



महाराष्ट्र प्रदूषण नियंत्रण मंडळ
MAHARASHTRA POLLUTION CONTROL BOARD

ANNUAL REPORT
2007-08



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MAHARASHTRA POLLUTION CONTROL BOARD

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1. INTRODUCTION

The role of Maharashtra Pollution Control Board is to implement the Acts, Rules, Policies and Programmes related to control of pollution and protection of environment in Maharashtra State. The Maharashtra Water (Prevention and Control of Pollution) Board was established in 1970, under the provisions of Maharashtra (Prevention of Water Pollution) Act, 1969, which was enacted by the State Legislature. Maharashtra being highly urbanized and industrialized State in India the State Board has occupied a very prominent position in pollution prevention and control in the State. The Water (Prevention and Control of Pollution) Act 1974 passed by the Parliament was adopted by the State in 1981 and the Board was renamed as Maharashtra Pollution Control Board under this new Act.

Now the Board has been charged with several responsibilities covering all kinds of media such as water, air, noise wastes and solid wastes (such as municipal solid wastes, hazardous wastes, bio-medical waste, plastic wastes, etc.). With the limited human resources the Board has fulfilled its responsibilities by adopting innovative methods such as public-private partnership, technology demonstrations, information disclosure, raising awareness and empowering the people. Practicing judicious outsourcing, decentralizing and rationalizing its internal procedures are the factors with which the Board is improving its functional efficiency.





The scope of the activities of the Board is science and technology based and multidisciplinary in nature. Considering the challenges in the enforcement of the environmental regulations, the Maharashtra Pollution Control Board (MPCB) has geared itself up in terms of capacity building, development of infrastructure, laboratories, engaging services of the professionals and environmental scientists and engineers, outsourcing of the work, preparation and implementation of the action plans for environmental management of the places of interest and prevention and control of pollution.

Considering the necessity of the regular monitoring of drinking water sources used by local authorities, the Board has started monitoring 133 new stations for the drinking water sources throughout the State from January, 2007,

In order to monitor coastal water quality, sediment quality and biological characteristic of the coastal region of Maharashtra and to seek advice on corrective measures wherever necessary, the Board has started the "Coastal Water Monitoring Survey" in collaboration with National Institute of Oceanography (NIO).

MPCB has developed a road map for strengthening of the ambient air monitoring network and increased the total no. of stations up to 72, which will represent the regional air quality on spatial and temporal scales.

MPCB is also in the process of developing a calibration laboratory for calibration of air quality monitoring stations including the equipments, sampling and analysis procedures.

The Board has set up additional 9 stations this year under SAMP (State Air Quality Monitoring Programme). The cities monitored are Kolhapur, Akola, Chandrapur Amravati Ulhasnagar, etc. Daily air quality data of 6 major cities in the State is reported on website and is updated daily.

The Board has also provided technical and financial assistance for management of Municipal solid wastes and Bio-Medical waste in the state. To facilitate the implementation of MSW Rules and to motivate urban local bodies, MPCB has completed demonstration projects at 5 places in the state for which the Board has received appreciation from Hon. Supreme Court. For management of BMW in different cities in Maharashtra the Board has taken proactive measures in facilitating development of common facilities. There are now 37 common facilities developed in the State.

The quantity of hazardous wastes generated in Maharashtra State is almost half



of the quantity of the hazardous wastes generated in India. However the Board has managed the hazardous wastes in the state very effectively and received appreciations from SCMC for this work. Common facilities for management of hazardous wastes have been set up at Taloja and TTC industrial areas. MPCB has granted the consents to establish to develop the hazardous waste management facilities being established at Butibori (Nagpur), and Ranjangaon (Pune) to meet the requirements hazardous waste treatment and disposal needs of the industries in Vidarbha, and Western Maharashtra. Efforts are being made to further develop the Hazardous waste management facilities in Marathwada and Konkan regions. MPCB is also considering the request of Goa State to develop a joint TSDF for southern Konkan and Goa industries. To monitor the emissions from the incinerator, MPCB is in process of developing the laboratory facility for analysis of dioxin, furans, PACs VOCs, etc. A new software is launched by the Board to file the annual returns online through MPCB web site MPCB has issued scratch cards for the HW generators in the Maharashtra state which includes the secret password for individual industry and the Board is now receiving the returns online. This effort of the Board is highly appreciated by the industry and stakeholders. (URL: http://mpcb.nic.in/hwmms/annual_returns_home.php)

Under Lead-Acid Batteries (Management & Handling) Rules 2001, MPCB achieved very good success in terms of the collection of the used batteries from the dealers and bulk consumers.





The Board has carried out Rapid E-waste Assessment Study for which UNEP has provided financial assistance. The report is now placed on website for the public.

Information on the consents/ authorizations granted by the Board is regularly uploaded on website of the Board which is helpful to track the status of application of the concerned industry / developer.

To generate environmental awareness among the people regarding effects of pollution, need to prevent, control the pollution and protect environment MPCB had organized various programs. These programs were organized involving media, NGOs, industries, local bodies and academic institutions etc. Street plays were also organized as a part of the campaign against the plastic carry bags. These were arranged at schools, colleges, railway stations and Mantralaya and were very widely appreciated by the people





2. CONSTITUTION OF THE BOARD

The Maharashtra Pollution Control Board consists of Chairman, Members and a full time Member- Secretary, who functions as chief executive officer as per the Rules under Water (P.&C.P) Act, 1974 notified by the State Government in 1983. The composition of the Board is as under:

Chairman: (Part time or full time)

A person having special knowledge or practical experience in respect of matters relating to environmental protection or a person having knowledge and experience in administering institutions dealing with the matters aforesaid

- **Representatives of the State Govt.** (not exceeding five)
- **Representatives of local bodies** (not exceeding five)
- **Representatives of companies or corporations of the State Govt.** (two)
- **Members representing interests of agriculture, fishery or industry or trade etc.** (not exceeding three)
- **Member Secretary:** Full time possessing qualifications, knowledge and experience of scientific, engineering or management aspects of pollution control

Under section 4 of the Water (Prevention and Control of Pollution) Act, 1974 the Government of Maharashtra is empowered to constitute State Pollution Control Board,(MPCB). However, during the year under report, the Board could not be constituted as provided under the Act.

Shri Shyamlal Goyal. Secretary, (Environment), Govt. of Maharashtra took as Chairman of the Board from 08/10/2007.

Shri Shyamlal Goyal. Chairman, M.P.C Board, Mumbai.

Shri Shyamlal Goyal. Secretary, Environment Dept. Government of Maharashtra Mumbai.

Principal Secretary. Home (Transport) Dept. Government of Maharashtra, Mumbai.

Principal Secretary. Public Health Dept. Government of Maharashtra, Mumbai



Chief Executive Officer. M.I.D.C., Mahakali Caves Road, Andheri (E), Mumbai.

Member Secretary (Technical). Maharashtra Jeevan Pradhikaran, Express Towers, 4th Floor, Nariman Point, Mumbai.

The Secretary. Water Supply and Sanitation Dept., Govt. of Maharashtra, 5th Floor, Mantralaya, Mumbai.

Shri. Sanjay Khandare, Member Secretary, M.P.C. Board, Mumbai





3. MEETINGS OF THE BOARD

During the year under report, **one** meeting was conducted. The major decisions taken are reported below

146th meeting (06/11/07)

- While considering the environmental improvement at Religious places the Board agreed to consider Tuljapur and Ramtek as additional places under the project. The Board will prioritize the religious places on the basis of the environmental problems and the financial capacity of the local bodies to take up such improvement programme. It was decided that Shirdi being a financially capable Devasthan for implementation of the projects the Board can extend its technical guidance for the same, if requested.
- In respect of vermi-composting project at Shani-Shingnapur it was resolved that the third & final installment of Rs. 4, 60, 480/- be released on the basis of verification report and utilization certificate from the concerned Regional Officer of the Board.
- It was decided to ask MCGM to undertake the proposal for a study for determining the prevalence of Asthama and its co-relation with ambient air quality in Mumbai as suggested by the participating conference organized by the Maharashtra Pollution Control Board on Strategies to Control air pollution in Mumbai.
- While considering the financial assistance to Latur Environment Action Plan (LEAP) it was decided to ask Utilization Certificate and account of expenditure done out of Rs. 1 crore released by the Board, from the Chief Officer, Latur Municipal Council.
- The Board has approved the proposed augmentation of water and air quality monitoring network and also formation of PAMS group with proposed manpower with necessary infrastructure along with budgetary provisions. The Board has authorized Member Secretary to take further necessary actions.
- The Board has perused the Annual Report for the year 2005-2006 and it was decided to approve the same. It was further decided to take appropriate steps to lay down the same before the State Legislation.



4. COMMITTEES CONSTITUTED BY THE BOARD

With a view to have smooth functioning of the Board 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 Board constitutes various committees for efficient and effective implementation of the Acts and Rules.

During the year under report, the following committees constituted to conduct specific work

Consent Appraisal Committee:

As provided under section 9 of the Water Act 1974 and section 11 of Air Act 1981 the Board has constituted the Consent Appraisal Committee on 27/06/07. In exercise of the powers conferred on the Chairman of the Board the Consent Appraisal Committee is constituted as under:

- | | |
|--|------------------|
| 1. Chairman. Maharashtra Pollution Control Board | Chairman |
| 2. Secretary. Urban Development Dept., | Member |
| 3. The Technical Advisor.
Maharashtra Industrial Development Corporation | Member |
| 4. Member-Secretary.
Maharashtra Pollution Control Board | Member-Secretary |

This committee considers applications for Consents/Authorizations under Water (P&CP) Act, 1974, Air (P&CP) Act, 1981 and Hazardous Wastes (M & H) Rules, 1989 as under

- | | |
|-------------------|--|
| "RED" category | : Projects with capital investment above Rs. 15 crores. |
| "ORANGE" category | : Projects with capital investment above Rs. 100 crores. |
| "GREEN" category | : All Projects beyond Rs.500 crores
All A & B Class Municipal Councils And Corporations |



5. AIR AND WATER QUALITY MONITORING NETWORK

As per the provisions under section 17 of the water (P&CP) Act, 1974 & Air (P&CP) Act, 1981, it is one of the important functions of the Board to collect & disseminate information about water & air pollution.

Planning for prevention, control or abatement of pollution of streams, wells and air & to secure execution thereof, and classify the waters of the State is one of the functions of the State Board and as both air and water pollution poses risk to human health, it is essential to monitor the pollution level of river water, seawater and ambient air. To observe the trend in water quality and air quality, stations are fixed through which regular monitoring is carried out by the Board. Discharge of industrial effluent & sewage are the main causes of water pollution, whereas the air pollution is caused due to industrial emission; vehicular exhaust & burning of solid wastes, therefore to monitor the pollutants present in water and air, a monitoring network is established across the State. Air quality monitoring is done with the help of HVS (High Volume air Sampler) and mobile air monitoring van. Monitoring frequencies are fixed at each station.

Samples collected through Regional offices of the Board are analyzed through its Central Laboratory at Navi Mumbai and Regional Laboratories at Aurangabad, Pune, Nagpur, Nashik, Thane and Chiplun. These laboratories are strengthened with sophisticated instruments / equipments for the analysis of Air, Water, and Hazardous Waste sample. Around 3000 samples are being analyzed per month in these laboratories. Apart from this, 7 nos. of Mobile Monitoring Vans with sophisticated instruments are used for Monitoring of ambient air quality at various places. With these vans the major air pollutants e.g. SO₂, NO_x, SPM, Ammonia, CO, HC and meteorological parameters like temperature, humidity, wind direction, wind speed etc. are monitored. The data is computerized and printed on hourly basis. Under World Bank Project two fixed automatic monitoring stations received have been installed at Thane Belapur (Navi Mumbai) and at Chandrapur.

For effective implementation of these monitoring programmes, it was felt necessary to have separate working group which would look after data collection, collation and dissemination activities. Accordingly to streamline the monitoring and surveillance activities, Pollution Assessment Monitoring and Surveillance (PAMS) division, was formed on 3rd August, 2005



5.1 Water quality monitoring network

Water Quality Monitoring is necessary to understand the nature, extent of pollution and control measures required. The monitoring data will help in identifying the source of pollution also. To know the level of pollution in water bodies a scientific water quality monitoring was done during the year 2007-2008.

The water quality of the river depends on the concentration of pollutants remained in the river and flow of water in the river. Due to maximum extraction of water from the rivers, the flow of the rivers become very low even after monsoon resulting in minimizing the dilution factor which is required for diluting the effect of pollutants being discharged. In general the domestic waste water without sufficient treatment from the cities, towns and industrial estates located nearby the rivers are finding its way into the rivers resulting in deterioration of river water quality.

Under National Water Quality Monitoring Program (NWMP) water quality is being monitored at 48 surface water locations and 25 ground water locations established under the projects MINARS (Monitoring of Indian National Aquatic Resource System) & GEMS (Global Environmental Monitoring System). Monitoring at these stations is being done as per the monitoring guidelines issued by C.P.C.B. Out of 48 GEMS/ MINARS surface water locations, 21 locations are monitored quarterly while the other 27 locations are monitored monthly. All 25 ground water locations are monitored once in six months (April & October).

To tackle the hazards of faster deterioration of surface and ground water quality MPCB has expanded the existing water quality network in Maharashtra. Under State Water Quality Monitoring Program (SWMP), 152 surface water and 25 ground water stations were added.

In January 2007 monitoring has been initiated at 200 surface water stations such as rivers, nallah, sea water etc and 50 ground water stations in different regions across the State including the existing 73 GEMS/MINARS stations, as per the Guidelines issued under Uniform Protocol for Water Quality Monitoring by MoEF.

Considering the necessity of regular monitoring of drinking water sources used by local authorities, the Board has started monitoring 137 new stations for the drinking water sources throughout the State from January, 2007.



On February, 2008, CPCB has sanctioned 50 new stations under NWMP from existing SWMP stations - 45 surface water stations with monthly monitoring frequency & 5 ground water stations with half yearly monitoring frequency.

Water Quality Monitoring Stations

Water Quality Monitoring stations	No. of Stations operated during 2006 - 07	No. of Stations operated during 2007 - 08
Surface water monitoring stations under NWMP	48	93
Ground water monitoring stations under NWMP	25	30
Surface water monitoring stations under SWMP	152	107
Ground water monitoring stations under SWMP	25	20
Drinking water source monitoring stations	137	137
Coastal Monitoring Survey through NIO, Mumbai	114	114
TOTAL	501	501

State Water Quality Monitoring Stations

Besides regular monitoring of surface water quality of rivers under NWMP (National Water Monitoring Program) during **2007-08**, the Board has started monitoring of additional 152 stations under State Water Monitoring Program (SWMP). Therefore, the surface water monitoring stations are increased from 48 to 200 during this year. Ground water monitoring stations are increased from 25 to 50.

Considering the necessity of the regular monitoring of drinking water sources used by local authorities, the Board has started monitoring 133 new stations for the drinking water sources throughout the State from January, 2007; Table below shows the increase in number of water monitoring stations during this year.



Water Quality Monitoring stations	No. of Stations operated during 2006 - 07	No. of Stations operated during 2007 - 08
Surface water monitoring stations	48	200
Ground water monitoring stations	25	50
Drinking water source monitoring stations	0	133

Air Quality Monitoring Network

Air pollutants are added in the atmosphere from various sources that change the composition of atmosphere and affect the biotic environment. The concentration of air pollutants depends not only on the quantities that are emitted from air polluting sources but also on the atmospheric conditions to either absorb or disperse these emissions. The air pollutant concentration vary spatially and temporarily with different locations and time due to changes in meteorological and topographical condition. The sources of air pollution include vehicles, industries, domestic sources and natural sources. Because of the presence of higher concentration of air pollutants in the ambient air, the human health and property is adversely affected. In order to control the deterioration in air quality, Air (Prevention and Control of Pollution) Act 1981 was passed by the Parliament. It is necessary to assess the present and anticipated air pollution through continuous air quality survey/monitoring programs.

The existing 28 air monitoring stations under **National Ambient Air Quality Monitoring Programme** (NAMP) in Maharashtra are being managed by MPCB w.e.f. 01.07.2005 and the air quality monitoring network in Maharashtra is strengthened further. The strengthening also includes developing a systematic **State Air Monitoring Program** (SAMP) to support the NAMP.

The Board has started operating the stations at Kolhapur, Tarapur, Lote, Amravati and Navi Mumbai under NAMP. Similarly the SAMP stations are also monitored in different cities. At Present, there are 45 NAMP stations (39 operated by MPCB and 6 operated by NEERI), 9 SAMP stations and 7 Continuous Ambient Air Quality Monitoring Stations (CAAQMS) in operation apart from earlier 14 stations under operation.



Table 1:- Monitoring stations under NAMP

Sr. No.	Name of City	No. of Stations	Operated by	Remarks
NAMP				
1.	Mumbai	3	NEERI	Managed by CPCB
2.	Thane	3	Thane Municipal Corporation	In Operation since July,2005
3.	Pune	3	University of Pune	In Operation since July,2005
4.	Nagpur	3	Vishveshwarayya National Institute of Technology	In Operation since July,2005
		3	NEERI	Managed by CPCB
5.	Chandrapur	3	MPCB	In Operation since July,2005
6.	Aurangabad	3	Saraswati Bhuvan College Aurangabad	In Operation since July,2005
7.	Dombivali - Ambarnath	2	MPCB	Operational since Oct. 2004
8.	Nashik	3	K T H M College, Nashik.	In Operation since July,2005
9.	Solapur	2	Walchand Institute of Technology.	In Operation since July,2005
Total		28		

NEW NAMP STATIONS

10.	Kolhapur	3	Shivaji University, Kolhapur	December 2005
11.	Tarapur MIDC	3	MPCB	Jan - 2006
12.	Lote MIDC	2	MPCB	March - 2006
13.	Taloja MIDC	3	K.B.P.College, Vashi	April - 2006
14.	Navi Mumbai (TTC)	3	K.B.P.College, Vashi	April - 2006
15.	Amaravati	3	Govt. Engg. College Amaravati	Nov. - 2006
Total		17		

Table II:- Monitoring stations under SAMP

Sr. No.	Name of City	No. of Stations	Operating agency	Remarks
1.	Ulhasnagar	3	HM College, Ulhas Nagar	
2.	Jalna	2	MPCB	
3.	Pune	1	University of Pune	Handed over in Feb,2008
4.	Nashik	1	MPCB	
5.	Nagpur	1	MPCB	
6.	Aurangabad	1	MPCB	
Total		9		



Continuous Air Quality Monitoring Stations (CAAQMS)

The continuous air quality monitoring stations are equipped with the Advance air quality monitoring instruments which display "real time" value of air pollutants. The data is useful for the trend analysis.

MPCB had directed the major industries in Chandrapur district to install the Continuous Ambient Air Quality Monitoring Stations (CAAQMS). They were further directed to make air quality data available to public through display boards. As a result of MPCB's continuous follow-up, five major industries namely

- 1) M/s Lloyds Metal & Engineering Ltd., Ghugus, Tal. & Dist. Chandrapur.
- 2) M/s Associated Cement Co., Ghugus, Tal & Dist. Chandrapur.
- 3) M/s Ultrachic Cement, Awarpur, Dist. Chandrapur
- 4) M/s Manikgarh Cement, P.O. Gadchandur, Dist. Chandrapur.
- 5) M/s Ambuja Cement, Uparwahi, Dist. Chandrapur.

have installed CAAQMS at the locations identified by MPCB and electronic data display boards for information of public to know the status of ambient air quality. The regular availability of air quality data in public domain will create awareness among local people and ensure better compliance by the industries.

Table III:- List of CAAQMS

Sr. No.	Name of City	No. of Stations	Operating agency	Remarks
1.	Bandra Mumbai	1	M/s Chemtrols Engineering Ltd	
2.	Solapur	1	M/s Chemtrols Engineering Ltd	
3.	Pune	1	M/s Honeywell Automation Ltd	
4.	Chandrapur	1	M/s Alfatech Services	
5.	Vashi, Navi Mumbai	1	M/s Chemtrols Engineering Ltd Managed	by Navi Mumbai.M.C
6.	Mulund, Mumbai	1	M/s Alfatech Services	
7.	Sion, Mumbai	1	MPCB	
Total		17		



List of proposed stations approved in the 146th Board Meeting

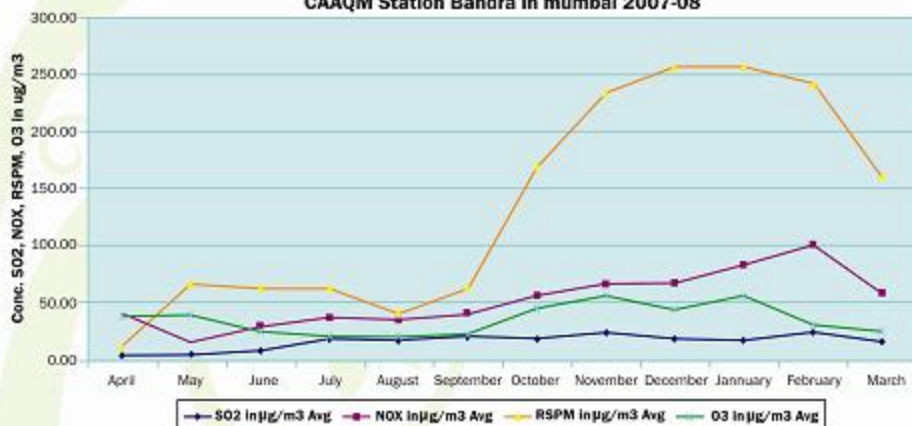
Sr. No.	City	Proposed NAMP	Proposed SAMP	Total	Details of Augmentation	Proposed Agency
1.	Mumbai	3	4	7	The city presently has only 3 NAMP stations which are grossly inadequate.	MPCB
2.	Pune	1	-	1	City is among 11 highly polluting industrial cities and need more stations for proper distribution of air quality stations.	University of Pune
3.	Kalyan-Dombivali	-	2	2	Dombivali is also an industrialized area where residential development is in the vicinity and Kalyan is also a municipal corporation and need more AAQM stations.	Birla College Kalyan
4.	Bhiwandi	-	2	2	Bhiwandi is an industrialized municipal corporation city and receives regular complaints of air pollution, AAQM is required to collect AAQ data on regular basis.	Birla College Kalyan
5.	Roha	-	2	2	Roha is a major established industrialized area and need regular AAQM stations.	Babasaheb Ambedkar Technological University Lonere
6.	Chandrapur	-	3	3	Chandrapur is a major established industrialized area and need regular AAQM stations.	MPCB
7.	Akola	1	2	3	It is a Municipal Corporation and need AAQM stations.	College of Engineering & Technology, Akola.
8.	Mahad	3	-	3	Mahad is a major established industrialized area and need regular AAQM stations.	Babasaheb Ambedkar Technological University Lonere
9.	Jalgaon	-	3	3	It is municipal corporation and need AAQM stations.	North Maharashtra University
10.	Ahmed-nagar	3	2	5	It is municipal Corporation and need AAQM stations.	Ahmednagar College
11.	Sangli	-	3	3	It is municipal corporation and need AAQM stations.	Walchand College of Engineering.
12.	Nanded	-	3	3	It is Municipal Corporation and need AAQM stations.	
13.	Latur	-	3	3	It is Municipal Corporation and need AAQM stations.	Dayanand Education Society Latur
14.	Dhule	-	3	3	It is municipal corporation and need AAQM stations.	
Total		11	32	43		



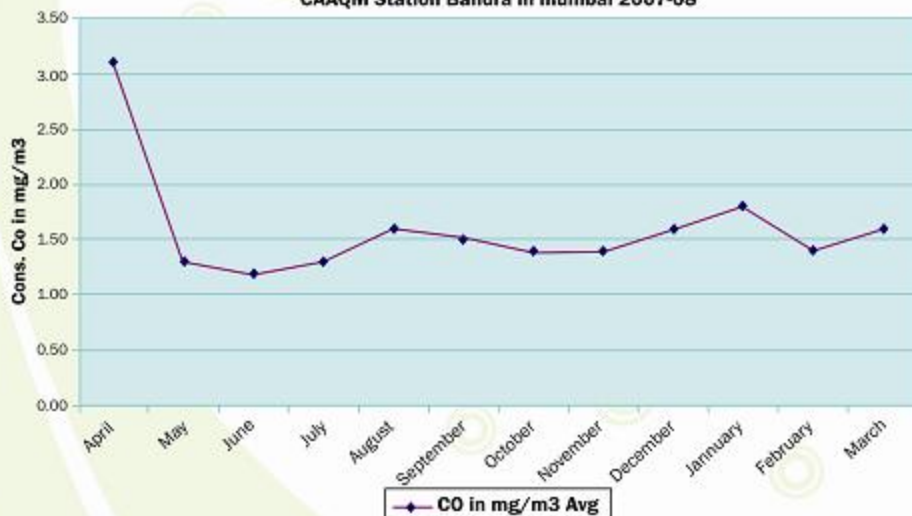
Air quality Monitoring Stations at a glance:

Sr. No.	Air Quality Monitoring stations	No. of stations in operation during 2006-07	No. of stations in operation during 2007-08	No. of stations proposed/under process
1.	NAMP	45	45	11
2.	SAMP	10	09	32
3.	CAAQMS	4	7	3 (MMRDA)
Total		59	61	46

CAAQM Station Bandra in mumbai 2007-08

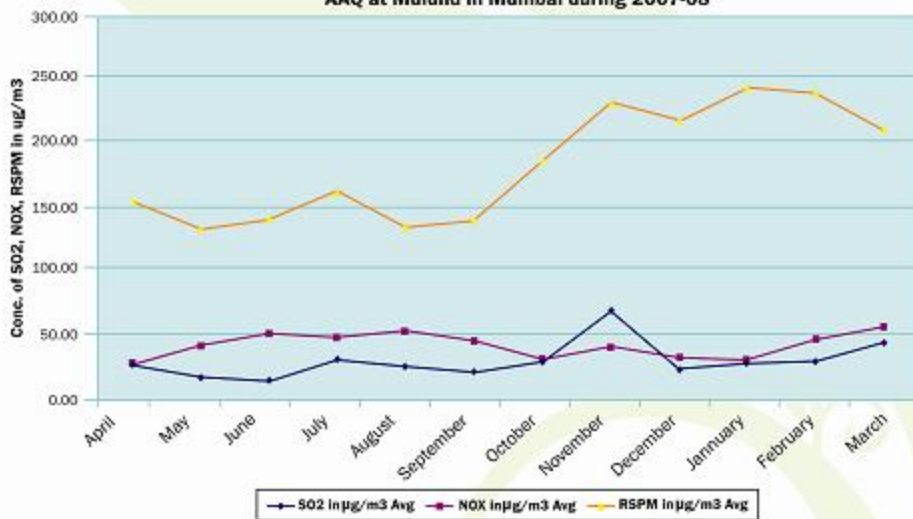


CAAQM Station Bandra in mumbai 2007-08

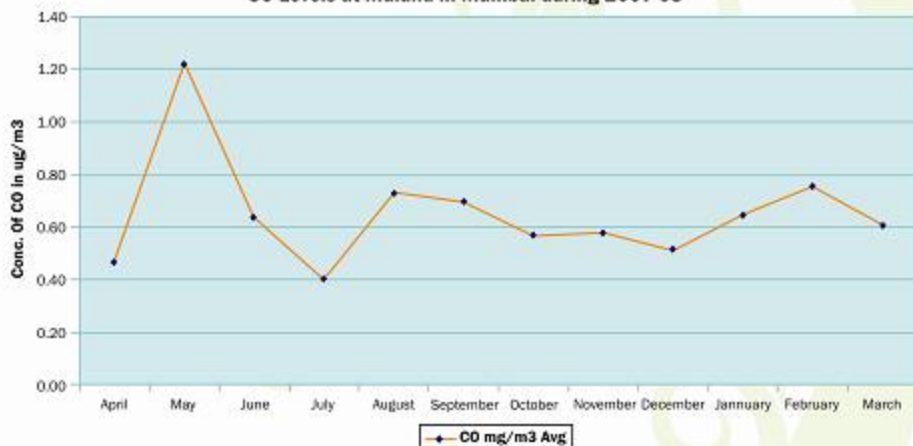




AAQ at Mulund in Mumbai during 2007-08

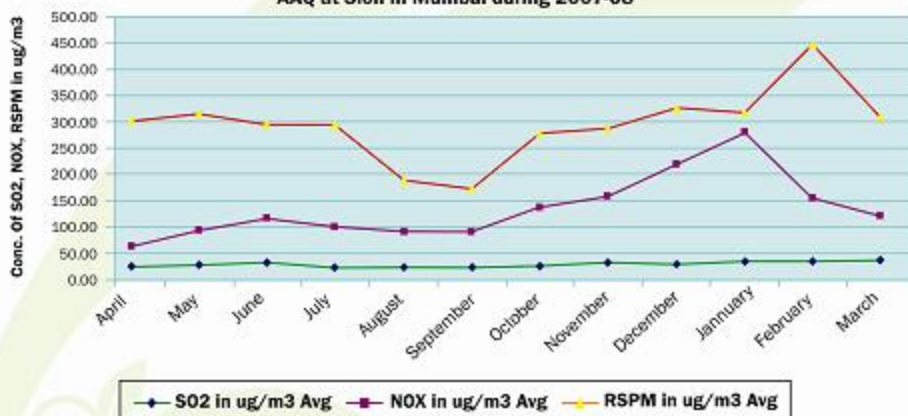


CO Levels at Mulund in Mumbai during 2007-08





AAQ at Sion in Mumbai during 2007-08



CO Levels at Sion in Mumbai during 2007-08

