bio-medical waste disposed through authorized recyclers in kg/day: 10,923

- Total number of violation by: 483
  i. Health care facilities (bedded and non-bedded): 474
  ii. Common bio-medical waste treatment facilities: 9
  iii. Others: 0

- Show cause notice/direction issued to defaulter: 199
  i. Common bio-medical waste treatment facilities: 11
  ii. Others: 188

- Any other relevant information
  i. Number of workshops/trainings conducted during the year: 1,316
  ii. Number of occupiers installed liquid waste treatment facility: 846
  iii. Number of captive incinerators complying to the norms: 0
  iv. Number of occupiers organized trainings: 1,634
  v. Number of occupiers constituted bio-medical waste management committees: 1,609
  vi. Number of occupiers submitted annual report for the previous calendar year: 3,653

vii. Number of occupiers practicing pre-treatment of lab microbiology and biotechnology waste: 499

viii. Number of common BMW treatment facilities that have installed continuous online emission monitoring system: 30

5.9 Electronic Waste

Electronic Waste or E-waste describes discarded electrical or electronics devices. It encompasses discarded electronic devices and equipment such as computers, smartphones, televisions and various gadgets. The rapid evolution of technology has led to a substantial surge in e-waste generation. Used electronics which are destined for reuse, resale, salvage, recycling, or disposal are also considered E-waste. Informal processing of E-waste in developing countries can lead to adverse human health effects and environmental pollution. Electronic scrape components, such as CPUs, contain potentially harmful components such as Lead, Cadmium, Beryllium, or Brominated flame retardants. Increasing consumer awareness regarding the environmental impact of E-waste is essential, emphasizing responsible disposal practices and encouraging the recycling of old electronics. Addressing the challenges posed by E-waste requires a comprehensive approach involving regulatory measures, technological advancements and a shift in consumer behavior to foster sustainable practices and embrace the principles of the circular economy.

5.9.1 Implementation of E-waste Management Rules, 2022

- E-Waste Management Rules, 2022 were notified on 2nd November, 2022 and came into force from 1st April, 2023.
- These rules are applicable for Manufacturer, Producer, Refurbisher, Dismantler and Recycler involved in manufacture, sale transfer, purchase, refurbishing, dismantling, recycling and processing of E-waste or electrical and electronic equipment including their components, consumables, parts and spares which makes the product operational.
- Manufacturer, Producer, Refurbisher and Recycler of E-waste must register on the centralized portal developed by CPCB.
- Manufacturer of solar photovoltaic modules or panels or cells must register on the centralized portal developed by CPCB.
- All producers shall fulfill their extended produce responsibility obligation through online purchase of Extended Producer Responsibility (EPR) Certificate from registered recyclers. The certificate shall be subject to environmental audit by the Central Pollution Control Board, or any other agencies authorized by CPCB in this regard.

- The SPCB is responsible for inventorization of E-waste, monitoring of compliance of EPR as directed by CPCB. To conduct random inspection of recycler and refurbisher and monitoring the utilization of recycling capacity.
- The ULB is responsible for ensuring that E-waste if found to be mixed with MSW; is properly segregated, collected and is channelised to registered recycler of refurbisher. E-waste pertaining to orphan products is also collected and channelized to registered recyclers or refurbisher.
- MPCB has carried out E-waste inventory for the State of Maharashtra through M/s. IRG System South Asia Pvt. Ltd.

Details of authorizations issued under the E-Waste Management Rules, 2022 to Dismantlers/Refurbishers/Recyclers/Producers up to 31st March, 2024 are as shown in **Table 5.61**.

Table 5.61 Present Status of E-Waste Generation and Recycling in Maharashtra State.
Present Status of E-Waste dismantling and recycling capacity.

		Number	Capacity (MTPA)
1.	E-waste Dismantlers	184	1,25,719
2.	E-waste Recyclers	42	2,51,650
Total		**226**	**3,77,369**

5.10 Plastic Waste Management in the State of Maharashtra

Plastic Waste (Management and Handling) Rules, 2011, came into the force as per the notification published by Ministry of Environment and Forest; New Delhi on 4th February, 2011 has been superseded by the Plastic Waste Management Rules, 2016 notified on 18th March, 2016 which have been amended on 27th March 2018, 12th August 2021, 17th September 2021, 16th February 2022 and 6th July 2022.

Rule 16 of the PWM Rules, 2016 requires setting up of State Level Advisory Committee for effective implementation of PWM Rules, 2016 in each State. Accordingly, Government of Maharashtra has constituted State Level Advisory Committee vide Government Resolution Plastic 2013/(284/2013) dated 4th January, 2017 under the Chairmanship of the Principal Secretary, Urban Development Department-II, Government of Maharashtra.

Under Plastic Waste Management Rules, 2016 and amendment thereto, 290 Plastic waste Recyclers of capacity 14.02 Lakh Tonnes per annum and 25 compostable material producers have been registered with Maharashtra Pollution Control Board as of 31st March 2024. Out of 360 recyclers, 290 have been registered in F.Y. 2023-24. The list of registered plastic waste

recyclers and compostable material producers is published and updated in CPCB's website regularly.

Government of Maharashtra has published Maharashtra Plastic and Thermocol Products (Manufacture, Usage, Sale, Transport, Handling and Storage) Notification, 2018 for regulating manufacture, usage, sale, storage, transport of the products made from plastic and thermocol etc. on 23rd March, 2018 and amendment dated 11th April 2018, 30th June 2018, 14th June 2019, 28th March 2022, 15th July 2022, 27th July 2022 and 30th November, 2022.

The notification is applicable for the whole State of Maharashtra. There are two committees constituted under the provisions of this notification namely

i. The Expert Committee under chairmanship of Principal Secretary, Environment Department for technical guidance to the Government in the matters of Maharashtra Plastic and Thermocol Notification
ii. Empowered Committee under chairmanship of Honorable Minister (Environment) to decide necessary amendments and review implementation of the said notification. So far, several meetings of the Expert Committee and Empowered Committee have been conducted and thereafter necessary amendments in the Notification have been issued

Regular surveys have been carried out jointly by local body authorities and MPCB officials within ULBs limits and separately by MPCB officials for industries, to implement the said notification. The status of inspection, action taken, fine collected and banned items seized during F.Y. 2023-24 is represented in **Table 5.62**.

Table 5.62 Status of action taken for Plastic Waste Management by the MPCB.

Period	No. of shops visited	Action initiated against no. of shops	Total fine collected (Rs. in Crore)	Total Qty of banned items seized (MT)
F.Y. 2023-24	1,78,750	8,331	4.5	191

As per the Plastic Waste Management Rules, 2016 and amendment thereto 'Every local body shall prepare and submit an Annual Report in Form-V to the concerned Secretary in charge of the Urban Development Department under intimation to the concerned State Pollution Control Board or Pollution Control Committee. Each SPCB or Pollution Control Committee shall prepare and submit an Annual Report in Form-VI to the CPCB on the implementation of these rules. Accordingly, MPCB has prepared an online portal for submission of Annual Reports from urban local bodies for speedy submission of the report. Out of 418 ULBs, 350 ULBs have submitted the Annual Report for the year 2023-24.

Collection and Disposal of Plastic Waste during the year 2023-24

The plastic waste generation is 4,27,926 TPA, wherein 3,61,337 TPA is collected and 3,21,840 TPA of waste is channelized for recycling (**Table 5.63**). This is as per the information obtained from Annual Report submitted by ULBs for F.Y. 2023-24. Out of this, following are main modes of use are;

- Plastic waste sent for co-processing : 10,614 tonnes
- Plastic waste used for pyrolysis : 920 tonnes
- Plastic waste used for road construction : 967 tonnes
- Plastic waste sent to landfilling facility : 68,873 tonnes

The Region-wise information on plastic waste generation, collected and disposal for the year 2023-24 obtained from ULB's Annual Report is represented in **Table 5.63**.

Table 5.63 Region-wise statistical information on Plastic Waste in Maharashtra for F.Y. 2023-24.

MPCB Regions	No. of ULBs	Plastic Waste generated (in tons)	Plastic Waste collected (in tons)	Plastic Waste channelized for recycling (in tons)
Amravati	41	2,926	2,781	2,255
Chhatrapati Sambhaji Nagar	81	43,800	41,377	32,840
Chandrapur	47	6,500	6,200	4,322
Kalyan	8	33,365	31,950	26,542
Kolhapur	44	9,000	8,284	8,032
Mumbai	1	1,20,600	80,287	75,470
Nagpur	47	18,744	18,730	13,818
Nashik	66	48,120	46,790	39,655
Navi Mumbai	2	10,807	9,865	8,970
Pune	56	85,462	74,327	71,560
Raigad	16	10,437	10,401	9,835
Thane	9	38,165	30,345	28,541
Total	**418***	**4,27,926**	**3,61,337**	**3,21,840**

Note* Annual report submitted by 350 ULBs and for 68 remaining ULBs last year + projected data are taken into consideration for preparing above statistic.

5.11 Construction and Demolition Waste

Construction and Demolition (C & D) Waste refers to the materials generated from building, renovating and demolishing structures, such as residential and commercial buildings, roads and bridges. This category of waste includes a diverse range of materials, such as concrete, wood, metal, bricks, glass and other construction materials. The construction industry is a significant contributor to C & D waste and the increasing pace of urban development amplifies the volume

of materials discarded. Effective management of C & D waste is crucial for several reasons. Improper disposal of construction waste harms the environment, especially slow-decomposing components like concrete and wood. Recycling and responsible management not only conserve resources but also reduce the environmental impact linked to extracting and processing new raw materials. Implementing strategies such as source separation, recycling and the use of advanced waste treatment technologies are essential for sustainable C & D waste management. Furthermore, raising awareness within the construction industry about the benefits of reducing, reusing and recycling C & D waste is vital for fostering a more sustainable approach to building and infrastructure development. Ultimately, a holistic and environmentally conscious approach to C & D waste management is essential for mitigating the environmental footprint of the construction sector.

Total **35,69,367.09 MT/A** C & D Waste is generated by 418 ULBs. Total **2,57,440.35 MT/A** Waste processed / recycled by ULBs. The C & D disposed by landfilling without processing (last option) or filling low lying area waste quantity is**. 31,99,571.7 MT/A**. These ULBs having **301** storage facilities to store C & D waste securely. Total **153** Municipal magistrates appointed for taking penal action for non-compliance with these rules by these ULBs and **169** number of cases were registered under this rule.

Table 5.65 provides details of plants available for processing the Construction and Demolition waste.

Table 5.64 Construction and Demolition waste abstract of ULBs and Cantonment Boards.

C & D Waste Abstract of ULBs and Cantonment Boards						
ULBs	**Total Quantity of C & D Waste Generated during whole year in MT**	**Total Quantity of C & D waste processed/recycled in MT**	**Total Quantity of C & D waste Disposed by landfilling without processing or filling low lying area**	**No. of Storage Facilities for C & D Waste Storage**	**Municipal magistrates appointed for taking penal action for non-compliance with these rules**	**No. of Penal action cases registered**
Municipal Corporation	35,22,511	2,34,982	31,87,529	45	9	94
'A' Class Municipal Council	10,841	2,922.65	2,658.3	36	8	0

'B' Class Municipal Council	11,358.73	4,996.32	3,144.49	110	33	11
'C' Class Municipal Council	12,074.31	6,820.06	4,704.2	80	64	56
Nagar Panchayats	12,316.05	7,715.32	1,469.71	25	39	8
Cantonment Boards	266	4	66	5	0	0
Total	**35,69,367.09**	**2,57,440.35**	**31,99,571.7**	**301**	**153**	**169**

Table 5.65 Showing operational plant for processing of Construction and Demolition waste.

Sr. No.	Name of Corporation	Plant capacity (TPD)
1.	Thane Municipal Corporation	300
2.	Pimpri-Chinchwad Municipal Corporation	200
3.	Navi Mumbai Municipal Corporation	150
4.	Pune Municipal Corporation	300
5.	Municipal Corporation of Greater Mumbai	800
		1100
6.	Nagpur Municipal Corporation	650

5.12 Performance of MPCB Laboratories

Maharashtra Pollution Control Board has established and recognized a Central Laboratory, Mahape, Navi Mumbai and seven Regional Laboratories at Pune, Nashik, Chhatrapati Sambhaji Nagar, Nagpur, Chiplun, Thane and Chandrapur, respectively under sub-section 2 of Section 17 of the Water (P&CP) Act, 1974 and the Air (P&CP) Act, 1981. These laboratories are well equipped and accredited by various authorities, including the Ministry of Environment, Forest & Climate Change (MoEF&CC), Government of India (GoI), Delhi under Environment Protection Act, 1986 and the National Accreditation Board for Testing and Calibration Laboratories (NABL) ISO/IEC 17025:2017 and safety standard ISO 45001:2018 certified.

All MPCB laboratories functions as Board's laboratories as defined under Water and Air Act; and Environment (Protection) Act, 1986 and rules made there under to analyze the samples collected by officers authorized to collect samples from respective jurisdiction for analysis of Water, Waste Water, Air, Hazardous waste, Municipal Solid Waste, Biomedical Waste samples and other samples of CPCB and the results from these analyses are sent to the respective Sub Regional Offices and Central Pollution Control Board (CPCB) officers for regulatory actions, ensuring compliance with environmental standards and contributing to pollution control efforts.

MPCB laboratories are well equipped with modern sophisticated instruments and equipments like UV Spectrophotometer, Gas Chromatograph (GC), Mass Spectroscopy, Atomic Absorption Spectrophotometer (AAS), Ion Chromatography (lC) Inductive Couple Plasma (ICP), Inductive Plasma Mass Spectroscopy, (IPMS) Adsorbable Organic Halide Analyzers (AOx), CHNS Analyzers and others.

Table 5.66 provides details of the number of samples and parameters analysed to evaluate the performance of each Board Laboratory. **Figures 5.27**, **5.28** and **5.29** represents the number of water, air and hazardous waste samples analysed respectively.

Table 5.66 Analysis Performance of Board Laboratories for the year 2023-2024.

Sr. No.	Laboratory	Total No. of Samples Analysed			Total	Total No. of Parameters Analysed			Total
		Water	Air	H.W		Water	Air	H.W	
	Central Laboratory, Navi Mumbai	6,028	1,648	134	7,810	97,024	14,881	1,255	1,13,160
1.	Regional Laboratory, Nashik	1,403	473	33	1,909	22,236	3,675	338	2,6249
2.	Regional Laboratory, Chhatrapati Sambhaji Nagar	992	333	8	1,333	13,963	782	62	14,807
3.	Regional Laboratory, Nagpur	1,600	791	67	2,458	26,841	6,624	719	34,184
4.	Regional Laboratory, Thane	1,120	762	-	1,882	8,721	3,262	-	11,983
5.	Regional Laboratory, Pune	4,614	1,256	107	5,977	55,878	4,916	896	61,690
6.	Regional Laboratory, Chandrapur	206	315	-	521	1,602	2,858	-	4,460
7.	Regional Laboratory, Chiplun	2,557	780	86	3,423	37,368	4,167	929	42,464
Total		**18,520**	**6,358**	**435**	**25,313**	**2,63,633**	**41,165**	**4,199**	**3,08,997**

(-) Indicates Facility Not Available

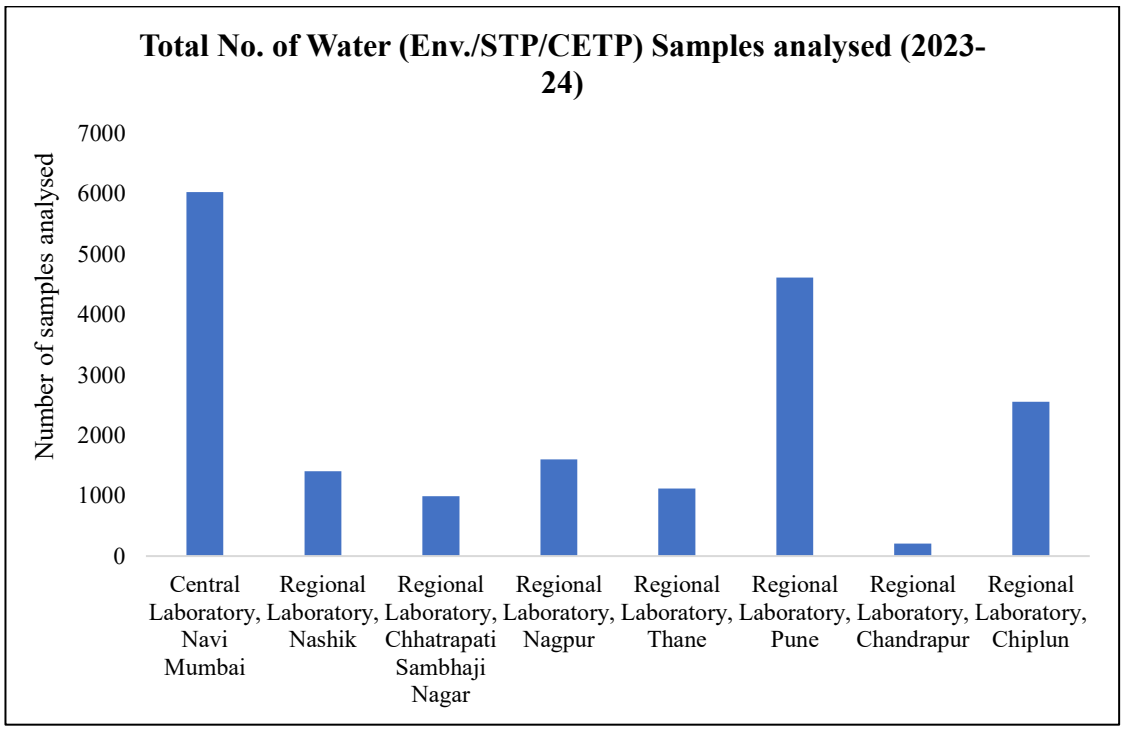


Figure 5.27 Annual total of Water Samples analysed at each MPCB Laboratory (2023-24).

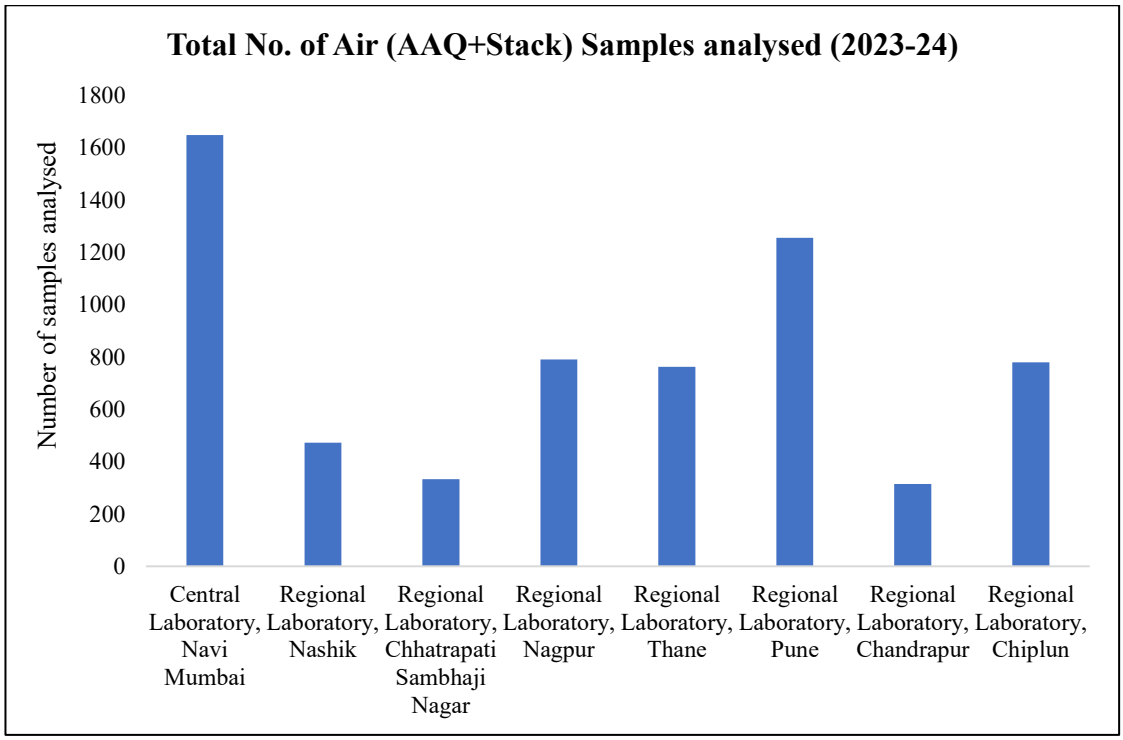


Figure 5.28 Annual total of Air Samples analysed at each MPCB Laboratory (2023-24).

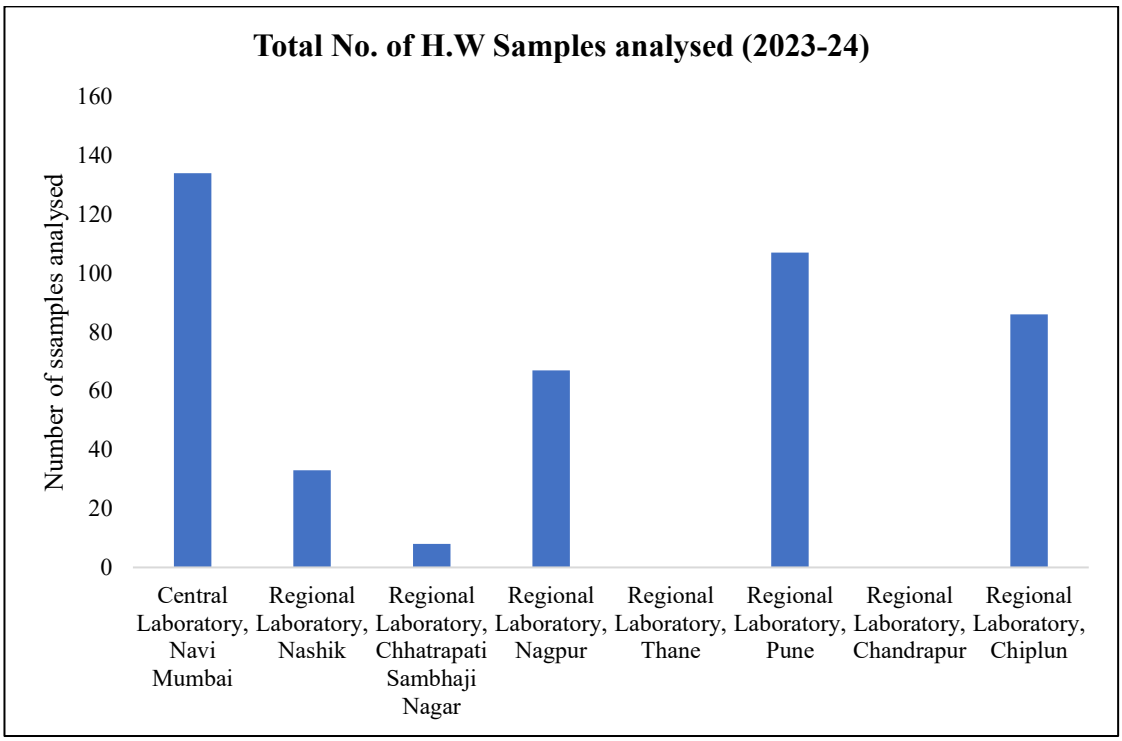


Figure 5.29 Annual total of Hazardous Waste Samples analysed at each MPCB Laboratory (2023-24).

5.12.1 Achievements of MPCB Laboratories

- **NABL ISO/IEC 17025:2017 Accredited and ISO 45001:2018 Certified:**
  Maharashtra Pollution Control Board's Central Laboratory, Mahape, Navi Mumbai and seven Regional Laboratories located at Pune, Nashik, Chhatrapati Sambhaji Nagar, Nagpur, Chandrapur, Thane and Chiplun are successful NABL ISO/IEC 17025:2017 Accredited. The Regional Laboratory, Pune and Chhatrapati Sambhaji Nagar are successfully undergoing first surveillance audit for Standard ISO 17025:2017 without any non-conformance and all laboratories are ISO 45001:2018 certified.

- **100% Performance in Inter Laboratory Proficiency Testing in Analysis:**
  Central Pollution Control Board, Delhi conducts exercise through 'Inter Laboratory Proficiency Testing' program across the country for EPA approved laboratories including State Pollution Control Board's laboratories for Chemical, Biological and Microbiological analysis. During the year 2023-24 the Board's Central Laboratory and Regional Laboratory, Nashik, Pune, Chhatrapati Sambhaji Nagar and Nagpur participated in these program and achieved 100% performance.

- **Strong support in Judicial matters:**
  i As per direction of High Court Bombay (No. PIL 17/2011 dated 1st March, 2011) and order vide no. MPCB/PSO/B-27 dated 2nd March, 2011, MPCB laboratories are

completing weekly analysis of CETP Joint Vigilance Sample analysis across the State and submitting analysis report well within time for hoisting the performance of CETPs on MPCB web site.

ii All Laboratories are equipped for Coal Analysis (Ash Content) as per NGT directions in application no. 19/2014 dated 15th October, 2015.

- **Special Monitoring of Ambient Air during Deepawali Festival:**

  In compliance of Hon'ble Supreme Court Judgment dated 23rd October, 2018, during Deepawali festival MPCB Laboratories analysis Ambient Air Quality Monitoring Samples as per CPCB protocol regarding bursting of firecrackers across the State and submit analysis report well within time. This helps in generation of data on pollution caused by bursting of firecrackers.

- **Time bound completion of analysis of samples collected under special projects:**

  i. During Ganesh Festival MPCB laboratories analyzes the samples pre and post immersion collected from lakes, river, sea and creek. During Diwali festival all laboratories analysed air pollution samples.

  ii. Pandharpur Yatra - Maharashtra Pollution Control Board carried out Water and Air Monitoring and its analysis during Pandharpur Yatra (Ashadhi and Kartiki) 2023. Mass awareness programme is being carried out during Pandharpur Yatra period to keep the Chandrabhaga River free from pollution and to keep clean environment at Pune Region.

- **Special Training to Scientific Officials:**

  Training of various sophisticated instruments, uncertainty of measurement and decision rule as per ISO/IEC 17025:2017 imparted to Senior Scientific Officer and all scientific staff.

6. REGIONAL ENVIRONMENTAL PROBLEMS AND CONTROL MEASURES TAKEN IN RESPECTIVE REGIONS.

6.1 Amravati

6.1.1 Air

Jurisdiction	Issues
SRO Amravati-I SRO Akola	Amravati and Akola fall under NCAP. An action plan has been submitted to the CPCB for restoration of air quality in cities.

Control Measures

Current Action Plan
SRO Amravati-I: An action plan for restoring air quality in Amravati, has been approved by the Hon'ble NGT and submitted to the CPCB. Key measures include tree plantation on vacant land, the relocation of brick kilns and the use of mechanical sweepers for road cleaning. Additionally, construction and demolition waste will be transported in covered vehicles.
The Amravati Municipal Corporation has also submitted a micro action plan to the PRANA Portal. Two CAAQM Stations have been established at Shivaji Science College and MPCB office, with a third station planned for Achalpur Municipal Council.
SRO Amravati-II: The MPCB has proposed three NAMP stations at Washim to monitor ambient air quality.
SRO Akola: Continuous follow-up conducted with Municipal Corporation, Akola and other stakeholders to minimize dust emission within city area.

6.1.2 Water

Jurisdiction	Issues
SRO Amravati-I SRO Amravati-II SRO Akola	The Purna and Pedhi river stretches are included in the polluted river stretches by CPCB. MPCB has submitted an action plan to CPCB for restoring the water quality of the rivers. Similar issue has been observed in SRO Amravati-I and SRO Akola, as the Penganga and Morna rivers are included in the polluted river stretches by CPCB.

Control Measures

Current Action Plan	Mid-Term Action Plan
RO Amravati: MPCB has submitted the action plan to CPCB for restoring the water quality of the Purna, Pedhi, Penganga and Morna rivers.	**SRO Amravati-I:** The Municipal Corporation of Amravati has proposed two STPs of 28 MLD to treat the unattended sewage.

6.1.3 Solid Waste

Control Measures

Action Plan
SRO Amravati-I: The accumalated legacy waste on the sites of the remaining Municipal Council or Nagarpanchyat needs to biomined.
SRO Amravati-II: The MPCB has issued notices/directions to the Municipal Council to setup a treatment facility for MSW. The biomining of remaining legacy waste is required to be carried out on warfooting. Similar measures have been taken in SRO Akola.

6.1.4 Noise

Jurisdiction	Issues
SRO Akola	The MPCB has issued notices/directions to marriage halls and hotels due to environmental issues.

Control Measures

Action Plan
SRO Amravati-I: The MPCB and police authorities are conducting noise monitoring during festival season. Action has been taken by the police authorities where violations of noise rules have been observed. MPCB officials have conducted time to time trainings of police authorities.
SRO Akola: The MPCB has issued notices/directions to marriage halls and hotels.

6.2 Chhatrapati Sambhaji Nagar

6.2.1 Air

Jurisdiction	Issues
SRO Chhatrapati Sambhaji Nagar	Sources of air pollution are industrial activities and commercial activity such as vehicles and construction.
SRO Nanded	Two sources of air pollution are by industrial and commercial activity such as vehicles and construction. The major industrial pollution is due to fuel burning in the boiler, dust pollution due to stone crusher units and manufacturing of traditional bricks.
SRO Parbhani	Illegal ash lifting and stocking of bottom ash from Dautpur ash ponds in nearby areas and premises of ash ponds as well as in vicinity of Parli Vaijnath city.
SRO Jalna	Air pollution problems due to steel industries located at Phase II, MIDC Jalna.

Control Measures

Current Action Plan	Long-Term Action Plan
SRO Chhatrapati Sambhaji Nagar: The MPCB has implemented an action plan related to the NCAP, focusing on the city's load-carrying capacity.	-
SRO Parbhani: Parli Thermal Power Station awarded tender to registered agencies and transportation is done through closed bulkers and achieving 100% fly ash utilization.	**SRO Parbhani:** Parli Thermal Power Station plans to install solar power plant.
SRO Jalna: The steel plants have upgraded the existing APC systems by replacing the primary fume extraction system and ventury scrubbers to secondary fume extraction system followed by bag filter. Stack work has been completed.	-
SRO Latur: Implementation of CPCB approved Latur Clean Air Action Plan is under progress. They have also submitted micro action plan.	-

6.2.2 Water

Jurisdiction	Issues
SRO Nanded	The major sources of water pollution are due to discharge of untreated sewage into the river through various nallahs. Immersion of idols and waste (nirmalya) during Ganesh Chaturthi and Navratri.
SRO Parbhani	At present except Hingoli Municipal Council all Urban Local Bodies do not have sewage treatment facilities. Thus, discharging the untreated sewage in water bodies or on land.
SRO Jalna	The STP work of Jalna Municipal Corporation is under construction.
SRO Latur	Latur city Municipal Corporation, Latur STP construction is in progress
SRO Latur	Other municipal councils and panchayats have not provided STP for treatment of domestic effluent generated from their jurisdiction.
	CPCB has declared Manjara river as a priority V in polluted water stretches.

Control Measures

Current Action Plan	Mid-Term Action Plan	Long-Term Action Plan
SRO Chhatrapati Sambhaji Nagar: Work order for assessment of contamination and delineation of action plan for remediation of contaminated groundwater at Waluj MIDC area, is given to NEERI.	-	-
SRO Nanded: Adopting Zero Liquide Discharge (ZLD) system. Installation of three STPs of capacity 87 MLD, 30 MLD and 15 MLD for treatment of domestic sewage.	**SRO Nanded:** STP for treatment of untreated sewage meet to Godavari river through 12 nallahs causing river water pollution and work of diverting untreated sewage effluent is under progress.	-
SRO Parbhani: Funds have been sanctioned under Swachh Bharat Mission-2 to Municipal Council, Gangakhed for provision of STP.	**SRO Parbhani:** Hingoli Municipal Council Has provided one STP of 15 MLD capacity and is under commissioning. Gangakhed Municipal Council has provided FSTP of 10 KLD.	**SRO Parbhani:** Parbhani Municipal Corporation and Parli Vaijnath Municipal Council have proposed to install STPs and are under planning stage.
SRO Jalna: STP provided at Partur Municipal council and is in operation.	-	**SRO Jalna:** The MPCB has directed to provide adequate STP for domestic effluent generated from the local bodies.
SRO Latur: Latur City Municipal Corporation has submitted proposals for installation of two STPs having capacities 40 MLD and 32 MLD.	**SRO Latur:** Latur has submitted proposal under 'AMRUT' Sewerage Scheme and it has been sanctioned by Government.	-

6.2.3 Solid Waste

Jurisdiction	Issues
SRO Nanded, SRO Parbhani, SRO Jalna, SRO Latur	Many ULBs have not provided adequate processing facility for treatment and disposal of MSW generated from their respective area.

Control Measures

Current Action Plan	Mid-Term Action Plan
RO Chhatrapati Sambhaji Nagar: Monitoring of ground water at MSW/TSDF site.	**RO Chhatrapati Sambhaji Nagar:** Scientific disposal of municipal solid waste and hazardous waste.
Deodorants are sprayed in the MSW plant and its vicinity every three to five times a day.	NMMC has submitted that the waste to energy plant proposal to the GoM.
-	ONGC to set up Compressed Bio Gas (CBG) and Waste to Energy (WTE) plant on public private partnership (PPP) model. The project is in approval stage and will be executed as early as possible.

6.2.4 Noise

Jurisdiction	Issues
SRO Chhatrapati Sambhaji Nagar, SRO Nanded	Use of DJ during Ganesh Chaturthi and Navratri.
	Noise and air problems due to fire crackers in Diwali festival.
	Noise pollution due to vehicles.

Control Measures

Current Action Plan	Mid-Term Action Plan	Long-Term Action Plan
SRO Chhatrapati Sambhaji Nagar: During Ganesh Chaturthi and Navratri, awareness programme, field noise monitoring at different locations were conducted. Noise monitoring conducted with police department in above said festivals.	**SRO Chhatrapati Sambhaji Nagar:** Guidelines circulated to local bodies and implementation of eco-friendly Ganesh Chaturthi, Navratri, Diwali and Holi celebration.	**SRO Chhatrapati Sambhaji Nagar, SRO Nanded:** Regular follow up taken, awareness programs conducted through advertisements on TV and radio.
Diwali fire cracker testing was carried and report submitted to MPCB.	-	MPCB is conducting monitoring during Diwali festival for controlling of high dB fire cracker through the committee consisting of member from DISH, police department to control the noise level.
SRO Nanded: During Ganesh Chaturthi and Navratri festivals, awareness programme was conducted by the MPCB.	**SRO Nanded:** MPCB has conducted monitoring of noise and also conducted awareness programme through display of banners at public places and publicity through electronic media.	-

6.3 Chandrapur

6.3.1 Air

Jurisdiction	Issues
RO Chandrapur	Air pollution caused by thermal power plants, sponge iron industries, coal mines, cement industries, lime kiln industries, coal washery industries, railway sidings, limestone mines, iron ore mining industries, roadside coal storage and domestic use of coal as fuel.

Control Measures

Current Action Plan
RO Chandrapur: Increasing the number of continuous air quality monitoring centres which will make it easier to collect data on air pollution.
In order to control air pollution caused by traffic and other reasons, the District Collector has directed industries located near Chandrapur city such as thermal power plants, coal mines and other industries to asphalt internal roads in their areas, install water spraying systems and take appropriate air pollution control measures. The same is implemented.

6.3.2 Water

Jurisdiction	Issues
RO Chandrapur	Chandrapur Municipal Corporation is not treating 100% of the domestic sewage generated from the city since the underground sewerage scheme is not completed.
	The water generated from the coal mines of Ve.Co.Ltd. is being discharged into the nearby drains and canals without treatment.

Control Measures

Current Action Plan	Long-Term Action Plan
RO Chandrapur: A letter of direction was issued in which Ve.Co.Ltd. It includes installing a setting tank for mining water, recycling maximum amount of mining water for spraying, etc.	**RO Chandrapur:** Installation of industrial wastewater treatment system.
The proposal for a 176 km underground sewerage scheme has been prepared by Chandrapur City Municipal Corporation. Out of which 141 km work has been completed and the remaining 36 km work is pending due to no-objection certificates from the archaeology and forest department.	-

6.3.3 Solid Waste

Jurisdiction	Issues
RO Chandrapur	No solid waste treatment plant.

Control Measures

Current Action Plan	Mid-Term Action Plan	Long-Term Action Plan
RO Chandrapur: To hold review meetings at the district level from time to time for effective implementation of the Solid Waste Management Rules, 2016.	**RO Chandrapur:** To determine the location of the Urban Solid Waste Disposal Centre.	**RO Chandrapur:** To dispose of solid waste generated from cities in a scientific manner using the latest technology.
Sending plastic waste generated from solid waste in the city to be used as fuel to cement industries.	-	Scientific disposal of heritage solid waste through bio-mining.

6.4 Kalyan

6.4.1 Air

Jurisdiction	Issues
SRO Kalyan-I	Around 87 textile units are using coal as a fuel. In winter, complaints are received regarding air pollution due to dispersion.
SRO Kalyan-II	Around 43 textile units are using coal as a fuel. Sometimes industry fails to operate the APC systems properly, due to which complaints with respect to gases emissions are received. AQI in local bodies area sometimes shows to be moderate to poor.
SRO Kalyan-III	Industries prone to air pollution include steel mills, aluminum and lead acid battery recyclers, tyre pyrolysis units, e-waste recyclers, stone crushers, and synthetic resin manufacturers.
SRO Bhiwandi	Most of the cloth yarn processing units and sizing units are sited randomly all over the city. So, there are air pollution complaints from residential areas.

Control Measures

Current Action Plan	Mid-Term Action Plan	Long-Term Action Plan
SRO Kalyan-I: All the units have provided adequate APC systems like dust collector with double stage wet scrubber. Vigilance on industry is kept by carrying out air monitoring. MPCB has pursued the industry to adopt cleaner fuel like PNG.	-	-
SRO Kalyan-II: Industries operating coal fired boilers have provided dust collectors and wet scrubber to control the air emissions. Legal actions are taken against the air polluting industries who are not operating their APC system as per consent conditions.	**SRO Kalyan-II:** City carrying capacity of Ulhasnagar and Badlapur is conducted by IIT Mumbai.	**SRO Kalyan-II:** To encourage industries to adopt advance technology to reduce, recycle and reuse to mitigate water, air and hazardous waste pollution.

SRO Kalyan-III: This office has done around 96 stack monitoring 41 mobile van monitoring.	**SRO Kalyan-III:** The thorough monitoring of recycler industries will be carried out based on SOP laid down by the CPCB. The stone crusher industries are seasonal. The monitoring of stone crushers will also be carried out as per MPCB and CPCB guidelines and legal actions will be initiated if non-compliances observed accordingly.	**SRO Kalyan-III:** The stack and ambient air quality monitoring will be carried out thoroughly and legal actions will be initiated accordingly and will sensitize industries towards long term effects of air pollution on the health as well as environment wherever it is necessary.
SRO Bhiwandi: Show cause notice, proposed and interim directions issued to sizing and dyeing units and are compelled to provide wet scrubber to coal fired boiler and thermopack.	**SRO Bhiwandi:** Industry location policy is to be adopted.	-

6.4.2 Water

Jurisdiction	Issues
SRO Kalyan-I	Kalyan Dombivali Municipal Corporation (KDMC) has not provided sewage treatment plant for the treatment of entire domestic effluent from corporation area.
SRO Kalyan-II	Illegal jeans washing unit are discharging untreated effluent into local nallah which ultimately goes into Ulhas river and Waldhuni river.
	Operation and maintenance of STPs is improper and irregular, due to which partially treated sewage goes into Waldhuni river.
SRO Bhiwandi	Treated effluent from textile processing units is being discharged into municipal gutter or local body gutter which finally meets to saline water zone of Kamavari river.
	In MIDC Saravali area also there is no CETP and existing unit has no space to upgrade the ETP.
	Most of cloth processing units have not provided secondary units.

Control Measures

Current Action Plan	Mid-Term Action Plan
SRO Kalyan-I: MIDC has installed a pipeline from Khambalpada Nallah to Ulhas Creek, extending 7.5 km and it is now operational.	**SRO Kalyan-I:** KDMC will provide STP of 30 MLD to 57 MLD with underground drainage system under Amrut Scheme.
SRO Kalyan-II: MIDC will change old effluent carrying pipeline from Badlapur MIDC up to Forest naka, Ambernath.	**SRO Kalyan-II:** The closed pipeline of about 17.5 kms is completed and operational since 12th June, 2023. Hence, there is no discharge of treated effluent of CETP's into Waldhuni river.
SRO Kalyan-III: M/s. Hindustan Coca Cola Beverages Wada, M/s. Technocraft Industries, Dhanivali Murbad and M/s. JSW Steel Coating, Shahapur have adopted cleaner technology.	**SRO Kalyan-III:** The industries which may cause water pollution have installed water pollution control systems. Systematic survey with respect to water polluting industries will be carried out to update the status.
SRO Bhiwandi: Closure directions are issued to 34 units.	**SRO Bhiwandi:** Industry location policy is to be adopted in Bhiwandi Tahsil area.
All cloth processing units are being compelled to provide secondary treatment.	-

6.4.3 Solid Waste

Jurisdiction	Issues
SRO Kalyan-I	The dumped MSW in Adharwadi dumping ground has not started bio-mining.
SRO Kalyan-II	At present, MSW generated by Corporation/Council are disposed unscientifically which leads towards smell nuisance complaints. Due to fire incidence at MSW site, problem of air pollution arises.
SRO Bhiwandi	As present MSW generated from Corporation is collected unscientifically and dumped at Chavindra site. There is only treatment process and scientific landfill site.

Control Measures

Current Action Plan
SRO Kalyan-I: Currently, two methanisation plants at Umbarde and Aayre are in working condition.
SRO Kalyan-II: MPCB has issued directions to the local body for installation of scientific MSW treatment and disposal facility.
SRO Kalyan-III: Mission Life programme was carried out in Jamghar and Nehroli schools wherein cotton bags were distributed among students. Students were sensitized to not use plastic bags.
SRO Bhiwandi: MPCB has issued number of directions for provision of MSW treatment plant and disposal site.

6.4.4 Noise

Jurisdiction	Issues
SRO Kalyan-I	Complaints received regarding noise pollution caused by the industry.
SRO Kalyan-II	Complaints about noise pollution are occasionally received, especially during the festival season.
SRO Kalyan-III	Complaint received regarding noise pollution caused by rolling mill unit.
SRO Bhiwandi	Noise complaints arises sometime due to power looms.

Control Measures

Current Action Plan	Mid-Term Action Plan
SRO Kalyan-I: MPCB has issued show cause notices and direction to the industry wherein there is exceedance in the noise level by 5 dB.	**SRO Kalyan-I:** Most of the unit has provided acoustical enclosure to the DG Sets.
SRO Kalyan-II: In case of industrial noise pollution, MPCB is carrying out noise monitoring of the industry and if the noise level found exceeding, directions are issued to control the noise pollution by providing noise barriers or noise control equipments. Similarly, noise complaints in residential area are forwarded to local body for further action.	**SRO Kalyan-II, SRO Bhiwandi:** During festival season, noise monitoring is being carried out by MPCB with the help of external agencies.

6.4.5 Other Issues

Jurisdiction	Issues
SRO Kalyan-I	Illegal industry is observed in the area Kalyan Dombivali area.
	Closed unit of jean wash from Ulhasnagar Municipal Corporation may be relocated in Kalyan Dombivali Municipal Corporation as well as Kalyan Taluka rural area.

SRO Kalyan-I, SRO Kalyan-II, SRO Kalyan-III and SRO Bhiwandi	Even though MPCB has closed down the industries which were engaged in banned plastic manufacturing activity, sometimes those are still noticed in the area as they are procured from outside Maharashtra.

6.5 Kolhapur

6.5.1 Air

Jurisdiction	Issues
SRO Kolhapur	Kolhapur declared as non-attainment city for the air quality.
SRO Sangli	Sangli city is a non-attainment city for air pollution, mainly due to the increase in vehicles and poor road conditions.
	Sugar, chemical, and other industries, especially those using bagasse as fuel, also contribute to air pollution.
SRO Chiplun	Smell nuisance due to industries and CETP in Lote MIDC.

Control Measures

Current Action Plan	Mid-Term Action Plan	Long-Term Action Plan
SRO Kolhapur: Air quality monitoring under the National Ambient Air Monitoring Programme (NAMP) is conducted at three locations in Kolhapur.	**SRO Kolhapur:** The action plan prepared by NEERI for mid-term will be implemented by Kolhapur Municipal Corporation and different stake holders.	**SRO Kolhapur:** The action plan prepared by NEERI for long-term will be implemented by Kolhapur Municipal Corporation and different stake holders.
SRO Chiplun: CETP has installed AAQM for monitoring air quality at Lote MIDC.	**SRO Chiplun:** DBJ College, Chiplun is checking ambient air quality at two locations.	**SRO Chiplun:** Monitoring of volatile organic compounds and provision of appropriate control measures to control VOC levels.

6.5.2 Water

Jurisdiction	Water
SRO Kolhapur	Polluted river stretches of Panchganga river is categorized in priority V by CPCB in its report regarding polluted river stretches in the country.
SRO Sangli	The Krishna River, along with its tributaries Warana and Yerla, flows through Sangli district. Pollution sources include untreated sewage from large villages and Sangli city, which enters the river through local drains like Sheri nallah.
	Gram panchayats in Sangli district also contribute to water pollution. Efforts are underway to improve sewer networks, sewage management, and install adequate STPs.
	Leachate from solid waste is another pollution source. Steps are being taken for proper collection, segregation, treatment and disposal of MSW to prevent leachate contamination.
SRO Ratnagiri	Untreated sewage directly discharging into the river and Arabian Sea through various nallahs/drains.
SRO Chiplun	Polluted Stretch of Vashishti river from village Dalvatane to Kherdi, identified by CPCB as category - V.
	Untreated sewage of all local bodies is mixing into the rivers. STPs are not installed by local bodies.
	Complaints of loss of mangroves and violation of CRZ rules etc. are received.

Control Measures

Current Action Plan	Mid-Term Action Plan	Long-Term Action Plan
SRO Kolhapur: 68 textile processing industries have been directed to curtail effluent generation by 25% of existing effluent quantity and six major textile units of five-star MIDC have been directed to provide ZLD for 75% of their existing effluent quantity.	-	-
Draft DPR report is prepared for provision of CETPs with ZLD system for Ichalkaranji Textile Processing, Shri Laxmi Co. Op. Industrial Estate and Parvati Co. Op. Industrial Estate, Yadrav.	-	-
Ichalkaranji Municipal Council - out of 40 MLD daily sewage, 20 MLD sewage is treated in an STP having total capacity of 20 MLD. Additional new STP is under commissioning with a capacity of 20 MLD.	-	-
SRO Ratnagiri: The MPCB has issued directions to Municipal Councils for provision of STP.	**SRO Ratnagiri:** Provision of STP by Municipal Councils.	**SRO Ratnagiri:** Provision of ETP by Fishery Department, Ratnagiri at Mirkarwada jetty. Provide STP to treat sewage generation from Municipal Councils.
SRO Chiplun: Follow up taken with all local bodies to install STPs. FIRs and criminal complaints are filed for destruction of mangroves by this office. Environmental compensation is imposed for violation of CRZ rules to concerned local body/hotel etc.	**SRO Chiplun:** Monitoring of CETP regularly in Lote MIDC. Monitoring of industries in Lote MIDC. MIDC shall be instructed to provide adequate storm water drains since heavy rainfall zone.	**SRO Chiplun:** Regular monitoring of industries, ETPs etc. Issue SCN, PD, ID, CD, Prosecution notice to non-complying industries/local bodies and instruct industries to install adequate pollution control systems. Prosecution notices may be issued and environmental compensation may be imposed to defaulting local bodies or establishments facility.

6.5.3 Solid Waste

Jurisdiction	Issues
SRO Kolhapur	Handling and disposal of burnt or used sand from foundry industries.
SRO Ratnagiri	All Municipal Councils and Nagarpanchayats provided processing facility for MSW, but need to operate facility properly.
SRO Chiplun	Local bodies are disposing of solid waste unscientifically.

Control Measures

Current Action Plan	Long-Term Action Plan
SRO Sangli: A district monitoring committee has been formed as per SWM Rules, 2016 and NGT orders.	-
SRO Ratnagiri: Taking follow up to operate and maintain treatment facility provided by Nagarpanchayats and Municipal Councils.	-
SRO Chiplun: Directions have been issued to local bodies to identify sites and prepare action plan for setup of scientific solid waste processing facility.	**SRO Chiplun:** Prosecution notices needs to be issued to all defaulting local bodies. Environmental compensation may be imposed to defaulting local bodies or other establishment etc.

6.5.4 Noise

Jurisdiction	Issues
SRO Kolhapur	Noise pollution in the Ganesh Festival at the time of Visarjan.
SRO Sangli	Religious programs are the occasions of causing noise pollution.

Control Measures

Current Action Plan	Mid-Term Action Plan	Long-Term Action Plan
SRO Kolhapur: Monitoring of noise levels in Kolhapur city during Ganesh Chaturthi at different locations were carried out.	**SRO Kolhapur:** Awareness among the Sarvajanik Mandals along with Police department and Municipal Corporations is done.	**SRO Kolhapur:** The Kolhapur Municipal Corporation is in process of preparing the action plan for control of noise pollution in Kolhapur city.

6.5.5 Other Issues

Jurisdiction	Issues
SRO Sangli	The Hon'ble Collector of Sangli, instructed to expedite the installation of CETP at Kupwad MIDC for small-scale industries. Civil work was delayed due to a court matter, but MIDC officials are following up and work is expected to restart in three months.
SRO Chiplun	This office has received complaints about frequent leakage of treated effluent into the creek, along with pollution concerns and loss of fish reported by Dabhol Khadi Sanghatana. Industries, CETP Lote and MIDC have been instructed to take corrective measures, including extending the CETP disposal pipeline into the creek. MIDC is currently working on this.

6.6 Mumbai

6.6.1 Air

Jurisdiction	Issues
RO Mumbai	Heavy vehicular traffic. Regular complaint received from RMC Plants, bakery, construction project.
	Air pollution problems due to burning of waste at Deonar dumping ground. Regular complaints of CHWTSDF.

Control Measures

Current Action Plan
RO Mumbai: Installation of fire-fighting systems and proper management of municipal solid waste.

6.6.2 Water

Jurisdiction	Water
RO Mumbai	JVS results of STP are not meeting with norms as per MPCB's direction.

Control Measures

Current Action Plan	Mid-Term Action Plan
RO Mumbai: MCGM has announced the upgradation and modification of six existing STPs according to MPCB norms, expected to be completed by July 2028. Additionally, a new STP with a capacity of 418 MLD is proposed at Dharavi, set for completion by July 2027.	**RO Mumbai:** Interception of DWF and construction of 8 MLD STP at WSP compound, Powai.

6.6.3 Solid Waste

Jurisdiction	Issues
RO Mumbai	Waste dumped at Deonar dumping ground without treatment.

Control Measures

Current Action Plan
RO Mumbai: Mulund bio-mining process is started for treatment of legacy waste at Mulund dumping ground.
MCGM has appointed NEERI as a consultant to study and suggest suitable treatment for legacy waste at Deonar dumping ground.

6.6.4 Noise

Jurisdiction	Issues
RO Mumbai	Various complaints received to this office regarding noise violation during Ganesh Chaturthi and Eid celebration.

Control Measures

Current Action Plan
RO Mumbai: MPCB issues direction to defaulting units to provide sound barrier along the periphery of the plant.

6.7 Nagpur

6.7.1 Air

Jurisdiction	Issues
RO Nashik	Air pollution due to mineral processing, mining sector and inadequate solid waste management.

Control Measures

Current Action Plan	Mid-Term Action Plan	Long-Term Action Plan
RO Nagpur: Implementation of NCAP for Nagpur city and Wadi. Notices regarding Graded Action Plan to Local Bodies.	**RO Nagpur:** Closure direction issued to stone crusher unit for effective implementation of norms by units in sectors.	**RO Nagpur:** Action plan for reuse and proper storage of coal and ash from thermal power plants.
Action on mines, stone crusher, mineral processing units.	-	Legal action against Local Bodies for implementation of Solid Waste Rules.

6.7.2 Water

Jurisdiction	Issues
RO Nagpur	Ambazari Lake and other reservoirs are polluted due to sewage intrusion from nearby areas, affecting MIDC and residential water supply.
	Nagpur Municipal Corporation and NIT have sewage treatment plants with a capacity of 403.5 MLD, but there is a shortfall of 116.5 MLD.

Control Measures

Current Action Plan	Mid-Term Action Plan
RO Nagpur: Reuse of treated sewage by thermal power plants in cooling towers, thus curtailment of natural water sources.	**RO Nagpur:** Provision of new STP is under consideration by NMC.

6.7.3 Solid Waste

Jurisdiction	Issues
RO Nagpur	Non-compliance of fly ash notification by thermal power plants of MAHAGENCO.
	Non-compliance of Solid Waste Rules by Local Bodies.

Control Measures

Current Action Plan	Mid-Term Action Plan	Long-Term Action Plan
RO Nagpur: Directions issued to thermal power plants for effective implementation for fly ash rule.	**RO Nagpur:** Directions to strengthen ash pond to MAHAGENCO to avoid entry of fly ash in drinking water source.	**RO Nagpur:** Development of fly ash cluster.
Direction issued to all ULBs to collect segregated waste and operate processing plant as per the rule.	-	Action initiated on Local Bodies for compliance of Solid Waste Rules.

6.7.4 Noise

Jurisdiction	Issues
RO Nagpur	Noise levels exceed during Ganesh Chaturthi, Navratri, Diwali and Tajia.

Control Measures

Action Plan
Instruction to Police department regarding noise levels and effective efforts to it.
Testing of fire crackers and instructions issued to explosives, police and local bodies.

6.8 Nashik

6.8.1 Air

Issue - Nashik and Jalgaon cities are declared non-attainment cities due to poor air quality.

Control Measures

Current Action Plan
RO Nashik: Industries should use of clean fuel for the boiler and modern technology for to minimizing the air pollution.
SRO Dhule: Conversion of traditional crematorium to electric based technology.

6.8.2 Water

Control Measures

Current Action Plan
RO Nashik: Committee has visited MIDC area and surrounding area to check the status of Nallahs flowing through MIDC area.
SRO Dhule: Dhule Municipal Corporation is working on providing underground sewerage network and construction of two STPs of capacity 40 MLD and 17 MLD is in progress.

6.8.3 Solid Waste

Jurisdiction	Issues
RO Nashik	There are no solid waste treatment facilities available in the most local bodies. Unscientific disposal of MSW generation from local bodies.

Control Measures

Current Action Plan
RO Nashik: Some of the Municipal Corporation have provided treatment facilities such as composting, bio-methanization, RDF plant.

6.9 Navi Mumbai

6.9.1 Air

Jurisdiction	Issues
RO Navi Mumbai	Smell nuisance at nearby industries in Rabale, Mahape and Koparkhairane MIDC area.
	Smell nuisance due to presence of H_2S along the nallah side.
	Smell nuisance complaints from Sector 11, Kopari gaon received during winter season.

Control Measures

Current Action Plan	Mid-Term Action Plan	Long-Term Action Plan
RO Navi Mumbai: Directions have been issued to concerned industries for provision of leak detection system.	**RO Navi Mumbai:** Performance evaluation of air pollution control measures with respect to efficiency, operation, maintenance and implementation of O&M.	**RO Navi Mumbai:** Direction issued to the industries, Navi Mumbai Municipal Corporation and common facilities to comply long term mitigation measures.
Industries insisted to change fuel to PNG. This area also come under CEPI area.	To prepare an inventory of hazardous air pollutant emitting units and installation of Leak Detection and Repair (LDAR) in case of pesticide and bulk drug manufacturing units.	

6.9.2 Water

Jurisdiction	Issues
RO Navi Mumbai	Accidental discharge of effluent due to overflow/leakage of effluent carrying pipeline of CETP.
	Discharge of untreated domestic effluent from residential slums pockets located in an around TTC MIDC area.

Control Measures

Current Action Plan	Mid-Term Action Plan	Long-Term Action Plan
RO Navi Mumbai: Monitoring of the industries for compliance of CEPI norms.	**RO Navi Mumbai:** Septic tank soak pits provided in slum pockets.	**RO Navi Mumbai:** STP shall be provided by NMMC for treatment of domestic effluent generated from slum area located in and around TTC MIDC area.
Direction issued to MIDC for maintenance of pipeline and to take necessary measures to control accidental discharge due to overflow or leakage of effluent carrying pipeline of CETP. MIDC authority have taken immediate steps to control overflow of effluent into the environment.	Directions issued of NMMC to divert flow to nearest STP	-

6.9.3 Solid Waste

Jurisdiction	Issues
RO Navi Mumbai	Smell nuisance complaints from citizens due to MSW processing facility located at TTC MIDC area Turbhe, Navi Mumbai.

Control Measures

Current Action Plan	Mid-Term Action Plan
RO Navi Mumbai: Monitoring of groundwater at MSW/TSDF site.	**RO Navi Mumbai:** Scientific disposal of MSW and hazardous waste.
Deodorants are sprayed in the MSW plant and its vicinity three to five times a day.	NMMC has submitted that the waste to energy plant proposal to the Government of Maharashtra.
-	ONGC to set up Compressed Bio Gas (CBG) and Waste to Energy (WTE) plant on public private partnership (PPP) model.

6.10 Pune

6.10.1 Air

Jurisdiction	Issues
SRO Pune I	The construction work of Metro and other building constructions is more in PMC area.
	Air pollution complaints received from RMC plant and individual industries.
SRO Pimpri Chinchwad	Occasional issues are noted regarding individual industries and RMC plants. Similar issues are observed in SRO Pune II regarding stone crusher units.
SRO Solapur	Sugar, distillery, chemical and other industries contribute to air pollution; bagasse is a major pollutant from sugar industries.

Control Measures

Current Action Plan	Mid-Term Action Plan
SRO Pune I: The use of coal and wood is not allowed in the PMC area.	**SRO Pune I:** Creating awareness and sensitization of people to mitigate the problems of air pollution. For the better dispersion of air pollutants, industry shall ensure height of the process and fuel burning stacks.
SRO Pimpri Chinchwad: To improve the Air Quality Index (AQI), air purification systems have been installed at 6 locations and Automizer/Dry Mist Fountains operational at 13 locations.	-
SRO Satara: Concerned stone crushers were directed to take precautionary measures to maintain, operate APC systems and provide metallic roads.	-

6.10.2 Water

Jurisdiction	Issues
SRO Pune II	Except for Khadki Cantonment Board, none of the Cantonment Boards and Councils have STPs to treat domestic effluent.
	A detailed survey of the industries and proper location for installation of CETPs phase-wise in Chakan MIDC needs to be carried out.
	Some households from ULBs are utilizing groundwater for drinking and other purposes, which needs to be addressed for CGWA compliance.
SRO Solapur	Large village developments in Akluj area cause sewage pollution in the Nira river.
	The annual gathering during Ashadhi Wari generates additional sewage, contributing to Bhima River pollution.

Control Measures

Current Action Plan
RO Pune: PMC has planned to cater to sewage from this area, submitting a plan for 11 new STPs at various locations in the PMC area with a total capacity of 396 MLD.
PCMC has laid an interceptor line to collect sewage water from various nallahs meeting the Pawana and Indrayani rivers.
Mechanical screens are installed on nallahs to arrest solid waste flowing through.
Local nallahs carrying sewage shall be used temporarily for irrigation purpose.

6.10.3 Solid Waste

Jurisdiction	Issues
SRO Pune I	Out of 44 processing plants only 30 plants are operational.
SRO Satara	No MSW site has been provided for scientific disposal and treatment of MSW in Koregaon, Jawali, Lonand, Khandala and Patan Nagarpanchayat.
	Fire incidents at MSW dumping sites are causing smoke and smell nuisance problems.
	Gram panchayats and do not have MSW sites for the treatment of MSW. Similar issue has been observed in SRO Pune II.
SRO Solapur	Old dump/legacy waste is lying at the Tuljapur Road MSW dumping yard.

Control Measures

Current Action Plan	Mid-Term Action Plan	Long-Term Action Plan
RO Pune: An initiative has been taken for the upgradation of MSW treatment and disposal facilities of all local bodies as per the hon'ble NGT orders.	**RO Pune:** MPCB is in constant communication with all local bodies to check on their progress in disposing of solid waste according to the SWM Rule 2016.	**RO Pune:** PMC has proposed 10 new plants for processing mixed waste, with a treatment capacity of 1600 MT/day. MIDC should allocate a specific area for solid waste disposal and appoint an authorized agency to handle collection. Local bodies should also set up processing plants or composting units.

6.10.4 Noise

Jurisdiction	Issues
SRO Satara, SRO Solapur	Religious programs, festivals and marriage halls are causes of noise pollution.

Control Measures

Current Action Plan	Mid-term Action Plan
SRO Pune I, SRO Pune II: If any industry found not provided acoustic measures the issue is attended immediately.	-
SRO Satara: As per the rule, playing of musical instruments, drums are banned from 10 pm to 6 am.	-

SRO Solapur: The Solapur Municipal Corporation is in process of preparing the action plan for control of noise pollution in Solapur city.	**SRO Solapur:** The Police department and Municipal Corporation, Solapur is being taken effective steps and measures for control of noise pollution during festivals.

6.11 Raigad

6.11.1 Air

Jurisdiction	Issues
SRO Raigad II	The manufacturing capacity at M/s. JSW Steel Ltd. is receiving air pollution complaints. The consented limits are not achieved due to inadequate efficiency of APC systems of some units.

Control Measures

Current Action Plan	Mid-Term Action Plan	Long-Term Action Plan
SRO Raigad I: Surprise night survey of industries in Taloja MIDC surrounding area.	**SRO Raigad I, II:** Industry shall carry out regular monitoring and verify efficiency of the APC systems.	**SRO Raigad I, II, Mahad:** Industry shall switch over to clean fuel technology.
Warning notices, show cause notice, closure, interim directions issued to default industries and stone crusher plant in Khalapur and Panvel Taluka.	For the better dispersion of air pollutants, industry shall ensure height of the process and fuel burning stacks.	Industry shall carry out audit, testing of all the equipment and machineries used for the process.
SRO Raigad II: MPCB has issued legal directions to M/s. JSW Steel Ltd., Dolvi, Tal. Pen, Dist. Raigad for upgradation and improvement of APC systems.	-	Industry shall carry out study of process emissions, fuel emission and accordingly modify the process and fuel type to reduce air pollutions.
SRO Mahad: This office is initiating the actions against the defaulting industries and taking further follow up to rectify it.	-	Industry shall carry out dispersion modelling study with the metrological data for all the season.

6.11.2 Water

Jurisdiction	Issues
SRO Raigad I	Water pollution from food malls.
	Municipal Councils and Nagarpanchayat has not provided STP to treat the sewage generated. Untreated sewage is mixed in natural water resources. Similar issue observed in SRO Raigad II and SRO Mahad.
	After the treatment of trade effluent is discharged into saline zone of Kundalika and Amba rivers. The analysis reports of the trade effluent suggest that it is exceeds the standards. Similar issue observed in SRO Raigad II.
SRO Raigad II	M/s. JSW Steel Ltd. is discharging 14 MLD trade effluent generating from the expansion project 5 to 10 MTPA into Dharamtar Creek.

Control Measures

Current Action Plan	Long-Term Action Plan
SRO Raigad I: The food malls located across the Mumbai Pune Express Highway has provided STP and is being operated.	**RO Raigad:** Industry shall regularly monitor effluent carrying pipeline system. Also, carry out water audit report including water consumption, losses and effluent generation. Industry shall segregate high and low concentration pollution load stream of the effluent and provide adequate treatment facility to reduce pollution load. Industry shall achieve ZLD scheme for the high COD and TDS stream.
SRO Raigad II: Industries shall operate ETP and MEE, ATFD scientifically.	

6.11.3 Solid Waste

Jurisdiction	Issues
SRO Raigad I	MSW site at Chal is overloaded and scientific operation of the site seems to be collapsed.
	Untreated domestic waste of Khopoli Municipal Council area is discharged in Patalganga river.
SRO Raigad II	Air pollution complaints received regarding disposal of MSW in unscientific manner.

Control Measures

Current Action Plan	Mid-Term Action Plan	Long-Term Action Plan
The Municipal authority shall increase number of waste collecting vehicles, vehicles to pick up and segregate MSW at source.	The municipal authority shall adopt upgraded technology for treatment and disposal of MSW.	The municipal authority needs to propose new additional MSW site.
Municipal Corporation prepared short term and long-term plans to improve existing MSW facility.	This office has filed prosecution against Mahad Nagarpalika regarding illegal disposal of MSW near Smashanbhumi Mahad.	The municipal authority shall provide separate treatment and disposal facility for plastic waste, biodegradable waste, recycle waste.

6.12 Thane

6.12.1 Air

Jurisdiction	Issues
SRO Thane-II	There are small scale industries in Mira-Bhayander and Vasai-Virar area which are operating in galas in industrial estate.
	Major air polluting units are commercial RMC plants.

Control Measures

Current Action Plan
SRO Thane II: This office has issued proposed direction/ closure direction and directed to upgrade present system.
Letter has issued to Grampanchayat not to burn solid and plastic waste.

6.12.2 Water

Jurisdiction	Issues
SRO Thane-II	Inadequate STP capacity for Vasai-Virar City Municipal Corporation (VVCMC) area.

Control Measures

Current Action Plan
SRO Thane I: Eight STPs are installed in the jurisdiction of Thane city; seven are in operation.
SRO Thane II: VVCMC has planned to provide adequate capacity STP by December 2026.
SRO Tarapur-I: Segregation and disposal of high COD stream of individual industries to M/s. Sadekar Enviro Eng. for further treatment.

6.12.3 Solid Waste

Jurisdiction	Issues
SRO Thane I	Untreated domestic waste of Khopoli Municipal Council area is discharged in Patalganga river
SRO Thane II	There are some fire incidences at dumping yard at VVCMC and MBMC.

Control Measures

Current Action Plan	Mid-Term Action Plan	Long-Term Action Plan
SRO Thane-I: Firefighting arrangement has been provided to mitigate MSW burning incidents at dumping yards.	The municipal authority shall adopt upgraded technology for treatment and disposal of MSW.	The municipal authority needs to propose new additional MSW site.
SRO Thane-II: The municipal authority shall provide containers of higher capacity at the particular locations (high populations) for collection of MSW, provide adequate measures to avoid fire catch and burning incidence of MSW and to control odour nuisance.	-	The municipal authority shall provide separate treatment and disposal facility for plastic waste, bio degradable waste, recycle waste.

6.12.4 Noise

Mid-term Action Plan
SRO Tarapur-I: To obtain bank guarantees and time bond program to seek compliance.

6.12.5 Other Issues

Jurisdiction	Issues
SRO Thane II	There are small scale industries in Mira-Bhayander and Vasai Virar area which are operating in Galas (illegal structure).
	Recently Forest department has declared Eco Sensitive Zone for Sanjay Gandhi National Park and Tungareshwar Wildlife Sanctuary. There are existing structures in this area and industries (small scale industries i.e. engineering, food, automobile, electrical) in operation.

7. ENVIRONMENTAL STUDIES AND SURVEYS

7.1 Noise Monitoring during Ganesh Festival 2023

The ambient noise monitoring was carried out during the period of the Ganesh Festival at 132 locations which are covered under 27 Municipal Corporations all over Maharashtra. The noise level data was collected using precalibrated Type-II Sound Level Meters (SLM), outside the pandals where continuous music and a crowd of devotees were observed. The monitoring was carried out for five days for 6 hours between 6 PM to 12 AM on 19th September, 20th September, 23rd September, 25th September and 28th September 2023. The study found that noise levels were noticeably higher at some locations this year compared to last year. The biggest increase happened on 28th September, 2023, which was the last day of monitoring. This rise in noise was mainly due to the celebration of Ganesh Visarjan; the final day of the festival when the Lord Ganesha idols are taken through the streets with loud music, drums, DJs, and bands. The number of noise monitoring locations in different Municipal Corporations all over Maharashtra is represented in **Figure 7.1**.

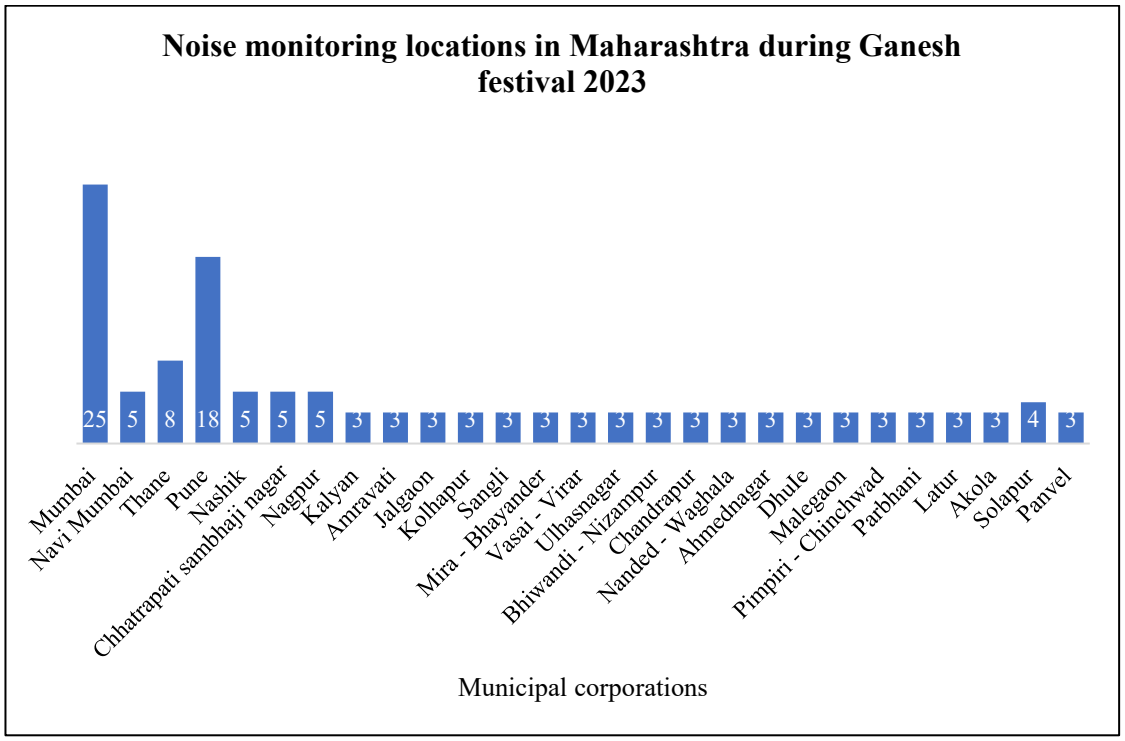


Figure 7.1 Noise monitoring locations in Maharashtra during Ganesh festival 2023.

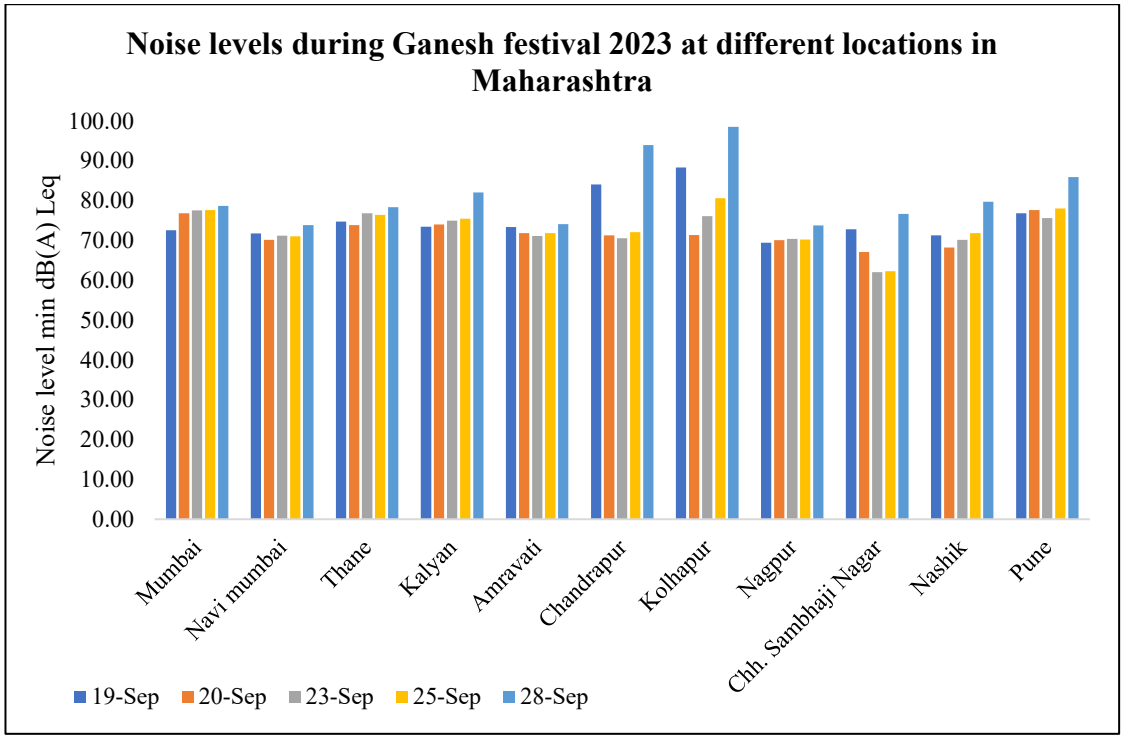


Figure 7.2 Noise levels during Ganesh festival 2023 at different locations in Maharashtra.

From the above graph (**Figure 7.2**), it can be observed that the highest mean noise level recorded on 19th September was 88.30 dB(A) at Kolhapur. On 20th September, which was the second day of noise monitoring, the highest mean noise level recorded was 77.67 dB(A) at Pune. On 23rd September, the highest mean noise level recorded was 77.54 dB(A) at Mumbai. On 25th September, 80.62 dB(A) was the highest noise level which was recorded in Kolhapur. On the last day of noise monitoring during the Ganesh festival, that is on 28th September, the highest noise level was 98.55 dB(A) and was recorded again at Kolhapur.

The lowest mean noise level recorded on 20th September which was the of noise monitoring during the Ganesh festival, was 69.42 dB(A) at Nagpur. The noise levels were low at Chhatrapati Sambhaji Nagar for three consecutive days of noise monitoring; 20th, 23rd and 25th September, with noise levels being 67.07 dB(A), 62.05 dB(A) and 62.32 dB(A) respectively. On 28th September, 73.80 dB (A) was the lowest mean noise level recorded again at Nagpur.

7.1.1 Conclusion - Noise Monitoring during Ganesh Festival, 2023

Ganesh festival is the biggest festival celebrated in Maharashtra for decades. This year 132 locations from 27 Municipal Corporation of Maharashtra were considered for noise monitoring. The noise monitoring was carried out for a five-day period during the Ganesh Festival i.e. on 19th September, 20th September, 23rd September, 25th September and 28th September 2023 for six hours from 6 PM to 12 AM for each location comprising of residential, commercial and silence zone.

It was found that while noise levels were generally lower on the first few days of the festival, they spiked on the last day, September 28th, exceeding legal limits. Compared to the previous two years, 2023 had quieter noise levels in some areas than 2022, though still higher than 2021, when the festival was affected by COVID-19 restrictions. Several cities like Nashik, Bhiwandi, Chandrapur and Pune saw decreases in noise levels compared to 2022, with Panvel showing the most significant reduction. Despite some declines, areas like Chinchpokali East in Mumbai only showed a slight drop in noise.

The results suggest that ongoing efforts by local organizations and public awareness initiatives are helping to manage noise pollution during festivals. The study calls for continued efforts to ensure noise levels remain within permissible limits, highlighting the need for greater public education on the impact of noise pollution while respecting cultural and religious traditions.

7.2 Noise Monitoring during Diwali 2023

To assess the ambient noise levels in the environment during the Diwali festival, the MPCB has taken the initiative to carry out noise monitoring at 158 locations from 29 Municipal Corporation of Maharashtra for three days period during Diwali Festival that is on 6th November (Pre-Diwali), 12th November (on Diwali) and 14th November 2023 (Post-Diwali) for 24 hours at various locations in different cities of Maharashtra which comprise of residential, commercial and silence zone. The study aims to measure and compare ambient noise levels during Diwali and analyze trends over the years. Also, raise public awareness about the harmful effects of high noise levels during the festival. Noise monitoring was carried out using calibrated Sound Level Meters (Type II). The locations at which the noise monitoring was carried out is represented in **Figure 7.3**.

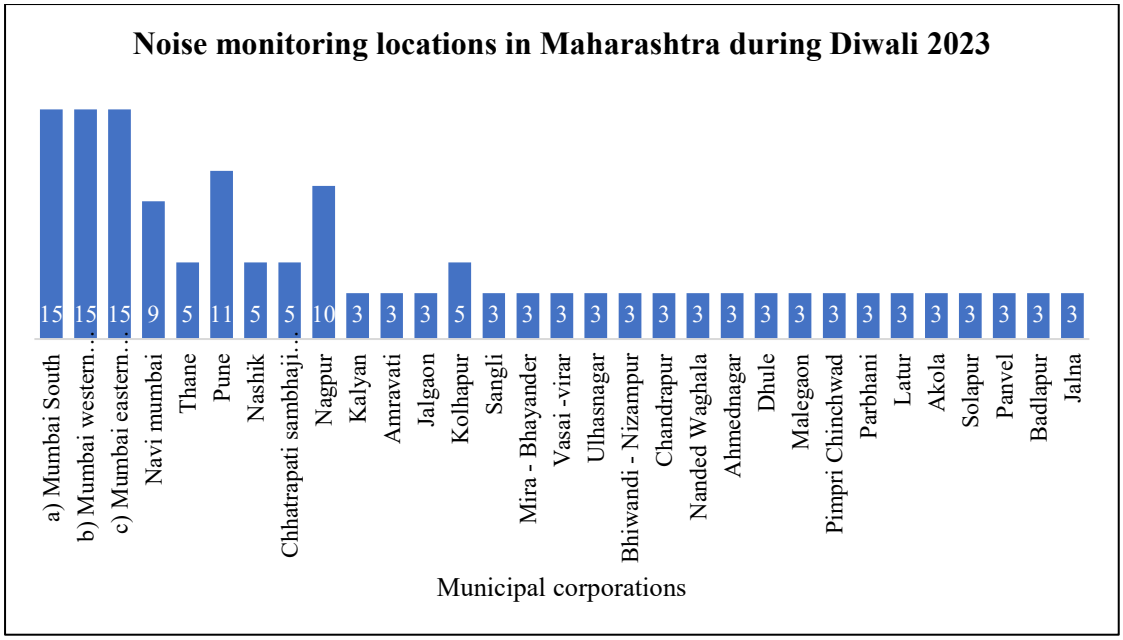


Figure 7.3 Noise Monitoring locations in Maharashtra during Diwali 2023.

Figure 7.4 shows that on 6th November, the highest daytime noise level of 77.37 dB(A) was recorded at Kalyan. On 12th November, Kolhapur had the highest daytime noise level of 89.83 dB(A), and on 14th November, Kolhapur again recorded the highest daytime noise level of 83.24 dB(A). At night, the highest noise levels were 69.47 dB(A) in Kalyan, 74.07 dB(A) in Amravati, and 68.62 dB(A) in Mumbai, recorded on 6th, 12th and 14th November respectively.

The lowest mean noise levels of 57.52 dB(A), 60.72 dB(A) and 64.28 dB(A) were recorded during daytime on the 6th, 12th and 14th November respectively, at Chhatrapati Sambhaji Nagar and Nashik respectively. The lowest mean noise levels of 49.24 dB(A), 59.64 dB(A) and 54.84 dB(A) were recorded during night-time on the 6th, 12th and 14th November respectively, only at Chhatrapati Sambhaji Nagar.

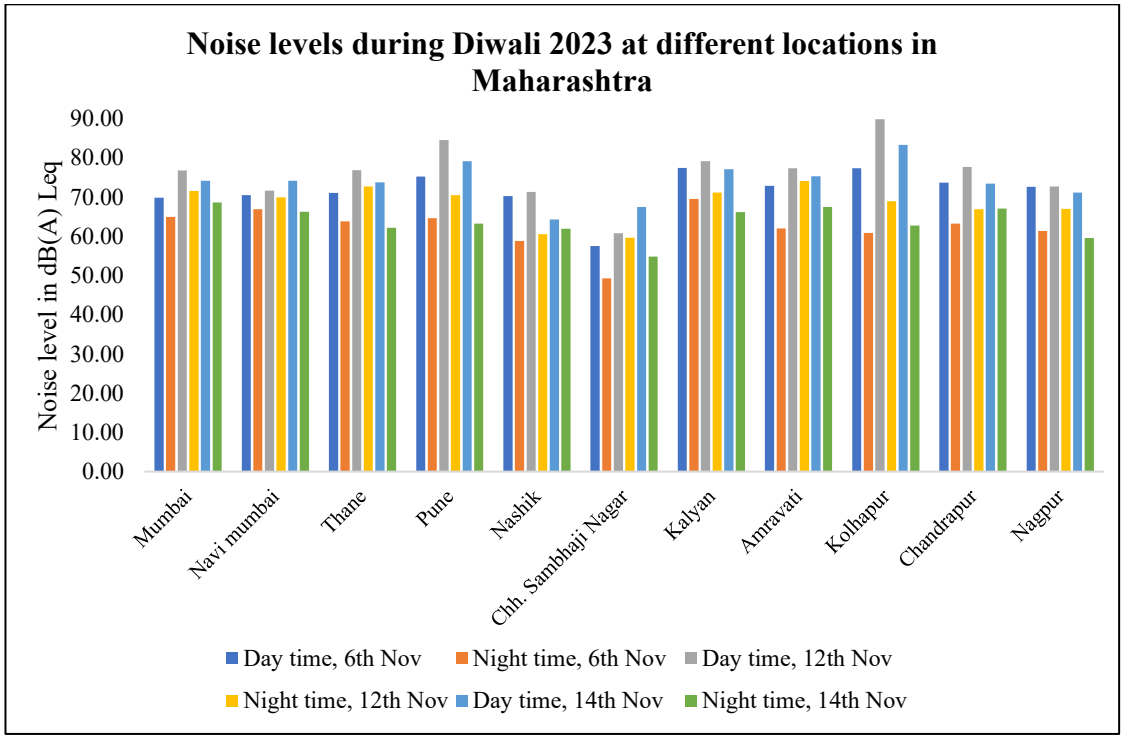


Figure 7.4 Noise levels during Diwali 2023 at different locations in Maharashtra.

7.2.1 Conclusion - Noise Monitoring During Diwali 2023

This year 158 locations from 29 Municipal Corporation of Maharashtra were monitored for the noise levels. The monitoring was carried out for three days during the Diwali Festival i.e. on the 6th November (Pre-Diwali), 12th November (Diwali) and 14th November (Post-Diwali) 2023 for 24 hours. Each location comprises of residential, commercial and silence zone.

The study found that while the average noise levels were higher than recommended standards, they were lower this year compared to last year at most locations. The noise levels were influenced by sources like traffic, honking, construction, and firecrackers. On 6th November

(pre-Diwali), noise levels ranged from 34.6 dB(A) to 87.8dB(A), on 12th November (Diwali) from 45.6 dB(A) to 92.7 dB(A), and on 14th November (post-Diwali) from 48.5dB(A) to 88.0 dB(A). The maximum noise levels were recorded at locations in Mumbai, such as Gandhi Market and Sewree.

When comparing this year's data with 2022, noise levels decreased at most locations during all three periods (pre-Diwali, Diwali, and post-Diwali), suggesting a positive trend in reducing noise pollution. This decrease is likely due to increased awareness and efforts by authorities, NGOs, and the community, including the use of quieter fireworks. The collective impact of these measures highlights the need for continued efforts to balance cultural celebrations with environmental concerns.

Apart from the above general common observations, city-specific observations are given. Municipal Corporation wise observations for the noise level generated are provided below.

- **Mumbai**: The noise level in Mumbai ranged from 57.4 dB(A) to 87 dB(A) this year. Out of this, ambient noise levels in Mumbai South ranged from 56.9 dB(A) at night to 87.0 dB(A) at daytime and in Mumbai Western Suburbs ranged from minimum of 60.0 dB(A) at night to maximum of 84.4 dB(A) at day. In Mumbai Eastern Suburbs, noise levels ranged from lowest average noise level i.e. 53.4 dB(A) at night and highest i.e. 81.8 dB(A) at daytime. The high noise levels in Mumbai South, Mumbai Western Suburbs and Mumbai Eastern Suburbs were mainly due to the usage of firecrackers and traffic.
- **Navi Mumbai:** The noise levels in Navi Mumbai ranged from 63.3dB(A) to 77.9 dB(A) at day and 58.5 dB(A) to 82.5 dB(A) at night this year. As 6 out of 9 monitoring locations falls under commercial zone, hence crowded spaces and traffic also contributed in high level of noise at these places.
- **Thane:** In Thane the minimum noise level recorded was 62.0 dB(A) at night time and the maximum of 82.1 dB(A) at daytime this year. Traffic in the commercial zone contributed to the high noise levels and in residential zones crackers bursting as well as traffic both contributed in the noise levels.
- **Panvel:** The noise level in Panvel ranged from 64.0 dB(A) to 75.0 dB(A) at night and 66.8 dB(A) to 83.6 dB(A) at daytime. The noise levels were due to firecrackers.
- **Pune:** The noise level in Pune was recorded in the range of 57.1dB(A) to 79.6 dB(A) at night and 73.8 dB(A) to 88.6 dB(A) at daytime. Traffic in the commercial zones contributed to the overall high noise levels in the city.
- **Nashik:** In Nashik, the noise level ranged from 51.9 dB(A) to 67.8 dB(A) at night and 68.0 dB(A) to 73.6 dB(A) at daytime. The recorded noise levels in the city were due to the bursting of firecrackers and traffic.

- **Chhatrapati Sambhaji Nagar:** The noise level in Chhatrapati Sambhaji Nagar ranged from 48.0 dB(A) to 63.5 dB(A) at night time and 57.5 dB(A) to 77.5 dB(A) at daytime. The noise levels were due to firecrackers.
- **Nagpur:** The noise level in Nagpur ranged from 55.3 dB(A) to 73.9 dB(A) at night time and 65.1 dB(A) to 79.7 dB(A) at daytime this year. Traffic in the commercial zones contributed to the overall high noise levels in the city.
- **Kalyan:** The noise level in Kalyan ranged from 61.5 dB(A) to 78.4 dB(A) at night time and 71.9dB(A) to 86.1dB(A) at daytime this year. The measured and recorded noise levels were due to crackers and traffic congestion.
- **Amravati:** The minimum noise level in Amravati was recorded as 58.3 dB(A) to 76.6 dB(A) at night time and 65.1 dB(A) to 77.6 dB(A) at daytime this year.
- **Jalgaon:** The minimum noise level in Jalgaon was recorded as 34.6 dB(A) and maximum as 89.4 dB(A) this year. The noise level in Jalgaon also was due to traffic at commercial zone.
- **Kolhapur:** The noise level in Kolhapur ranged from a 59.3 dB(A) to 78.2 dB(A) at night time and 62.5 dB(A) to 92.7 dB(A) at daytime this year. The increase in noise level was due to the bursting of crackers.
- **Sangli:** The noise level in Sangli ranged from 54.5 dB(A) to 68.8 dB(A) at night time and 78.3 dB(A) to 90.2 dB(A) at daytime this year. The increase in noise levels was mainly due to crackers bursting.
- **Mira - Bhayander:** The noise level in Mira – Bhayander ranged from 57.7 dB(A) to 77.4 dB(A) at night time and 66.8 dB(A) to 80.6dB(A) in daytime this year. The noise level was high mainly due to the bursting of crackers.
- **Vasai - Virar:** The noise level in Vasai - Virar ranged from 57.7 dB(A) to 79.1 dB(A) at night time and 61.5 dB(A) to 83.6 dB(A) at daytime this year. The increase in noise level was due to crackers and traffic congestions.
- **Ulhasnagar:** The noise level in Ulhasnagar ranged from 61.7dB(A) to 76.6dB(A) at night time and 73.3 dB(A) to 85.6 dB(A) at daytime this year. The noise level generation in Ulhasnagar was also due to the bursting of crackers.
- **Bhiwandi - Nizampur:** The noise level in Bhiwandi – Nizampur ranged from 58.0dB(A) to 73.2 dB(A) at night time and 71.3 dB(A) to 78.7 dB(A) at daytime this year. Noise level was high at the commercial spots of city mainly due to traffic.
- **Chandrapur:** The noise level in Chandrapur ranged from 61.1 dB(A) to 70.8 dB(A) at night time and 71.7 dB(A) to 81.1 dB(A) at the daytime and was due to the traffic and bursting of firecrackers during Diwali.

- **Nanded - Waghala:** The noise level in Nanded – Waghala ranged from 48.5 dB(A) to 62.0 dB(A) at night time and 52.2 dB(A) to 71.4 dB(A) at daytime this year. The noise levels in Nanded were lower as compared to other locations.
- **Ahmednagar:** The noise level in Ahmednagar ranged from 57.6dB(A) to 63.3dB(A) at night time and 65.2 dB(A) to 77.7 dB(A) at daytime this year. All the monitoring locations here in Ahmednagar come under Commercial zones, hence traffic and honking were the main contributors to the recorded noise levels.
- **Dhule:** The noise level in Dhule ranged from 57.9dB(A) to 63.8dB(A) at night time and 66.6 dB(A) to 70.6 dB(A) at daytime this year and was due to the traffic and bursting of firecrackers on Diwali.
- **Malegaon:** The noise level in Malegaon was recorded as 57.3dB(A) to 65.2dB(A) at night time and 66.0 dB(A) to 69.6 dB(A) at daytime this year. The higher noise level was due to traffic and crowd.
- **Pimpri - Chinchwad:** The minimum noise level in Pimpri – Chinchwad was recorded as 58.1 dB(A) to 72.6 dB(A) at night time and 74.6dB(A) to 87.2 dB(A) at daytime this year. All the monitoring locations here in Ahmednagar come under Commercial zones, hence traffic and honking were the main contributors to the recorded noise levels.
- **Parbhani:** The noise level in Parbhani ranged from 48.5 dB(A) to 64.2 dB(A) at night time and 53.0 dB(A) to 72.2 dB(A) at daytime this year. The noise levels in Parbhani were less as compared to other locations.
- **Latur:** The noise level in Latur ranged from 48.8 dB(A) to 65.2 dB(A) at night time and 51.7 dB(A) to 70.7 dB(A) at daytime this year. The noise levels in Latur were also less as compared to other locations.
- **Akola:** The noise level in Akola ranged from 56.8 dB(A) to 79.6 dB(A) at night time and 75.7 dB(A) to 84.5 dB(A) at daytime this year. The higher noise levels observed were due to traffic congestion and the bursting of crackers.
- **Solapur:** The noise level in Solapur ranged from 56.1 dB(A) to 74.4 dB(A) at night time and 68.6 dB(A) to 84.7 dB(A) at daytime this year. The higher noise level was due to traffic.
- **Badlapur:** The noise level in Badlapur ranged from 57.3 dB(A) to 73.3 dB(A) at night time and 64.7 dB(A) to 81.5 dB(A) at daytime this year. The increase in noise was due to the heavy traffic and the bursting of crackers.
- **Jalna:** The minimum noise level in Jalna was recorded as 49.2dB(A) to 64.9dB(A) at night time and 51.5 dB(A) to 63.8 dB(A) at daytime this year.

8. ENVIRONMENTAL TRAINING

During the year 2023-24, MPCB staff attended 22 training programmes in various places across India. The programmes included a wide range of topics, including management, safety, pollution control technology and many more. **Annexure 5** contains detailed information on the training programme and **Table 8.1** provides a summary of the same. Environmental training is crucial for individuals, organizations and communities to foster a greater understanding of environmental challenges and promote responsible and sustainable behaviours. It plays a vital role in equipping people with the skills and knowledge needed to protect and preserve the environment for future generations.

Planning and organizing environmental training programmes benefit both the employee and the organisation. Not only it leads to better communication and team bonding but also skill development, capacity building, networking and exchange of ideas to tackle a possible issue. It empowers individuals and organizations to be better stewards of the environment and contributes to a healthier, more sustainable future.

Table 8.1 Training Abstract for F.Y. 2023-24.

Total Training Programs Conducted	Total Participants
22	120

9. FINANCE AND ACCOUNTS

Annual Accounts of the MPCB for the Financial Year 2023-24 are prepared as per Section 40 of the Water (P & CP) Act, 1974 and as per the guidelines given in the Water (P & CP) Rule 1983, in the form of Receipt and Payments, Income and Expenditure and Balance Sheet along with schedule of Fixed Assets.

Comptroller and Auditor General of India (CAG) have allotted the statutory audit work of Board to M/s. Gokhale & Sathe, Chartered Accountant. The Audit of Final Accounts was done by M/s. Gokhale & Sathe, Chartered Accountant for the Financial Year 2023-24.

The Audited Final Accounts submitted to the MPCB for approval and adoption. After approval from the MPCB, it will be submitted to the Environment Department, Government of Maharashtra and Account General Maharashtra. The gist of annual Receipts and Payment Accounts, Income and Expenditure Accounts and Balance Sheet for the year 2023-24 is given in this chapter.

- **Total Income of MPCB for the year 2023-24 is Rs. 726.18 Crore as follows;**
    - i. Consent Fees : Rs. 531.43 Crore
    - ii. Analysis Charges : Rs. 10.15 Crore
    - iii. Interest on Investment : Rs. 176.75 Crore
    - iv. Other Income : Rs. 7.85 Crore

- **Total Expenditure of MPCB for the year 2023-24 is Rs. 213.38 Crore as follows;**
    - i. Salary and CPF Contribution Expenditure : Rs. 58.18 Crore
    - ii. Expenditure for Employees Welfare : Rs. 6.56 Crore
    - iii. Expenses on Projects : Rs. 66.63 Crore
    - iv. Office Expenditure and Depreciation : Rs. 82.01 Crore

- Excess of Income over expenditure for the year : Rs. 512.80 Crore
- Capital Expenditure : Rs. 8.97 Crore
- Investment in Fixed Deposits as on 31st March, 2024 : Rs. 4024.59 Crore

Details of accounts for the year 2023-24 are attached as **Annexure 6**.

10. IMPLEMENTATION OF ACTS AND RULES

The MPCB functions under the administrative control of Environment Department of Government of Maharashtra. The MPCB enforces several acts rules and notifications to ensure environmental protection and sustainable development in the State. They are:

Acts and Rules

1. Water (Prevention and Control of Pollution) Act, 1974
2. Air (Prevention and Control of Pollution) Act, 1981
3. Maharashtra Water (Prevention and Control of Pollution) Rules, 1983
4. Maharashtra Air (Prevention and Control of Pollution) Rules, 1983
5. Maharashtra Biodegradable and Non-biodegradable Waste (Control) Act, 2006
6. Public Liability Insurance Act, 1991
7. Right to Information Act, 2005
8. National Green Tribunal Act, 2010
9. Environment (Protection) Act, 1986 and Rules made thereunder as follows:
    i. Environment (Protection) Rules, 1986 (Amendment Rules, 2016)
    ii. The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016
    iii. The Bio-Medical Waste Management Rules, 2016
    iv. The Solid Waste Management Rules, 2016
    v. The Construction and Demolition Waste Management Rules, 2016
    vi. The Plastic Waste Management Rules 2016
    vii. The E-waste (Management) Rules, 2016
    viii. The Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989
    ix. The Noise Pollution (Regulation and Control) Rules, 2000
    x. The Batteries (Management and Handling) Rules, 2001
    xi. The Wetlands (Conservation and Management) Rules, 2017

Notifications

1. Environment Impact Assessment Notification, 2006 and amendments thereof.
2. Coastal Regulation Zone Notification, 2019.
3. Maharashtra Plastic and Thermal Products (Manufacture, Usage, Sale, Transport, Handling and Storage) Notification, 2018 (as amended).
4. Various Notifications issued by MoEF, Government of Maharashtra in respect of Environmental Sensitive Areas such as:

i. Dahanu Notification
ii. Murud Janjira Notification
iii. Mahabaleshwar-Panchgani Notification
iv. Matheran Notification
v. Antop Hill Notification etc.
vi. Western Ghat Notification.

As per these Acts and Rules the following prosecutions have been launched and convictions have been accordingly secured for the year 2023-24.

10.1 Status of Legal Enforcement for the year April 2023-March 2024

i. Status of Cases before Hon'ble Supreme Court of India.

No. of special Leave Petitions / Writ Petition (Civil)/ Civil Appeals filed	No. of Special Leave Petitions/ Writ Petition (Civil)/ Civil Appeals Disposed off	No. of Special Leave Petitions/ Writ petition (Civil) Civil Appeals Pending
28	01	27

ii. Status of Writ Petitions/PILs before Hon'ble High Court of Judicature at Bombay (Bench at Mumbai/ Chhatrapati Sambhaji Nagar/ Nagpur)

No. of Writ Petitions /PILs filed	No. of Writ Petitions/PILs disposed off	Writ Petitions/ PILs pending
125	27	98

iii. Status of Appeals/ Applications before Hon'ble national Green Tribunal, Principal Bench, New Delhi and Western Zone, Pune.

No. of Appeals / Applications filed	No. of Appeals /Applications disposed off	No. of Appeals Applications Pending.
166	23	143

iv. Status of cases filed before Hon'ble Trial Courts

Sr. No.	Name of the Act	No. of cases filed	No. of Cases disposed off	No. of cases pending
1.	Water (P&CP)Act, 1974	28	NIL	28
2.	Air (P&CP)Act, 1980	NIL	NIL	NIL
3.	Environment (Protection) Act, 1986 & Rules made thereunder.	151	02	149

v. Status of Appeals/ Applications filed before the Public Information officer/ Appellate Authority (P&L Div.) MPCB, Mumbai under the Right to Information Act, 2005 during the period from April 2023 to March 2024.

Sr. No.	Particulars	No. of Appeals/ Applications filed	No. of Appeals/ Applications disposed off	No. of Appeals /Applications pending
1.	Application	12	12	-
2.	Appeals	-	-	-

11. ENVIRONMENTAL AWARENESS AND PUBLIC PARTICIPATION

- **A widespread awareness about single-use plastic ban in Jaanata Raja theatre play:** The event was held at Shivaji Park, Dadar in Mumbai. Hon'ble Prime Minister - Narendraji Modi had given a message to adopt an eco-friendly lifestyle through Mission Life. In line with this, throughout the week, attendees of the play were provided with various audio and video materials related to Mission Life. Extensive information and awareness about the ban on single-use plastics was conducted.

- **Environmental awareness at The Maharashtrian of the Year award ceremony of Dainik Lokmat:** At the Dainik Lokmat's Maharashtrian of the Year award ceremony, the attendees took an oath to protect the environment. The event was attended by various social, political, and art figures from the State. Hon'ble Prime Minister – Shri. Narendraji Modi had given a message to adopt an eco-friendly lifestyle through mission life. In this context, various audio videos and widespread awareness about the ban on single-use plastic were provided to the people who attended the event throughout the week.

Chairman of MPCB and Principal Secretary Environment and Climate Change Department - Shri. Pravin Darade along with Director of Lokmat News Group - Shri. Vijaybabu Darda and Shri. Rajendra Darda at the Lokmat Maharashtrian of the Year programme.

- **Environmental awareness in magazine on Chaitra Gudi Padwa:** On the occasion of Chaitra Gudi Padwa, the message of environmental awareness was published in the Shobha Yatra organized and commemorative by Swami Vivekananda Yuva Pratishthan, Girgaum. This was published by Shivner newspaper in their issue.

- **On the occasion of World Earth Day, newspapers published awareness articles:** On the occasion of World Earth Day, an article on environmental awareness was published in the Mumbai edition of the Maharashtra Times, Loksatta, Sakaal, Lokmat, Saamana and Indian Express. A one-page awareness article was published in other editions of the same newspapers in the State. Hindustan Times, Punyanagari, Pudhari, Navakaal, Navbharat and other leading newspapers of the State published awareness articles/ messages.

- **Tarun Tejankit and Khandesh Festival environmental awareness:** The Loksatta Tarun Tejankit initiative celebrates young people who have done innovative, research oriented and remarkable work in various fields. Selected young individuals from various fields such as education, health, arts, sports, science, environment friendly new research-oriented business and social service are honored with the Tarun Tejankit Award. At this festival, there was widespread public awareness about the ban on single-use plastic

- **On organizing an exhibition of alternative items to single-use plastic at Mantralaya on the occasion of World Earth Day:** On the occasion of World Earth Day, an exhibition of various items that are an alternative to single-use plastic was held in the Mantralaya premises. The exhibition showcased innovative items such as products made from coconut and betel nut trees, its shrubs, products made from paper, wood made from various plants, cloth bags, etc. This provided an opportunity to present the available alternatives to single-use plastic to the citizens.

- **Mission Life's exhibition stall on the occasion of the G20 summit:** On the occasion of G20 summit, an environmental conference was organized at Jio Centre, Mumbai. On this occasion, Hon'ble Prime Minister - Shri. Narendraji Modi had introduced the global concept of Mission Life for environmental conservation. The message of adopting eco-friendly lifestyle and protecting the earth was presented to create awareness about the various elements of Mission Life. To raise awareness about how ordinary citizens can participate in environmental conservation through various elements of Mission LIFE, an exhibition stall was presented.

A stall of Mission Life was set up on the occasion of the G20 conference. Assistant Secretary (Technical) - Shri. Nandkumar Gurav of the MPCB present on this occasion.

- **On June 5, World Environment Day, awareness articles published in newspapers:** On the occasion of World Environment Day, Maharashtra Times, Loksatta, Sakaal, Lokmat, Saamana, Indian Express, Times of India, Mid-Day, DNA, Hindustan Times, Punyanagari, Pudhari, Navakaal, Navbharat and other leading newspapers had published a message of awareness about the impact of single-use plastic ban on human health. At the same time, an awareness video was broadcasted on leading Marathi news channels. In addition, awareness messages about the ban on single-use plastic was published on the official advertisement boards of the Directorate General of Information and Public Relations across the State.

- **Paryavarnachi vaari, Pandharichya daari :** On the occasion of Ashadhi Ekadashi, an environmental awareness campaign was organized from Alandi to Pandharpur. In the present situation, the environmental issues of the city and rural areas are equal, so various basic messages such as 'remove plastic, save the country', water, electricity, natural resources, use of limited electricity pumps for agriculture, use of organic fertilizers, proper management of wet and dry waste was conveyed to the one million people who come together on the occasion of Pandharpur vaari. These messages were also spread through popular folk arts like Kirtan, Bharud, Powada and awareness was created. During this 15-day walk, Sangeet Natak Akademi Award winning folk artist - Smt. Chandabai Tiwadi, famous Shahir Shri. Devanand Mali, Shahir Prasad Vibhute and H.B.P. Shri. Dnyaneshwar Maharaj Wabale spread awareness through Bharud, Powada and Kirtan respectively. This

vaari was inaugurated in Pune in the presence of Member Secretary and Principal Secretary Environment - Shri. Pravin Darade. It was organized under the auspices of Dr. Shri. Prakash Khandge, a deep scholar of folk arts. The concluding event of this vaari was held on the evening before Ashadhi Ekadashi in Pandharpur, with the presence of Hon'ble Chief Minister - Eknathji Shinde, the Member Secretary of the MPCB and Hon'ble Principal Secretary of Environment - Shri. Pravin Darade, along with other dignitaries.

In the closing ceremony of the initiative 'Paryavarnachi vaari, Pandharichya daari', Hon'ble Chief Minister - Shri. Eknathji Shinde, Hon'ble Minister - Shri. Radhakrishna Vikhepatil, Hon'ble Principal Secretary - Shri. Pravin Darade and other dignitaries.

- **Environmental awareness at Glam Marathi Awards by Navrashtra and Navbharat Times:** Marathi artists present at the Glam Marathi Awards ceremony organized by Navrashtra and Navbharat Times were sworn to avoid the use of single-use plastic. At this awards ceremony, all the award-winning artists assured the attending public that they would play a significant role in environmental conservation.

- **News 18 Lokmat Maharashtra Gaurav Samman 2023, Environmental Awareness:** News 18 Lokmat, a Marathi news channel honoured individuals with the Maharashtra Gaurav Samman award for their outstanding achievements in various fields in the State. The MPCB participated in the event as a co-convener on environmental issues.

- **Eco-friendly Dahi handi :** The eco-friendly Dahi Handi Festival was organised in association with Ideal Book Company and MPCB. The event included noise pollution awareness rallies and street plays featuring renowned actors from the Marathi film industry. The rally was attended by renowned film and TV artistes. On Dahi Handi, popular television channel artistes of Star Pravah channel participated and spread awareness about noise

pollution control. On this occasion, a soundless eco-friendly Dahi Handi was broken in front of Chhabildas High School, Dadar in collaboration with film and theatre artists. The Public Relations Officer of MPCB was present at the event.

- **Sakaal Shravansari initiative raises widespread awareness about single-use plastic ban:** The event was organised by Sakaal newspaper for women in major cities across the State, including Mumbai, Pune, Pimpri Chinchwad, Nashik and Kolhapur. At this event, various activities were organized, including a question-and-answer session about the ban on single-use plastic and a pledge from actors of Marathi TV serials to avoid using single-use plastic.

- **Environmental awareness in Loksatta 999 Navratri initiative:** Loksatta 999 was organized by the newspaper Loksatta on the occasion of Navratri in Mumbai. The MPCB participated in the event as an environmental organizer. The women who participated in the event, which was held for nine days, were given extensive information about the ban on single-use plastic. Additionally, in this initiative, actors from various TV serials on the Star Pravah channel administered a pledge to the participating women for the protection of a prosperous environment.

- **Eco-friendly domestic Ganpati Competition organized by MPCB and Loksatta:** The eco-friendly domestic Ganeshotsav competition was organized at the six zonal levels of Loksatta dailies namely Mumbai, Pune, Nashik, Nagpur, Ahmednagar and Chhatrapati Sambhaji Nagar in association with MPCB and Loksatta. More than 5000 participants took part in the event. The prize distribution ceremony of this competition was organized in the presence of Hon'ble Chairman of the MPCB - Shri. Pravin Darade and Hon'ble Member Secretary - Dr. Avinash Dhakne.

Prize Distribution Ceremony of Eco-friendly domestic Ganpati Competition organized by MPCB and Loksatta.

- **Times Green Ganesha:** The Times Green Ganesha competition was jointly organized by the MPCB, Environment Department, Government of Maharashtra and Times of India Group for the cities of Mumbai and Pune. The initiative was inaugurated by Dr. Avinash Dhakne - Member Secretary of MPCB. An eco-friendly Ganesh competition was organized by the public Ganeshotsav organizations and housing societies in Mumbai. This campaign included awareness activities in various malls and cinema theatres in Mumbai. Ganesh idol workshop for school students, various activities among college students for eco-friendly Ganesh Ambassador was conducted. During Ganesh Visarjan, a cleanliness drive was conducted at Girgaum Chowpatty in Mumbai. The prize distribution ceremony of this competition was organized in the presence of Hon'ble Chairman of the MPCB - Shri. Pravin Darade and Hon'ble Member Secretary - Dr. Avinash Dhakne.

- **ABP Majha Eco-friendly Ganeshotsav Competition:** MPCB and ABP Majha organized an eco-friendly domestic Ganeshotsav competition in the State. On this occasion, an invitation to participate in the competition was made through a promo featuring Jui Gadkari and Amit Bhanushali from the TV show 'Tharala tar mag' on Star Pravah channel, which was broadcasted on the ABP Majha channel. In accordance, numerous contestants celebrating eco-friendly domestic Ganeshotsav participated in it. The event was held at the MPCB headquarters in the presence of Chairman - Shri. Pravin Darade, Member Secretary - Dr. Avinash Dhakne, serial artists Jui Gadkari and Amit Bhanushali. The show was broadcasted for half an hour on the channel.

- **Ganeshotsav Idol Competition organized by MPCB and Loksatta:** MPCB participated as co-convener in the Ganeshotsav Idol Competition organized by Loksatta. Special prizes were given in the category of best eco-friendly Ganesh idol in the competition. The competition was held for two cities, Mumbai and Pune.

- **News 18 Lokmat and MPCB organized Eco-friendly public Ganpati competition:** IBN Lokmat and MPCB jointly organized an eco-friendly public Ganeshotsav competition. Special promos were aired to invite the participants to participate. A special episode was broadcasted on the channel to mark the occasion. Similar competition was also organized by Dainik Lokmat Digital along with the MPCB. Zee 24 Taas organized a similar event, featuring an eco-friendly domestic Ganpati competition, while Sam TV hosted a competition for housing societies.

Prize distribution ceremony of Eco-Friendly Household Ganpati Competition organized by Zee 24 Taas. Principal Secretary of Environment Department - Shri. Pravin Darade, Member Secretary of the MPCB - Dr. Avinash Dhakne, Public Relations Officer - Shri. Sanjay Bhuskute, Zee 24 Tas editorial member - Smt. Mithali Matkar and prize winners.

- **Eco-friendly Ganeshotsav competition for school students organized by Jai Maharashtra and MPCB:** Jai Maharashtra and MPCB jointly organized an eco-friendly Ganeshotsav competition for school students in the State. Jai Maharashtra channel had made a comprehensive appeal to participate in this competition through promos. The response was great. Similar event was organized by TV9 and the MPCB.

Award distribution ceremony of eco-friendly Ganeshotsav program organized by the TV 9 and MPCB. Principal Secretary of Environment Department - Shri. Pravin Darade, Member Secretary of the MPCB - Dr. Avinash Dhakne, Public Relations Officer - Shri. Sanjay Bhuskute and prize winners.

- **Video message from Hon'ble Chief Minister, Hon'ble Deputy Chief Minister on eco-friendly Ganeshotsav and ban on single-use plastic during Ganesh festival :** The video message of Hon'ble Chief Minister and Deputy Chief Minister regarding eco-friendly Ganeshotsav and the ban on single-use plastic during Ganeshotsav was broadcasted on ABP Majha, Zee 24 Taas, TV9, News 18 Lokmat, Sam TV, Jai Maharashtra, Lokshahi and Mumbai Doordarshan.

- **Kartikichi vaari, Pandharichya daari:** In order to protect the environment conservation through folk artists, this initiative was organized in Pandharpur on the eve of Kartiki Ekadashi. On this occasion, awareness about environmental conservation was spread through folk art like Kirtan, Bharud, Powada. The event was attended by the State Deputy Chief Minister - Shri. Devendraji Fadnavis, Chairman and Principal Secretary Environment - Shri. Pravin Darade, Hon'ble Minister of Revenue - Shri. Radhakrishna Vikhepatil and other dignitaries were present.

In the program 'Kartikichi vaari, Pandharichya daari', Hon'ble Deputy Chief Minister - Shri. Devendraji Fadnavis and folk artist - Purva Kane performing Kirtan.

- **Pollution Free Diwali Resolution Abhiyan pledge and other awareness activities:** To celebrate a pollution-free Diwali, the pollution-free Diwali resolution Abhiyan 2023 was organized at Mantralaya. The oath of a pollution-free Diwali was administered to the students from schools and colleges across the State by Hon'ble Chief Minister - Shri. Eknathji Shinde, Hon'ble Deputy Chief Minister - Shri. Devendraji Fadnavis. Hon'ble minister - Shri. Shambhuraje Desai, Shri. Deepak Kesarkar, Principal Secretary of Environment and Climate Change Department - Shri. Pravin Darade and other dignitaries were present at the event. This event was attended by students from various universities in Mumbai. It was broadcasted on leading television channels across the State. The State's leading FM radio channels, 92.7 Big FM, 93.5 Red FM, 98.3 Radio Chili, 91.1 Radio City, Radio Nasha, Radio One broadcasted the message of pollution-free Diwali. At the same time, the message of pollution-free Diwali was spread on Marathi and Hindi channels, as well as in Maharashtra Times, Lokmat, Sakaal, Loksatta, Times of India, Indian Express, Hindustan Times and other leading newspapers of the State.

- **Distribution of innovative sets with pollution-free Diwali message:** An innovative set was created to celebrate a pollution-free Diwali. The coloured boxes which give the message of pollution-free Diwali, included various items like small lamps, wicks, natural rangoli design set, rangoli design books, utane, torans etc. The sets were sent to the Hon'ble MLA and Hon'ble MP by courier. The set was distributed free of cost to the offices of Hon'ble Chief Minister, Hon'ble Deputy Chief Minister at Mantralaya, Hon'ble Ministers, Hon'ble Secretary, Information and Public Relations Department, Legislative Correspondents Association, as well as the Environment Department, Majhi Vasudhara Department, MPCB Headquarters and offices of the MPCB in the Mumbai Metropolitan Region.

- **Diwali Magazine 2023; message of Pollution Free Diwali:** Diwali and Diwali magazines are a long tradition of reading culture of Maharashtra. Through this Diwali magazine, many renowned Marathi authors, thinkers, scientists working in various fields, and artists write articles. This Diwali issue is a great reading treat. Therefore, on that occasion, the message of pollution-free Diwali was published in various Diwali issues published from across the State.

- **Vasundhara Sathi Award organized by Maharashtra Times and MPCB:** Maharashtra Times Honor awards are held annually on behalf of Maharashtra Times. For the past three years, Vasundhara Sathi award is being distributed by the MPCB and Maharashtra Times. This year, the award was presented to Bijmata Padmashri Rahibai Popare by Hon'ble Chief Minister of the State - Shri. Eknathji Shinde and Deputy Chief Minister - Shri. Devendraji

Fadnavis. Member Secretary of the MPCB - Dr. Avinash Dhakne, Editor of Maharashtra Times - Shri. Girish Karandikar and Public Relations Officer of the MPCB - Shri. Sanjay Bhuskute were present.

- **Other environmental awareness activities:** A special award was given to the best book published in the environmental literature category at the literary award of Lokmat newspaper. The MPCB participated in the event as co-convenor. Also, the annual issue of Loksatta newspaper, Varshavedh, had published a message of environmental awareness. In addition, a half-page awareness article was published to mark the anniversary of the newspaper Navakaal. On the other hand, the MPCB participated in the conference on environment co-convenor, organized by Navbharat newspaper. For the Loksatta newspaper's Tarun Tejankit program, the MPCB participated as an environmental co-organizer.

- **Pollution-free Holi:** To celebrate a pollution-free Holi, an appeal was made through radio jingles on the leading radio stations in the State. The appeal encouraged the use of natural colors, minimal water usage, avoiding Dolby sound systems, and refraining from using single-use plastics while celebrating Holi.

12. IMPORTANT MATTERS DEALT BY THE BOARD

12.1 Air Pollution Control

- **Information about comprehensive noise quality information in various departments of the Maharashtra State:** With the aim to set up real-time Ambient Noise Level Monitoring Stations in major cities with a population of more than 10 lakhs in the State of Maharashtra, there are currently a total of seven locations in the Brihanmumbai Municipal Corporation area, one location in the Thane Municipal Corporation area and two in the Navi Mumbai Municipal Corporation area. A total of 10 of the above stations have been established and the noise level data obtained through them is regularly updated on the CPCB website. Additional monitoring stations are planned for Kalyan-Dombivali Municipal Corporation, Vasai-Virar Municipal Corporation, Pune Municipal Corporation, Pimpri-Chinchwad Municipal Corporation, Nashik Municipal Corporation, Chhatrapati Sambhaji Nagar Municipal Corporation and Nagpur Municipal Corporation, with a total of 36 locations identified. It is proposed to set up four noise monitoring stations each. The tender process has been completed and the installation of noise monitoring stations is in progress. The data received from the noise measuring stations is proposed to be circulated on the MPCB or CPCB website.

- **Information about noise monitoring stations and noise monitoring in Maharashtra during Ganeshotsav and Diwali festivals:** In the year 2023-24, noise monitoring was conducted at a total of 13 places in major cities of the State during Ganeshotsav and a detailed report has been circulated on the MPCB website. Similarly, during Diwali 2023-24, noise monitoring was conducted at a total of 156 places in major cities of the State and a detailed report has been circulated on the MPCB website. The report has also been sent to the police administration and local bodies for further measures and action.

- **Information about network of air quality measurement and current environmental conditions and Information about air monitoring stations:** The MPCB has set up and commissioned Continuous Ambient Air Quality Monitoring Stations (CAAQMS) at 69 locations in major cities of Maharashtra to monitor the air quality. The information about the air quality checked by these centres is circulated daily on the CPCB website. Therefore, the current Air Quality Index (AQI) of air quality is made available to the general public. A total of 118 such locations are under the National Ambient Air Quality Monitoring Programme (NAMP) at 75 locations in the State and 43 locations under the State Air Quality Monitoring Programme (SAMP). Air quality monitoring stations have been set up in the State and most of the stations are run by local educational institutions. For this purpose, grants are provided

by the CPCB. The air pollution data obtained through these stations is collected and circulated through the Air Quality Index (AQI) on the MPCB and CPCB websites. Continuous Ambient Air Quality Monitoring Stations (CAAQMS) are proposed to be set up at a total of 50 locations as per CPCB norms in the remaining cities of the State, for the year 2024-25. The tender process for this work is in progress. Through this, the MPCB aims to conduct air quality checks in almost all districts of Maharashtra. The MPCB, along with the Hon'ble Chief Minister, Hon'ble Deputy Chief Minister and the Government of Maharashtra, has launched five mobile CAAQMS vans through which air quality is monitored.

- **Information on air quality findings:** In 2023-24, the AQI has been calculated from the data collected by 69 CAAQMS stations and 118 AAQMS set up by the MPCB. Based on the data, in most of the locations in Maharashtra the concentration of SO_2 was observed to be less than its prescribed standard limit of 50 µg/m³. The concentration of PM_{10} and $PM_{2.5}$ were observed to be exceeding its prescribed standard limit of 60 µg/m³ at most of the locations. In order to reduce the amount, measures are being taken by the MPCB and concerned organizations to reduce particulate matter to less than 40% by 2026 under the National Ambient Air Quality Monitoring Programme (NAMP). Objectives have been put in place and measures are being taken by various offices/institutions.

12.2 IT Initiatives

Major Integrated Management Information System application updations during 2023-24

- **Integration of additional new services with MAITRI**: As mandated under EoDB, Board has integrated Construction and Demolition Authorization, Bio-Medical waste Authorization, Battery Dealer Authorization and MSW Authorization Services with MAITRI to achieve single window portal for all online MPCB services. This integration aims to provide a single-window portal for industries and stakeholders, streamlining the application and approval processes for various environmental services under MPCB. This platform ensures real-time tracking and updates, improving accountability and visibility throughout the process.

- **Integration of Bank Guarantee, JVS and Sample registration module with Consent Processing:** At the time of processing the consent application, it is very important to check and go through all the details associated with that application like Bank Guarantee details, JVS sample details etc. Therefore, stand-alone BG and JVS modules were integrated with consent application module. This integration has eliminated the need of manual cross-referencing between different systems.

- **Hazardous Waste Generating Industries Inventory and Auto Generation of Hazardous Waste Annual Report:** Recently, Hazardous Waste Generating Inventory and Auto Generation of Hazardous waste Annual Report module has been developed to automate the process of inventory generation and reporting. Further, the auto consent is linked to this module and Hazardous waste inventory is generated in customized format and this module enables the Board Officials to generate auto annual report, resulting in considerable time saving.

- **Automated Bank Guarantee (Auto BG) System:** At the Consent application approval stage, IMIS System auto-generates a Bank Guarantee payable amount based on its application, pre-filling the details from the approved consent's draft Schedule Ill. Once the details are filled by the industry in the Bank Guarantee module, the same will be marked/highlighted on concerned Officer's BG Module Desk under BG section, it will remain marked/highlighted in the system until the industry submits the requisite Bank Guarantee.

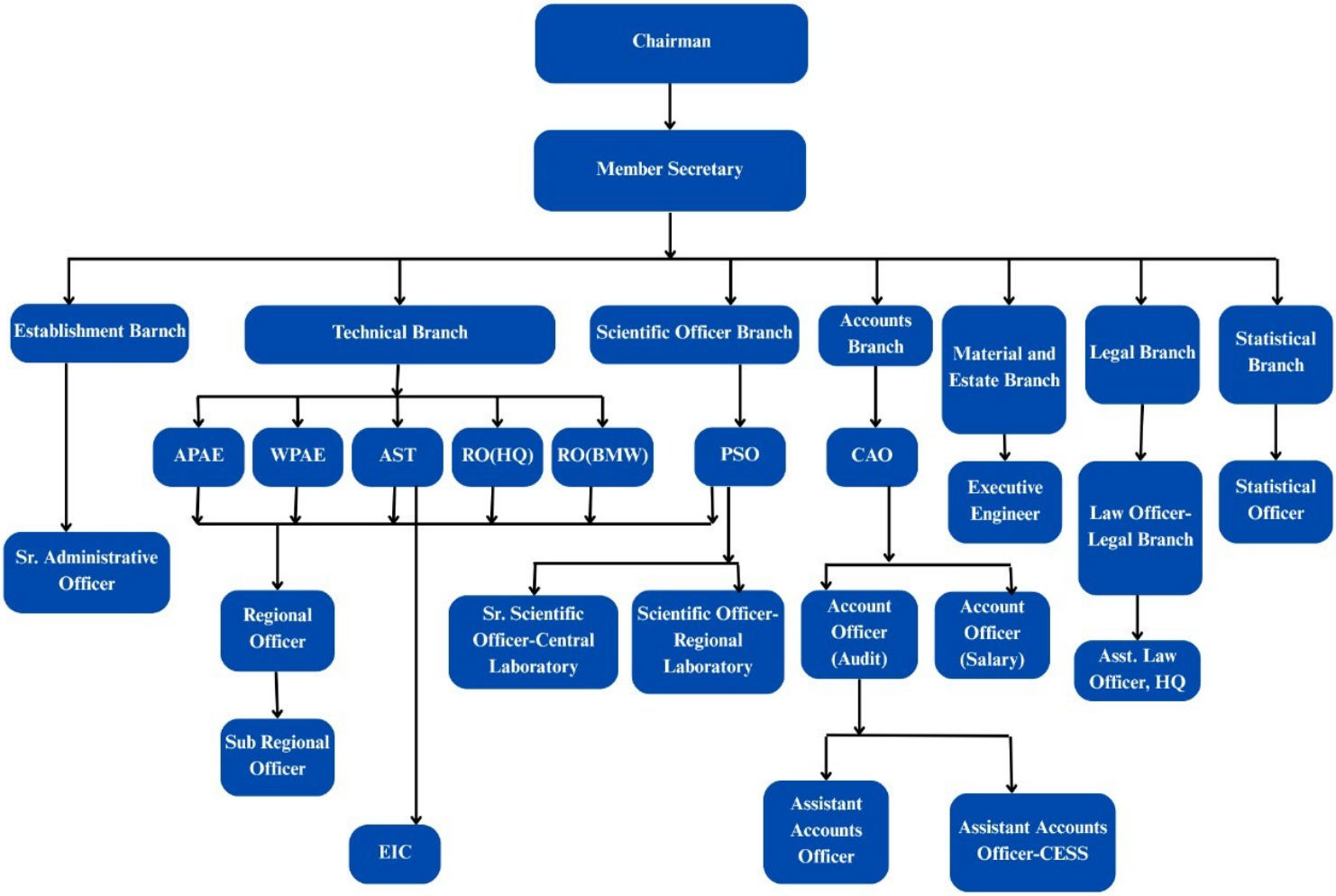
- **New Industry Visit Report Format:** A new field inspection format has been developed, which contains dropdown menu, radio button selection option (ex. Yes/No questionnaire) which simplifies and speed-up the Visit/ Inspection Report generation process. The mobile app for the same have also been developed to support the new industry visit report format, ensuring easy access and convenience for field officers. This mobile app is available on both iOS and android platform, ensuring real-time updates and efficient data collection during visits.

12.3 Water Pollution Control

- State Environment Plan and District Environment Plans (36 districts) is in implementation process in compliance of Honorable NGT Order OA 360/2018.
- Polluted River Stretches -
  i. Priority I - Reduced from initial 4 stretches to 3
  ii. Priority II - Reduced from initial 5 stretches to 3
  iii. Priority III - Reduced from initial 18 stretches to 7
  iv. Total polluted river stretches down from 55 to 50
  v. Priority IV – Reduced from initial 17 stretches to 10
- The MPCB has implemented guidelines/policy that have been formulated for environment friendly idol immersion.
- The MPCB has implemented Eco-Friendly Festivals and methods of immersing idols in natural water bodies. The MPCB has prepared a report on the Water Quality Status of Maharashtra with the help of TERI.

ANNEXURES

ANNEXURE 1 A. ORGANIZATIONAL STRUCTURE OF THE BOARD



ABBREVIATIONS:
APAE – Air Pollution Abatement Engineer,
WPAE – Water Pollution Abatement Engineer,
AST – Assistant Secretary (Technical),
CAO – Chief Accounts Officer,
PSO – Principal Scientific Officer,
RO (HQ) – Regional Officer (Headquarter)
EIC – Environment Information Centre
RO (BMW) – Regional Officer (Biomedical Waste)

ANNEXURE 1 B. FIELD OFFICES CHART

RO Thane

SRO Thane-I
SRO Thane-II
SRO Tarapur-I
SRO Tarapur-II

RO Nashik

SRO Nashik
SRO Jalgaon
SRO Dhule
SRO Ahmednagar

RO Amravati

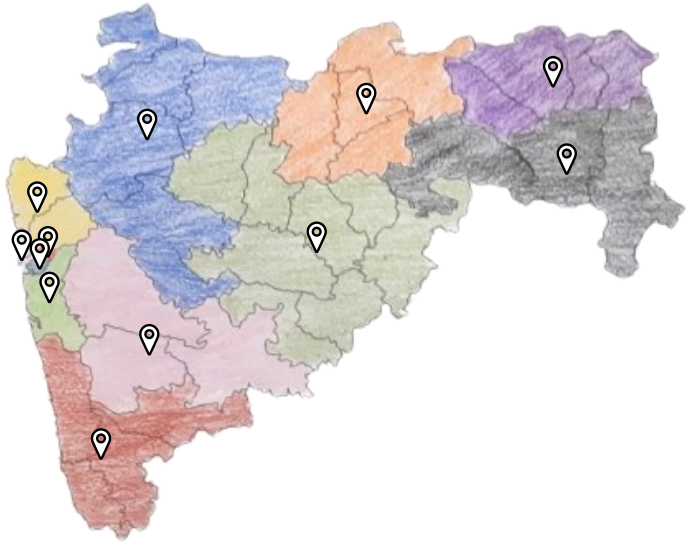
SRO Amravati-I
SRO Amravati-II
SRO Akola

RO Nagpur

SRO Nagpur-I
SRO Nagpur-II
SRO Bhandara

RO Mumbai

SRO Mumbai-I
SRO Mumbai-II
SRO Mumbai-III
SRO Mumbai-IV



RO Chandrapur

SRO Chandrapur

RO Kalyan

SRO Kalyan-I
SRO Kalyan-II
SRO Kalyan-III
SRO Bhiwandi

RO Chhatrapati Sambhaji Nagar

SRO Chhatrapati Sambhaji Nagar
SRO Jalna
SRO Latur
SRO Parbhani
SRO Nanded

RO Raigad

SRO Raigad-I
SRO Raigad-II
SRO Mahad

RO Navi Mumbai

SRO Navi Mumbai I
SRO Navi Mumbai II
SRO Taloja

RO Kolhapur

SRO Kolhapur
SRO Sangli
SRO Chiplun
SRO Ratnagiri

RO Pune

SRO Pune-I
SRO Pune-II
SRO Pimpri-Chinchwad
SRO Satara
SRO Solapur

ANNEXURE 1 C. BOARD LABORATORIES CHART

Regional Laboratory Nashik

RO Nashik

Central Laboratory

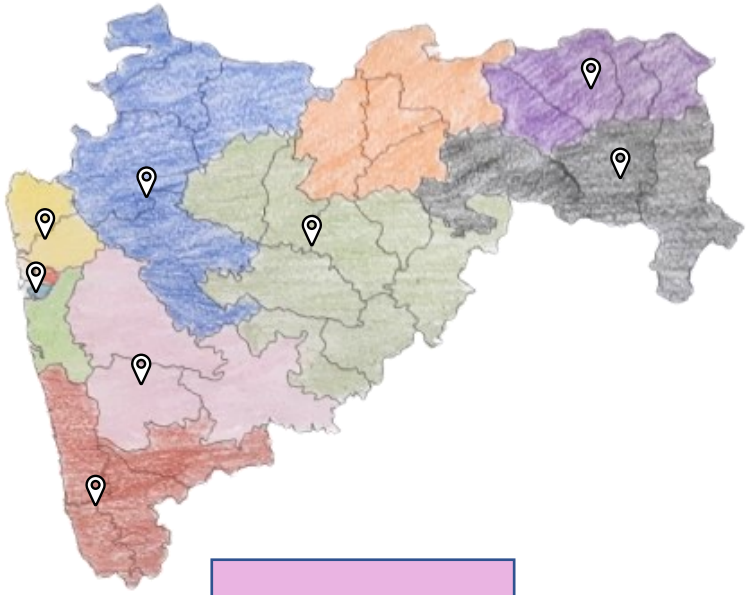
RO Mumbai
RO Navi Mumbai
RO Raigad
RO Kalyan

Regional Laboratory Nagpur

RO Nagpur
RO Amravati

Regional Laboratory Thane

RO Thane



Regional Laboratory Chandrapur

RO Chandrapur

Regional Laboratory Chiplun

RO Kolhapur
SRO Mahad

Regional Laboratory Pune

RO Pune

Regional Laboratory Chhatrapati Sambhaji Nagar

RO Chhatrapati Sambhaji Nagar

ANNEXURE 2. STAFF STRENGTH AS OF 31/03/2024

Sr. No.	Posts	Salary Band	Grade	Sanctioned	Filled	Vacant
1.	Chairman			1	1	0
2.	Member Secretary	(PB-4) 37400- 67000	10000	1	1	0
3.	WPAE (Water Prevention Amendment Engineer)	15600-39100	7600	1	1	0
4.	APAE (Air Prevention Amendment Engineer)	15600-39100	7600	1	1	0
5.	Principal Scientific officer	15600-39100	7600	1	1	0
6.	Chief Accounts Officer	15600-39100	7600	1	1	0
7.	Assistant Secretary (Technical)	15600-39100	7600	1	1	0
8.	Senior Law Officer	15600-39100	7600	2	0	2
9.	Senior Administrative Officer	15600-39100	6600	1	0	1
10.	Executive Engineer	15600-39100	6600	1	1	0
11.	Material Officer	15600-39100	6600	1	0	1
12.	Regional Officer	15600-39100	6600	15	15	0
13.	Law Officer	15600-39100	6600	2	2	0
14.	Senior Scientific Officer	15600-39100	6600	3	1	2
15.	Sub-Regional Officer	15600-39100	5400	55	52	3
16.	Statistical Officer	15600-39100	5000	1	1	0
17.	Assistant Secretary (EB)	15600-39100	5000	1	1	0
18.	Private Secretary	9300-34800	5000	2	0	2
19.	Administrative Officer	15600-39100	5000	1	1	0
20.	Scientific Officer	15600-39100	5000	9	8	1
21.	Account Officer	15600-39100	5000	2	2	0
22.	Junior Scientific Officer	9300-34800	4400	26	19	7
23.	Assistant Accounts Officer	9300-34800	4400	11	1	10
24.	Assistant Law Officer	9300-34800	4400	3	1	2
25.	Deputy Engineer	9300-34800	4400	1	0	1
26.	Senior Stenographer	9300-34800	4400	5	5	0
27.	Junior Stenographer	9300-34800	4300	27	8	19
28.	Field Officer	9300-34800	4300	204	131	73
29.	Head Accountant	9300-34800	4300	20	10	10
30.	Legal Assistant	9300-34800	4300	4	0	4
31.	Junior Scientific Assistant	9300-34800	4200	40	18	22
32.	First Clerk	9300-34800	4200	17	17	0
33.	Statistical Assistant	9300-34800	4200	1	0	1
34.	Draftsman	5200-20200	2800	1	0	1
35.	Field Inspector	5200-20200	2800	42	0	42
36.	Senior Clerk	5200-20200	2400	50	38	12
37.	Assistant Draftsman	5200-20200	2400	2	0	2

38.	Electrician	5200-20200	2400	2	1	1
39.	Tracer	5200-20200	2000	6	1	5
40.	Laboratory Assistant	5200-20200	2000	7	3	4
41.	Junior Clerk	5200-20200	1900	64	31	33
42.	Driver	5200-20200	1900	74	44	30
43.	Instrument Fitter	5200-20200	1900	1	0	1
44.	Daftari	5200-20200	1900	14	0	14
45.	Naik	4440-7440	1600	2	0	2
46.	Roneo Operator	4440-7440	1600	1	0	1
47.	Peon	4440-7440	1300	88	25	63
48.	Chowkidar	4440-7440	1300	20	9	11
49.	Sweeper	4440-7440	1300	3	3	0
		Total		**839**	**456**	**383**

CONVERTED TEMPORARY ESTABLISHMENT AS ON 31/03/2024.

Sr. No.	Posts	Salary Band	Grade	Sanctioned
1.	Junior Scientific Assistant	9300-34800	4200	11
2.	Laboratory Assistant	5200-20200	2000	5
3.	Junior Clerk	5200-20200	1900	4
4.	Driver	5200-20200	1900	1
5.	Peon	4440-7440	1300	3
		Total		**24**

ANNEXURE 3. DETAILS OF REGIONAL AND SUB-REGIONAL OFFICES IN MAHARASHTRA WITH THEIR JURISDICTIONS

Sr. No.	Name of the Region	Jurisdiction	Telephone No.
	Head Office		
	Kalpataru Point, 2nd, 3rd and 4th floor, opposite Moviemax, Sion Circle, Sion (E), Mumbai-400 022.		022-24020781/ 24010437
	Central Laboratory		
	Central Laboratory, Nirmal Bhavan, Mahape, CBD Belapur		
1.	**Regional Office Mumbai**		
	Kalpataru Point, 2nd floor, opposite Moviemax, Sion Circle, Sion (E), Mumbai-400 022.	Mumbai Municipal Corporation Area	24015269 24016239
	Sub Regional Office Mumbai - I Kalpataru Point, 2nd floor, opposite Moviemax, Sion Circle, Sion (E), Mumbai-400 022.	Mumbai city, Ward A, B, C, D, F (North), F (South), G (North) and G (South)	24015269 24016239
	Sub Regional Office Mumbai - II Kalpataru Point, 2nd floor, opposite Moviemax, Sion Circle, Sion (E), Mumbai-400 022.	Mumbai Suburban Ward M/H (West), M/H (East) and L	24015269 24016239
	Sub Regional Office Mumbai - III Kalpataru Point, 2nd floor, opposite Moviemax, Sion Circle, Sion (E), Mumbai-400 022.	Mumbai Suburban Ward K (East), K (West), S, N and P (South)	24015269 24016239
	Sub Regional Office Mumbai - IV Kalpataru Point, 2nd floor, opposite Moviemax, Sion Circle, Sion (E), Mumbai-400 022.	Mumbai Suburban P (North), R (North), R(South) and T Ward	24015269 24016239
2.	**Regional Office Thane**		
	Plot no. P-30, 5th floor, Office Complex building, Mulund Check Naka, Thane - 400 604.	Thane district	25829582 25805398
	Regional Laboratory, Thane		
	Plot no. P-30, 5th floor, Office Complex building, Mulund Check Naka, Thane - 400 604.		25829582 25805398
	Sub Regional Office Thane - I Plot no. P-30, 5th floor, Office Complex building, Mulund Check Naka, Thane - 400 604.	Thane Municipal Corporation, Wagale estate MIDC	25829582 25802272
	Sub Regional Office Thane - II Plot no. P-30, 5th floor, Office Complex building, Mulund Check Naka, Thane - 400 604.	Thane Taluka, Thane Municipal Corporation, Mira Bhayander and Vasai Virar Municipal Corporation and Vasai taluka of Palghar district	25829582

	Sub Regional Office Tarapur - I MIDC Office building, Boisar Station, Post Taps, Tarapur, Dist. Thane - 401 506.	Tarapur MIDC and related area	02525-273314
	Sub Regional Office Tarapur - II MIDC Office building, Boisar Station, Post Taps, Tarapur, Dist. Thane - 401 506.	Dahanu, Talasari, Mokhada, Javhar, Vikramgadh and Palghar taluka (Except Sub Regional Office Tarapur - I jurisdiction)	02525-273314
3.	**Regional Office Kalyan**		
	Sidhivinayak Sankul, 3rd and 4th floor, Oak Bagh, Station Road, Kalyan (W) - 421 301.	Kalyan, Bhiwandi, Ulhasnagar, Badlapur, Wada, Murbad and Shahapur taluka of Thane district	0251-2310212 0251-2310167
	Sub Regional Office Kalyan - I Maharashtra Pollution Control Board, Sidhivinayak Sankul, 3rd and 4th floor, Oak Bagh, Station Road, Kalyan (W) - 421 301.	Kalyan Bhiwandi taluka	0251-2310167
	Sub Regional Office Kalyan - II Maharashtra Pollution Control Board, Sidhivinayak Sankul, 3rd and 4th floor, Oak Bagh, Station Road, Kalyan (W) - 421 301.	Ulhasnagar, Badlapur taluka	0251-2310167
	Sub Regional Office Kalyan - III Maharashtra Pollution Control Board, Sidhivinayak Sankul, 3rd and 4th floor, Oak Bagh, Station Road, Kalyan (W) - 421 301.	Wada taluka (Palghar district), Murbad, Shahapur taluka (Thane district)	0251-2310167
	Sub Regional Office Bhiwandi Maharashtra Pollution Control Board, Sidhivinayak Sankul, 3rd and 4th floor, Oak Bagh, Station Road, Kalyan (W) - 421 301.	Sarawali MIDC and Bhiwandi taluka (Thane district), Bhiwandi Municipal Corporation	0251-2310167
4.	**Regional Office Navi Mumbai**		
	Raigad Bhavan, 6th and 7th floor, Sector - 11, C.B.D Belapur, Navi Mumbai - 400 614.	Parts of Thane and Raigad district and jurisdiction under Sub-Regional Office Navi Mumbai	2757240 27571127
	Sub Regional Office Navi Mumbai - I Raigad Bhavan, 6th and 7th floor, Sector - 11, C.B.D Belapur, Navi Mumbai - 400 614.	C.B.D Belapur, Shiravane, Nerul, Seawoods, Juinagar, Turbhe, Pawane, Vashi, Khairne (sub)	2757240 27571127
	Sub Regional Office Navi Mumbai - II Raigad Bhavan, 6th and 7th floor, Sector - 11, C.B.D Belapur, Navi Mumbai - 400 614.	Airoli, Rabale, Ghansoli, Mahape and MIDC Khairne (sub) Digha, Dahisar, Mori, Pimpri, Uttarshiv, Ghoteghar	2757240 27571127
	Sub Regional Office Taloja Raigad Bhavan, 6th and 7th floor, Sector - 11, C.B.D Belapur, Navi Mumbai - 400 614.	MIDC Taloja, Uran taluka	2757240 27571127

5.	**Regional Office Raigad**		
	Raigad Bhavan, 6th and 7th floor, Sector - 11, C.B.D Belapur, Navi Mumbai - 400 614.	Parts of Raigad district and jurisdiction under Sub Regional Office Raigad	27572620 27562865 27572620
	Sub Regional Office Raigad - I Raigad Bhavan, 6th and 7th floor, Sector - 11, C.B.D Belapur, Navi Mumbai - 400 614.	Khalapur and Panvel taluka (Except MIDC Taloja)	27572620 27562865 27572620
	Sub Regional Office Raigad - II Raigad Bhavan, 6th and 7th floor, Sector - 11, C.B.D Belapur, Navi Mumbai - 400 614.	Pen, Karjat, Roha, Alibaug, Murud Janjira taluka	27572620 27562865 27572620
	Sub Regional Office Mahad Samaik Suvidha Kendra building, MIDC - Mahad, Dist. Raigad - 402 309.	Mahad, Mangaon, Shrivardhan Poladpur and Tala taluka	02145-232372
6.	**Regional Office Pune**		
	Jog Center, 2nd and 3rd floor, Mumbai Pune Road, Wakadewadi, Pune - 411 003.	Pune district	020-25811627 020-25811694 020-25811627
	Regional Laboratory, Pune		
	Jog Center, 2nd and 3rd floor, Mumbai Pune Road, Wakadewadi, Pune - 411 003.		
	Sub Regional Office Pune - I Jog Center, 2nd and 3rd floor, Mumbai Pune Road, Wakadewadi, Pune - 411 003.	Haveli (limited to Pune Municipal Corporation) Bhor, Purandar, Baramati, Indapur, and Daund, Corporation-1 and Council-6	020-25811029
	Sub Regional Office Pune - II Jog Center, 2nd and 3rd floor, Mumbai Pune Road, Wakadewadi, Pune - 411 003.	Haveli taluka (excluding Pimpri Chinchwad Municipal Corporation and Pune Municipal Corporation area) Khed, Mulshi, Ambegaon, Junnar, Maval and Shirur taluka of Pune district	020-25816451
	Sub Regional Office Pimpri - Chinchwad Jog Center, 2nd and 3rd floor, Mumbai Pune Road, Wakadewadi, Pune - 411 003.	Pimpri Chinchwad Municipal Corporation area including MIDC Pimpri, Bhosari and Akurdi	020-25810222
	Sub Regional Office Satara New Government Bhavan, 2nd floor, near S.T. Stand, Sadar Bazar, Satara - 415 001.	Satara district (11 talukas) Satara, Karhad, Phaltan, Wai, Mahabaleshwar, Khandala, Man, Khatav, Patan, Javali, Koregaon, Council-09	02162-233527

	Sub Regional Office Solapur 4/B, Bali Block, Civil Lines, opposite Government Milk Dairy, Saat Rasta, Dist. Solapur - 413 003.	Solapur district	0217-2319850
7.	**Regional Office Kolhapur**		
	Udyog Bhavan building, near Collectorate Office, Kolhapur - 416 002.	Sangli, Kolhapur, Sindhudurg district	0231-2652952
	Regional Laboratory, Chiplun		
	Parkar Complex, 1st floor, near Chiplun Municipal Council Office, Dist. Ratnagiri, Chiplun - 415 605.		02355-261570
	Sub Regional Office Kolhapur Udyog Bhavan building, near Collectorate Office, Kolhapur - 416 002.	Kolhapur district	0231-2660448
	Sub Regional Office Ratnagiri Mahsul Vibhag, Workers Co-op Patasanstha Limited, Office building, Collector office compound, Zadgaon, Ratnagiri - 415 639.	Ratnagiri district, Rajapur, Ratnagiri, Lanja and Sangameshwar taluka. Sindhudurg district, Kudal, Kankavali, Sawantwadi, Vengurla, Malvan, Vaibhavwadi, Devgad, Dodamarg talukas	02352-220813
	Sub Regional Office Chiplun Parkar Complex, 1st floor, near Chiplun Municipal Council office, Chiplun, Dist. Ratnagiri, Chiplun - 415 605.	Chiplun, Guhagar, Khed, Dapoli, Mandangad taluka of Ratnagiri district	02355-261570
	Sub Regional Office Sangli 300/2, Udyog Bhavan, behind Tata petrol pump, near Government Rest House, Vishrambaug, Sangli - 416 416.	Sangli district, Miraj, Valawa, Shirala, Aatpati, Taasgaon, Khanapur, Kadegaon, Palus, Jat and Kavthemahakaal	0233-2672032
8.	**Regional Office Nashik**		
	Udyog Bhavan, 1st floor, Trimbak Road, Satpur, Nashik - 422 007.	Nashik, Ahmednagar, Jalgaon, Dhule, Nandurbar district	0253-2365150
	Regional Laboratory, Nashik		
	Udyog Bhavan, 1st floor, Trimbak Road, Satpur, Nashik - 422 007.		0253-2365150
	Sub Regional Office Nashik Udyog Bhavan, 1st floor, Trimbak Road, Satpur, Nashik 422 007.	Nashik district	0253-2365161
	Sub Regional Office Jalgaon Hall no. A, 3rd floor, old B. J. market, Jalgaon - 425 001.	Jalgaon district. Jalgaon Municipal Corporation, Bhusawal, Faijpur, Savda, Raver, Pachora, Dharangaon, Chalisgaon, Chopda, Amalner, Bhadgaon, Jamner, Yaval, Varangaon	0257-2221288

	Sub Regional Office Ahmednagar Savitribai Phule Vyapari Sankul, 1st floor, hall no. 2 and 3, near T.V. centre, Savedi, Ahmednagar - 414 003.	Ahmednagar district Ahmednagar, Nevasa, Shrirampur, Sangamner, Parner, Kopargaon MIDC area	0241-2470852
	Sub Regional Office Dhule Fulchand Plaza, 2nd floor, B.C. College Road, Near S.S.V.P.S. Engineering College, Near Vidya Nagari, Devpur, Dhule - 424 001.	Dhule district Dhule, Shirpur, Sakri and Sindhkheda, MIDC Avdhan and MIDC Nardana Nandurbar district - Nandurbar, Navapur, Shahada, Taloda, Dhadgaon and Akkalkupa, MIDC Navapur area	02562-273731
9.	**Regional Office Chhatrapati Sambhaji Nagar**		
	Paryavaran Bhavan, A-4/1, Chikalthana Industrial area, near Seth Nandlal Dhoot Hospital, Chhatrapati Sambhaji Nagar - 431 210.	Chhatrapati Sambhaji Nagar, Jalna, Parbhani, Hingoli, Nanded, Beed, Dharashiv	0240-2993004
	Regional Laboratory, Chhatrapati Sambhaji Nagar		
	Paryavaran Bhavan, A-4/1, Chikalthana Industrial area, near Seth Nandlal Dhoot Hospital, Chhatrapati Sambhaji Nagar - 431 210.		0240-2993004
	Sub Regional Office Chhatrapati Sambhaji Nagar Paryavaran Bhavan, A-4/1, Chikalthana Industrial area, near Seth Nandlal Dhoot Hospital, Chhatrapati Sambhaji Nagar - 431 210.	Chhatrapati Sambhaji Nagar	0240-2993004
	Sub Regional Office Jalna Plot no. P-3/1 and P-3/2, near Hotel Aadarsh Palace, Jalna - Chhatrapati Sambhaji Nagar Road, MIDC colony Jalna.	Jalna and Beed (except Parli taluka of Beed)	02482-220120
	Sub Regional Office Latur Plot no. P-10, Latur district Udyog Samuh Building, MIDC, Latur - 413 531.	Latur, Dharashiv district	02382-299645
	Sub Regional Office Parbhani Devkripa Building, Rangnath Maharaj Nagar, Nandkhula Road, Parbhani - 431 401.	Parbhani, Hingoli and Beed district, Parli Vaijnath taluka of Beed	02452-226687
	Sub Regional Office Nanded Lahoti Complex, 2nd Floor, near Shivaji statue, Vajirabad, Nanded - 431 601.	Nanded District	02462-242492
10.	**Regional Office Nagpur**		
	Udyog Bhavan, 5th floor, Sales Tax office, Civil Lines, Nagpur - 440 001	Nagpur, Wardha, Bhandara, Gondia district	0712-2565308
	Regional Laboratory, Nagpur		
	Udyog Bhavan, 5th floor, Sales Tax office, Civil Lines, Nagpur - 440 001.		0712-2565308

	Sub Regional Office Nagpur - I Udyog Bhavan, 5th floor, Sales Tax office, Civil Lines, Nagpur - 440 001	Nagpur city, Kamati, Katol, Kalmeshwar, Narkhed, Ramtek and Savner, Parshivani	0712-2560139
	Sub Regional Office Nagpur – II Udyog Bhavan, 5th floor, Sales Tax office, Civil Lines, Nagpur - 440 001	Nagpur rural taluka Hingana, Mouda, Umred, Kuhi Bhivapur and Wardha taluka of Nagpur district	0712-2560152
	Sub Regional Office Bhandara Tatya Tope ward, near city petrol pump, Miskin tank, Mahal Road, Bhandara - 441 904	Bhandara and Gondia District	07184-260629
11.	**Regional Office Chandrapur**		
	Udyog Bhavan, 1st floor, near Railway Station, Chandrapur - 442 401.	Chandrapur, Gadchiroli district Yavatmal district	07172-251965 07172-272410
	Regional Laboratory, Chandrapur		
	Udyog Bhavan, 1st floor, near Railway Station, Chandrapur - 442 401.		07172-251965 07172-272410
	Sub Regional Office Chandrapur Udyog Bhavan, 1st floor, near Railway Station, Chandrapur - 442 401.	Chandrapur district, Yavatmal and Gadchiroli district MIDC Chandrapur Chandrapur, Tadali, Ghuggus, Varora, MIDC Yavatmal, Yavatmal, Mul, Bhadravati, Chimur, Gadchandur, Nagbhid, Gadchiroli, Kotgal Kolsa Khani Chandrapur, Bhadravati, Ballarpur, Rajura and Varora west, Kolsa area	07172-251965 07172-258062 07172-272410
12.	**Regional Office Amravati**		
	Sahakar Surbhi, Bapatwadi, Vivekanand Colony, Amravati - 444 606.	Amravati, Akola, Buldhana, Vashim	0721-2563597 0721-2563592
	Sub Regional Office Amravati - I Sahakar Surbhi, Bapatwadi, Vivekanand Colony, Amravati - 444 606.	Amravati District Amravati, Achalpur, Chandur Bazar, Tivsa, Daryapur, Anjangaon, Surji, Chandur Railway, Dhamangaon Railway Morshi, Varud, Nandgaon Khandeshwar, Bhatkuli, Dharani, Chikhaldara	0721-2563593
	Sub Regional Office Amravati - II Sahakar Surbhi, Bapatwadi, Vivekanand Colony, Amravati - 444 606.	Washim district Washim mangarulpir, Risod, Manora, Malegaon, Karanja Laad	0721-2563594
	Sub Regional Office Akola Opposite to Hutatma Statue, Nehru Park Square, Alsi Plot, Akola - 444 001.	Akola District Akola, Balapur, Patur, Akot, Murtijapur, Barshi Takali	0724-2452344

		Buldhana District. Buldhana, Chikhali, Mehkar, Lonar, Shegaon, Sindhkhedraja Deulgaonraja, Khamgaon, Nandura, Malkapur, Motala	0724-2442344

ANNEXURE 4. INDUSTRY STATISTICS FOR THE YEAR 2023-24

Industrial Statistics data for F.Y. 2023-24														
Office	**Green**			**Green Total**	**Orange**			**Orange Total**	**Red**			**Red Total**	**White Total**	**Grand Total**
	LSI	**MSI**	**SSI**		**LSI**	**MSI**	**SSI**		**LSI**	**MSI**	**SSI**			
RO Amravati	-	14	4,850	4,864	27	18	2,240	2,285	40	6	275	321	1,452	8,922
RO Chhatrapati Sambhaji Nagar	82	86	6,345	6,513	133	107	2,756	2,996	349	41	747	1,137	813	11,459
RO Chandrapur	14	12	673	699	19	44	472	535	133	31	253	417	371	2,022
RO Kalyan	39	34	2,203	2,276	112	76	1,395	1,583	193	71	2,228	2,492	1,541	7,892
RO Kolhapur	40	40	8,328	8,408	106	86	4,608	4,800	314	104	1,802	2,220	7,145	22,573
RO Mumbai	39	47	2,664	2,750	602	230	1,191	2,023	360	34	806	1,200	262	6,235
RO Nagpur	26	28	2,851	2,905	117	99	2,999	3,215	309	64	1221	1,594	705	8,419
RO Nashik	175	124	6,425	6,724	212	148	3,294	3,654	480	92	2,072	2,644	5,878	18,900
RO Navi Mumbai	74	78	2043	2,195	185	118	1,394	1,697	253	69	1253	1,575	1,111	6,578
RO Pune	596	404	8,653	9,653	1,754	392	5,233	7,379	1,302	194	3,159	4,655	5,112	26,799
RO Raigad	48	38	789	875	110	54	697	861	298	53	604	955	198	2,889
RO Thane	44	30	2,099	2,173	290	42	972	1,304	212	61	1,363	1,636	612	5,725
Grand Total	**1,177**	**935**	**47,923**	**50,035**	**3,667**	**1,414**	**27,251**	**32,332**	**4,243**	**820**	**15,783**	**20,846**	**25,200**	**1,28,413**

Abbreviations
LSI – Large Scale Industries
MSI – Medium Scale Industries
SSI – Small Scale Industries

ANNEXURE 5. DETAILS OF TRAINING PROGRAMS ATTENDED BY MPCB OFFICIALS DURING THE YEAR 2023-24

Details of Training Programs attended by MPCB Officials during the Year 2023-24.					
Sr. No.	**Training/ Workshop Dates and Period**	**Training Venue**	**Subject**	**No. of Partici-pants**	**Name of Participants**
1.	04.04.2023 to 06.04.2023	Hyderabad	Bio-Medical Waste Management	**3**	1) Dr. Vishwajeet Thakur, PSO 2) Shri. Amol Satpute, SRO 3) Shri. Dhananjay Nanekar, JSA
2.	14.09.2023	The Park Hotel, Navi Mumbai	One day Workshop on 'International Conventions on Chemicals and waste' Organized by CSIR - NEERI	**49**	1) Shri. Manish Holkar, Regional Officer, HQ, Mumbai 2) Shri. Satish Padwal, Regional Officer, Navi Mumbai 3) Shri. Jaywant Hajare, Regional Officer, Raigad 4) Shri. L. S. Bhad Regional Officer, Kalyan 5) Shri. Ravindra Andhale, Regional Officer, Thane 6) Shri. Raju Vasave, Sub Regional Officer, Tarapur-I 7) Shri. Vikrant Bhalerao, Sub Regional Officer, Taloja 8) Shri. Prashant Bhosale Sub Regional Officer 9) Shri. V.V. Killedar, Sub Regional Officer, Pune-II 10) Shri. Jayant Kadam, Sub Regional Officer, Navi Mumbai-I 11) Shri. Amar Durgule, SRO Nashik 12) Shri. Babasaheb Kukade, Sub Regional Officer, Kalyan-II 13) Shri. Upendra Kulkarni, Sub Regional Officer, Kalyan-I 14) Shri. Anand N. Katole, Sub Regional Officer, Thane-II 15) Smt. Sneha Kamble, Sub Regional Officer, PSO Div, HQ 16) Shri. Anil Sadansing, JSO, Regional Lab, Pune

					17) Smt. Yamini Chachad, JSO, Central Lab, Mahape 18) Smt. Ranjana Rane JSO, Regional Lab, Thane 19) Shri. Sunil Sonkamble, Field Officer, JD(APC), HQ, 20) Smt, Kalyani Kulkarni Field Officer, AS(T), 21) Shri. Amol Patil, JSA, PSO Division, HQ 22) Dr. Sandeep Shinde, Field Officer, RO (HQ), Mumbai 23) Dr. Prabhakar Wavade, Field Officer, RO HQ, Mumbai 24) Shri. Uday Yadav, Field Officer, JD (WPC) HQ, Mumbai 25) Shri. Abhijeet Kasbe, Field Officer, HQ 26) Shri. Sagar Warekar, Field Officer, RO, Mumbai 27) Smt. Ujjwala Gude, Field Officer, RO, Thane 28) Smt. Deepali Taide, Field Officer, RO, Kalyan 29) Shri. Yogesh Deshmukh, Field Officer, RO, Raigad 30) Smt. Madhurima Joshi, Field Officer, RO, Navi Mumbai 31) Shri. Sameer Vastre, FO, Pune-II 32) Shri. V. G. Bhattane, Field Officer, SRO Kalyan-II 33) Shri. Gajanan Pawar, FO, Tarapur 34) Smt. Rupali Sonkamble, Field Officer, RO, Raigad 35) Shri. Rajaram Injulkar, Field Officer, Taloja 36) Dr. Rajesh Auti, Field Officer, SRO Raigad II 37) Shri. Milind Thakur, Field Officer, Mumbai-II 38) Shri. Darshan Mhatre, Field Officer, Mumbai-I 39) Shri. Sameer Hundalekar, Field Officer, Mumbai-IV

					40) Shri. Jayant Doke, Field Officer, SRO, Pune-I 41) Smt. Sushma Kumbhar, Field Officer, Pune-I 42) Smt. Sanjana Jadhav, Field Officer, SRO, Pimpri Chinchwad 43) Shri. Pramod Doke, Field Officer, Pune-II 44) Smt. Rekha Togare, Field Officer, Pune-II 45) Shri. Jayprakash Bhusara, Field Officer, Kalyan-III 46) Shri. Rajesh Nandgaokar, Field Officer, Kalyan-1 47) Shri. Vinod Pawale, Field Officer, Nashik 48) Dr. Sushilkumar Shinde, Field Officer, SRO, Chiplun 49) Shri. Jaideep Kumbhar, Field Officer, Mahad.
3.	08.10.2023 to 09.10.2023	Pride Plaza Hotel, New Delhi	Spilltech-2023	**4**	1) Dr. J. B. Sangewar, JD(WPC) 2) Shri. Sanjay Bhosle, RO, Mumbai 3) Shri. Sagar Auti, RO BMW 4) Shri. Vikrant Bhalerao, SRO, Taloja
4.	06.11.2023 to 08.11.2023	The Westin Mumbai Gaondevi City	Industrial Green Chemistry World convention & Ecosystem (IGCW - 2023)	**4**	1) Shri. Kiran Hasabnis, RO Thane 2) Shri. R. S. Kamat, SRO Raigad-II 3) Shri. Babasaheb M. Kukade, SRO, Kalyan-II 4) Shri. Vikrant Bhalerao, SRO, Taloja
5.	22.11.2023	New Delhi	Stakeholder Consultation on Containing antibiotic pollution from mfg. to reduce the risk of antimicrobial resistance.	**1**	Shri. Nandkumar Gurav (AST)
6.	23.11.2023	Thiruvanant hapuram, Kerala	Review and update of National strategies for Persistent	**1**	Shri. Jayavant Hajare, RO Raigad

			Organic Pollution (POPs) Management		
7.	04.12.2023 to 05.12.2023	IIT Bombay	India UK tackling AMR in the Environment from Anti-microbial Manufacturing waste.	**1**	Shri. Vikrant Bhalerao, SRO, Taloja
8.	Jan-24	Bruseels, Paris, Frankfurt, Copenhagen	Phase out HCFC Management Plan	**1**	Shri. Kartikeya Langote, SRO, Chairman Section.
9.	16.01.2024	Bandra-Kurla Complex Mumbai	Capacity Building programme on" Creating Empowered and Climate Responsive Women Officers on the Govt of Maharashtra" .	**18**	1) Smt. Saujanya Sudhir Patil, SRO 2) Smt. Rutuja Vikrant Bhalerao, SRO 3) Dr. Seema Uday Dalavi, SRO 4) Smt. Sneha Digambar Kamble, SRO 5) Smt. Priyashri Deepakrao Deshmukh FO 6) Smt. Poonam Kalpesh Parshetye (Poyrekar), FO 7) Smt. Meena Ankush Pawar, FO 8) Smt. Shubhangi Makarand Jadhav, FO 9) Smt. Ujwala Tushar Wadekar, FO 10) Smt. Suvarna Baburao Gaikwad, FO 11) Smt. Renuka Suhas Sane (Kulkarni) FO 12) Smt. Smita Raghunath Vanave (Sanap), FO 13) Smt. Aruna Rameshwar, Rokade, FO 14) Smt. Deepali Manohar Taide FO 15) Smt. Deepali Pravin Chaudhari, FO 16) Smt. Shrutika Sachin Dalvi, FO 17) Smt. Jayshri Prashant Junonkar, FO 18) Smt. Rupali Sunil Sonkamble, FO

10.	22.01.2024 to 23.01.2024	FHH Lab Hadapsar Pune	Analysis of Bacteriological parameters (TC, FC of FS) from water & Pure Culture Studies	**16**	1) Shri. Bipin Bhandare, I/c SO & JSO 2) Dr. Dayanand Tare, I/c SO & JSO 3) Ms. Yamini Chachad, Jr. Sci. Officer 4) Smt. Sumitra Mahajan, Jr. Sci. Officer 5) Shri. Ravindra Raut, Jr. Sci. Officer 6) Smt. Heena Khalokar, Jr. Sci. Officer 7) Shri. Bhimraj Chavan, Jr. Sci. Assistant 8) Shri. Mahesh Walse, Jr. Sci. Assistant 9) Shri. Gajanan Nagre, Jr. Sci. Assistant 10) Shri. Harish Narkhede, Jr. Sci. Assistant 11) Shri. Pramod Patil, Jr. Sci. Assistant 12) Smt. Anjana Sengupta, Jr. Sci Assistant 13) Smt. Aarti Thakur, Jr. Sci. Assistant 14) Smt. Sharwari Charmode, Jr. Sci. Assistant 15) Smt. Vaibhavi Kadam, Jr. Sci. Assistant 16) Smt. Mrudula Ingle, Jr. Sci. Assistant
11.	23.01.2024 to 25.01.24	CSIR Chennai	Characterization of hazardous waste and its management in Tanneries	**1**	Shri. Nivrutti Lokhande, FO
12.	29.01.2024 to 31.01.2024	SGGS. Nanded	Principles of analysis of volatile Organic Pollutants from Water, Air / emission, soil/sediments, solid waste samples.	**1**	Shri. Chetan Sawant, JSO
13.	01.02.2024 to 03.02.2024	CPPRF Saharanpur	Complete Mfg. process of pulp & paper industries &	**1**	Shri. Umashankar Bahadule, SRO

			best available Technologies for its effluent treatment Management.		
14.	06.02.2024 to 08.02.2024	ISI, Delhi	Environmental Data interpretation	**1**	Shri. Dhananjay Nanekar, JSA
15.	07.02.2024 to 09.02.2024	ILS, Pune	Legal aspects to officer in their day-to-day activities.	**2**	1) Shri. Prakash Jadhav, SRO 2) Shri. Abhijit Kasbe, FO
16.	08.02.2024 to 10.02.2024	Goa	2nd International Environment and Sustainability summit, Goa	**2**	1) Shri. Shankar Waghmare, RO, BMW 2) Shri. Manish Holkar, RO HQ
17.	15.02.2024 to 16.02.2024	EPTRI Hyderabad	Management of waste tyre through EPR.	**1**	Dr. Prabhakar Wavade, FO
18.	15.02.2024 to 17.02.2024	IIT Bombay	National Environmental Conference - 2024	**2**	1) Shri. Jayavant Hajare, RO, Raigad 2)Shri. Anand Katole, SRO, Thane
19.	16.02.2024 to 17.02.2024	IIT Bombay	Hydrogen workshop	**2**	1) Shri. Prakash Jadhav, SRO 2) Shri. Yogesh Patil, FO, JD APC
20.	22.02.2024 to 24.02.2024	Jammu IIT	Water Quality Monitoring	**2**	1) Shri. Vikrant Bhalerao, SRO 2) Smt. Rutuja Bhalerao, SRO
21.	06.03.2024	Goregaon Mumbai	Water EX World Conference - 2024	**3**	1) Shri. Sanjay Bhosle RO 2) Shri. Jayavant Hajare, RO 3) Shri. Rajendra Rajput, RO
22.	27.03.2024 to 29.03.2024	Sandipani Hometel, Pune	Global sustainable Environment Plan, National solar mission	**4**	1) Shri. Raviraj Patil, FO 2) Shri. Nitin Choudhari, FO 3) Shri. Gajanan Khadkikar, 4) Shri. Santosh Mohare, FO
			TOTAL	**120**	

ANNEXURE 6. FINANCE AND ACCOUNTS FOR THE YEAR 2023-24

1

MAHARASHTRA POLLUTION CONTROL BOARD

Receipt & Payment Account for the Year ended 31st March, 2024

Previous Year 2022-23		Receipt	Schedule No.	Current Year 2023-24		Previous Year 2022-23		Payment	Schedule No.	Current Year 2023-24	
Major Head	Sub Head			Sub Head	Major Head	Major Head	Sub Head			Sub Head	Major Head
72,61,78,556.00		OPENING BALANCE			84,56,00,595.00			1) CAPITAL EXPENDITURE			
	72,59,88,167.00	i) Cash at Bank		84,53,50,651.00		30,82,67,765.00		Fixed Assets Purchased	I		8,96,94,592.00
	1,90,389.00	ii) Cash in Hand		2,49,944.00							
	0.00	iii) DD in Hand		0.00							
								2) REVENUE EXPENDITURE			
0.00		1) GRANT RECEIVED				49,52,47,961.00		a) SALARY & ALLOWANCES			54,79,35,991.00
	0.00	i) From State Government		0.00	0.00						
	0.00	ii) From Government of India		0.00							
4,26,20,784.00		2) FINANCIAL ASSIATANCE			3,08,61,866.00	2,82,10,228.00		b) CPF BOARD CONTRIBUTION			3,38,98,800.00
	0.00	i) From Other State Government		0.00							
	4,26,20,784.00	ii) From Government of India / CPCB		3,08,61,866.00							
35,94,044.00		3) Fund from UNIDO			0.00	1,90,56,825.00		c) Gratuity Fund			2,03,10,275.00
4,07,39,33,881.00		4) REVENUE RECEIPT				26,81,26,125.00		d) Office Expenditure	A		31,74,72,583.00
	4,01,54,10,597.00	i) Consent Fees		5,31,42,72,670.00	5,41,57,43,424.00	1,46,96,581.00		e) Running Expenditure of Laboratory	B		2,14,80,463.00
	5,85,23,284.00	ii) Analysis Charges		10,14,70,754.00		2,15,06,909.00		f) Expenditure For Vehicles	C		1,96,31,407.00
						13,73,58,063.00		g) Maintainance & Repairs	B1		29,72,51,213.00
19,27,91,562.00		5) Other Receipt	H		4,75,61,178.00	6,08,81,012.00		h) Expenditure For Employee Welfare	D		6,56,02,670.00
						33,49,46,990.00		i) Projects Expenditure	E		66,63,21,600.00
1,17,52,09,453.00		6) Interest on Investment			1,76,75,25,764.00	17,06,35,29,643.00		3) Investment (New)			26,42,12,83,430.00
1,18,59,651.00		7) Security Deposit With Others			1,13,10,000.00	1,46,22,019.00		4) Miscellaneous Advances			3,01,00,463.00
3,10,000.00		7) Miscellaneous Advances			2,78,40,793.00	2,00,000.00		5) Environmental Compensation Fund			0.00
2,21,613.00		8) Fund For VOC Monitoring			10,41,600.00	2,72,33,765.00		6) Sundry Payables			4,27,46,855.00
12,72,15,97,214.00		9) Other Payables			9,75,575.00	832872.00		7) Security Deposit With Others			5,00,000.00
4,51,33,577.00		10) Investment (Matured)			20,47,96,12,197.00	2011900.00		8) Fund For VOC Monitoring			0.00
99,75,30,668.00		11) Sundry Payables			1,73,67,679.00	78,15,51,298.00		9) Funds for NCAP Expenses			0.00
4,23,63,025.00		12) Amount Received from State Government			1,00,25,55,979.00	64,57,49,876.00		10) Amount Paid on behalf of State Government			1,29,75,00,000.00
66,61,08,121.00		13) Reimburesement of Cess			0.00	0.00		11)Fund from UNIDO			0.00
		14) Funds for NCAP Received			3,88,481.00	90591716.00		12) Fund from Cess Account			0.00
		15) Fund for Environment Improvement & EC			17,60,40,295.00	0.00		13) Creditors			18,93,070.00
38,41,90,401.00		16) Environmental Compensation Fund			22,60,97,900.00	0.00		14) Fund for Abatement of Pollution			38,12,126.00
1,23,72,067.00		17) Fund from Cess Account			59,50,763.00			15) Fund for NCAP Expenses			9,86,665.00
6,12,00,000.00		18) Fund for NANMN			0.00	84,56,00,595.00		CLOSING BALANCES			19,24,07,257.00
30,07,526.00		19) Fund for Abatement of Pollution			36,395.00		84,53,50,651.00	i) Cash at Bank	F	19,22,07,908.00	
		20) National Rural Liveli Hooda Mission			97,67,088.00		2,49,944.00	ii) Cash in Hand	G	1,99,349.00	
		21) Fund for NCAP Expenses			45,51,888.00		0.00	iii) DD in Hand		0.00	
21,16,02,22,143.00					30,07,08,29,460.00	21,16,02,22,143.00					30,07,08,29,460.00
						0.00					

For GORHALE & SATHE
CHARTERED ACCOUNTANTS
FIRM No. 103264W

RAVINDRA MORE
PARTNER
MEM. No. 153666

Chief Accounts Officer
Maharashtra Pollution Control Board

Member Secretary
Maharashtra Pollution Control Board

Chairman
Maharashtra Pollution Control Board

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MAHARASHTRA POLLUTION CONTROL BOARD

Income & Expenditure Account for the Year ended 2023-24

Previous Year 2022-23		Expenditure	Schedule No.	Current Year 2023-24		Previous Year 2022-23		Income	Schedule No.	Current Year 2023-24	
Major Head	Sub Head			Sub Head	Major Head	Major Head	Sub Head			Sub Head	Major Head
49,52,47,961.00		1) SALARY & ALLOWANCES			54,79,35,991.00			1) GRANT RECEIVED			
				52,97,80,988.00		0.00		i) From State Government			0.00
-				1,54,37,766.00		- 0.00		ii) From Government of India			0.00
				27,17,237.00							
2,82,10,228.00		2) CPF BOARD CONTRIBUTION			3,38,98,800.00	4,26,20,784.00		2) FINANCIAL ASSIATANCE			3,08,61,866.00
				3,25,77,423.00			0.00	i) From State Government		-	
				13,21,377.00							
26,81,26,125.00		3) OFFICE EXPENDITURE	A		31,74,72,583.00		4,26,20,784.00	ii) From Government of India / CPCB		3,08,61,866.00	
1,46,96,581.00		4) RUNNING EXPENDITURE OF LAB.	B		2,14,80,463.00	4,23,63,025.00		3) CESS REIMBURSEMENT			-
2,15,06,909.00		5) EXPENDITURE FOR VEHICLES	C		1,96,31,407.00						
13,73,58,063.00		6) MAINTAINANCE & REPAIRS	B1		29,72,51,213.00	4,07,39,33,881.00		4) REVENUE RECEIPT			5,41,58,47,540.00
	1,40,47,608.00	i) Land & Building		2,74,87,641.00			4,01,54,10,597.00	i) Consent Fees		5,31,42,72,670.00	
	1,36,34,519.00	ii) Furniture & Fixture		63,65,378.00							
	10,96,75,936.00	iii) Scientific Instruments & Office Appliances		26,33,98,194.00			5,85,23,284.00	ii) Analysis Charges		10,14,70,754.00	
6,08,81,012.00		7) EXPENDITURE FOR EMPLOYEE WELFARE	D		6,56,02,670.00						
33,49,46,990.00		8) PROJECTS EXPENDITURE	E		66,63,21,600.00	19,27,91,562.00		5) OTHER RECEIPT	H		4,75,61,178.00
14,61,94,750.00		9) DEPRECIATION	J		16,42,06,703.00	1,17,52,09,453.00		6) INTEREST ON INVESTMENT			1,76,75,25,764.00
4,01,97,50,086.00		10) EXCESS OF INCOME OVER EXPENDITURE			5,12,79,94,918.00						
5,52,69,18,705.00					7,26,17,96,348.00	5,52,69,18,705.00					7,26,17,96,348.00

Chief Accounts Officer
Maharashtra Pollution Control Board

Member Secretary
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For GOKHALE & SATHE
CHARTERED ACCOUNTANTS
FIRM No. 103264W

RAVINDRA MORE
PARTNER
MEM. No. 153666

MAHARASHTRA POLLUTION CONTROL BOARD

Balance Sheet as on 31st March, 2024

Previous Year 2022-23		Liabilities	Schedule No.	Current Year 2023-24		Previous Year 2022-23		Assets	Schedule No.	Current Year 2023-24	
Major Head	Sub Head			Sub Head	Major Head	Major Head	Sub Head			Sub Head	Major Head
2,72,54,60,420.00		A) CAPITAL FUND			2,81,68,05,775.00			1) WORKS (Form K-IV)			
	2,08,42,88,884.00	Opening Balance		2,72,54,60,420.00		1,49,12,40,087.00		2) FIXED ASSETS	I,J,K		1,41,83,78,739.00
	64,11,71,536.00	Add:- Transfer from Excess of Income over Expenditure for Capital Expenses		9,13,45,355.00			59,66,19,996.00	A) Land & Building		58,35,77,740.00	
							5,56,67,423.00	B) Laboratory Equipment		8,36,12,595.00	
6,83,98,642.00		B) Fund for NCAP	P		6,87,87,123.00		26,30,96,724.00	C) Vehicle		24,74,69,182.00	
1,08,89,667.00		C) Fund from UNIDO	Z		1,08,89,667.00		7,53,95,331.00	D) Furniture & Fixture		6,61,98,386.00	
7,15,97,504.00		D) CURRENT LIABILITIES			4,96,38,204.00		50,04,60,613.00	E) Scientific Instruments		43,75,20,836.00	
	5,60,90,892.00	1) Sundry Payables / Deposits	Q	2,90,98,324.00							
	19,15,007.00	2) Other Payables	R	9,97,512.00		34,30,42,35,475.00		3) INVESTMENT	L		40,24,59,06,708.00
	1,35,91,605.00	3) Fund From Cess Account	S	1,95,42,368.00							
						88,74,48,972.00		4) CURRENT ASSETS			52,06,49,325.00
40,18,331.00		E) Funds for Assistance to Abatement of Pollution	T		2,42,600.00		2,17,60,840.00	A) Miscellaneous Advances	M	2,40,20,510.00	
3,16,37,14,240.00		F) RESERVES			3,35,97,96,902.00		1,40,91,640.00	B) Security Deosit with others	N	32,81,640.00	
	3,08,36,07,063.00	1) Pension Fund	U	3,30,00,00,000.00							
	8,01,07,177.00	2) Gratuity Fund	V	5,97,96,902.00			59,95,897.00	C) Amount Paid on behalf of State Government	O	30,09,39,918.00	
6,45,800.00		G)Fund for Health Impact Assessment Study	W		6,45,800.00			5) CLOSING BALANCES			
		H) Fund for NCAP Expenses	AC		35,65,223.00		84,53,50,651.00	i) Cash at Bank	F	19,22,07,908.00	
10,77,643.00		I) Fund for VOC Monitoring	X		21,19,243.00		2,49,944.00	ii) Cash in Hand	G	1,99,349.00	
		J) National Rural Liveli Hoods Mission	AD		97,67,088.00		-	iii) DD in Hand		-	
46,70,87,603.00		K) Environmental Compensation Fund	Y		69,31,85,503.00						
		L) Fund for Environment Improvement & EC	AE		40,63,84,898.00						
6,12,00,000.00		M) Fund for Noise Monitoring	AB		6,12,00,000.00						
30,10,88,34,684.00		**N) INCOME & EXPENDITURE APPROPRIATION ACCOUNT**	AA		34,70,19,06,746.00						
36,68,29,24,534.00					42,18,49,34,772.00	36,68,29,24,534.00					42,18,49,34,772.00

Significant Accounting Policies and Notes to Accounts (Schedule AF)

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Maharashtra Pollution Control Board

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For GOKHALE & SATHE
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FIRM No. 103264W

RAVINDRA MORE
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MAHARASHTRA POLLUTION CONTROL BOARD

Kalpataru Point, 2nd, 3rd and 4th floor, opposite Moviemax, Sion Circle,
Sion (E), Mumbai-400 022.

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