

MPCB

Maharashtra Pollution Control Board

Ganesh Chaturthi traditionally kicks off the festive season in Maharashtra. After 10 days of community celebrations it is followed some weeks later by Dasara (another 10 days of festivities) and then Diwali. With an economy in booming mode it is only to be expected that the celebrations will be larger and bigger. But this increase can have its downside. The sweet sound of celebrations_ drum beats, disco music, loudspeakers and firecrackers _ turns into deadly din. The high decibels can, quite literally, pose a serious health risk, not just to the ears but also the cardiovascular system. It is especially harmful to the old, very young and the infirm.

The Maharashtra Pollution Control Board (MPCB), the environmental enforcement agency for the state, found in its latest 2006 monitoring study that noise levels had exceeded permissible limits in almost all the 165 locations of 13 cities or towns.

Noise levels could not be checked even though legal standards were in place and concerted efforts had been made by regulatory agencies. MPCB has therefore embarked on a new approach making the control of noise pollution into a social mission. It hopes to involve the community in making people aware of the adverse effects on the environment and health. It recognises the need for capacity building in the regulatory agencies and the crucial role that non-governmental organisations and voluntary agencies can play in curbing noise pollution.

The new approach is in keeping with MPCB's overall paradigm shift_ from that of an enforcement agency carrying out a set of mandated functions such as monitoring and enforcement through inspections, monitoring networks, consent

management and public hearings into a knowledge-based agency.

The shift has come about as MPCB has grown over the years from the establishment of the Maharashtra Water Pollution (Prevention and Control of Pollution) Board in 1970 to a dynamic body coping with newer and newer challenges to the environment like e-waste, biomedical waste, battery waste_ all brought about by increasing industrialisation and



advance of technology. In the process MPCB has metamorphosed itself through the following exercises:

- Improving functional efficiency through fast track mechanisms for clearing consents and decentralising the process of consent management.
- Expanding on the state's knowledge base by developing inventories in hazardous waste for example, publishing books on hazardous substances etc.
- Increasing public awareness through the publication of posters, release of films, street plays, responding to public complaints, and in general educating the public on environmental issues.
- Developing the state's common environmental infrastructure. This has been done by engaging in public-private partnerships to develop facilities such as sewage treatment plants (STP), common effluent treatment plants (CETPS), common hazardous waste disposal facilities (CHWTSDF).
- Educating and guiding entrepreneurs in improving the environment by suggesting appropriate pollution control technologies and techniques.

The Board which is responsible for the implementation of all the various environmental regulations and legislations in the state faces a formidable challenge especially as Maharashtra is one of the most industrialised and urbanised states in the nation. In addition the state government has entrusted the Board with various other responsibilities like looking into the manufacturing aspects of Plastic Rules, 2006. This came about because of the disastrous flooding of Mumbai in 2005 and the realisation that indiscriminate usage of poly bags were choking the city's sewage system. (See Box)

WATER POLLUTION

Increasing industrialisation and urbanisation is good news for the GDP but it has led to a heightened pace of environmental degradation. This is clearly evident in the quality of one of the most crucial natural resources - water.

MPCB keeps a strict vigil on the discharge of untreated effluents



Promoting investment in common infrastructure for environment protection is vital for achieving the goals of sustainable development.

-Shri Ganesh Naik
(Hon. Environment Minister, Maharashtra)

into the waters of the state by issuing directions/notices to local bodies, under appropriate sections of the relevant legislation. However, it is also imperative that the Board have an accurate idea of the levels of pollution of the water bodies of the state at all times, to effectively prevent and control such pollution. The water quality is monitored through a vast network of monitoring stations that assess the quality of river water, groundwater and coastal areas. MPCB proposes to strengthen the water quality monitoring network and to utilise the results from such sampling efforts in surveys and reports that can get to the roots of the problems. For example it has commissioned National Environmental Engineering Research Institute (NEERI) to undertake a study on environmental impacts of disposal of effluents on land at Aurangabad MIDC and to develop guidelines for the disposal of wastewater through a design protocol.

Water quality monitoring indicated that water quality has deteriorated in major rivers due to high levels of Biochemical Oxygen Demand (BOD). MPCB is planning to carry out River Basin Survey for each river identifying the sources of pollution in the river bodies.

AIR POLLUTION

Another important environmental medium that is facing deterioration in quality leading to poor health is air in urban and industrial areas. Both ambient and indoor air pollution has reached alarming levels in terms of particulate matters (fine dust). Industries and power plants propel growth but are also major contributors to gaseous emissions polluting ambient air. The expanding urban transportation network and more and more cars on the road thanks to the growing economy has meant that pollution levels in certain cities especially Mumbai have reached alarming levels.

MPCB has responded to this major challenge by adopting a two-pronged approach. First it has sought to beef up the National Air Quality Monitoring Programme (NAMP) by adding more monitoring stations to the network and including some new cities and industrial areas. The new stations were identified after a detailed inhouse exercise by MPCB.

It is also ensuring better functioning of Continuous Ambient Air Quality Monitoring Stations (CAAQMS). These stations have sophisticated instruments that

are advanced enough to show/analyse short duration air quality thereby providing more meaningful data. Since the operation of CAAQMS requires expertise and skilled field experience MPCB has outsourced the operation and maintenance of these to the supplier itself.

But besides this mandated functioning of monitoring air quality and taking enforcement action when complaints are received, MPCB has begun a massive awareness programme as part of its mission to be a knowledge-based agency. AAQM data is available on the MPCB's own website and it is also being disseminated through the electronic and print media. A health assessment study is being planned to be undertaken by National Environmental Engineering Research Institute (NEERI) and the chest medicine department of the KEM Hospital will forcefully emphasise the link between air quality and the health of the



We are on the right track! Facilitating and friendly approach of the Pollution Control Board is one of the important factors for attracting investment and development in the state.

*-Shri Ravishet Patil
(Hon. Minister of State for Environment, Maharashtra)*

people. The Board thereby hopes to mobilise the people's support and that of various non governmental organisations to become environmentally-sensitive and campaign for relevant issues like the use of compressed natural gas (CNG). The details of the health study are available on request with the Board via its website.

WASTE MANAGEMENT

As consumerism grows there is also exponential growth of waste causing a huge strain to be placed upon precious natural resources even as new dumping grounds have to be created. Solid waste management in Maharashtra, mainly in major towns, is highly inefficient at all stages of the management cycle_

collection, transportation, treatment and disposal. Mumbai generates the highest amount of municipal solid waste. MPCB is therefore working with urban local bodies as a facilitator. It has set up models of solid waste management at Ambad, Sonpeth and Navapur.

One kind of waste stream that is causing great concern is bio-medical waste generated by hospitals, nursing homes, blood banks and so on. The waste produced can be of a chemical or biological nature and may even possess some radiological properties. Despite regulations for disposal of bio-medical waste being put into place, many health centres are yet to implement them. On its part MPCB has sought to develop common infrastructure to handle the wastes. MPCB has facilitated and/or regulating 34 common bio-medical waste treatment and disposal facilities in the state. It has also provided technical guidance to the Municipal Corporation of Greater Mumbai to tackle this problem.

Even more challenging is the problem of hazardous wastes generated by industries. Since these are highly toxic they can have serious repercussions on health. The state generates 14 lakh MTPA of hazardous waste with industries in Thane, Ratnagiri and Raigad districts generating the maximum amounts. Despite rules in place and regulations in force there are instances where industries do not dispose off their waste safely. It is dumped without proper treatment into nearby nullahs or land causing severe pollution and health concerns. MPCB has viewed these developments with alarm and has therefore developed an inventory for these wastes and made the information available to the public. In the year 2005-06, the Board also started compiling a reference manual for application of Schedule II of the 1989 rules.

It has used remote sensing technology through the National Remote Sensing Agency (NRSA) to identify illegal dumpsites outside MIDC in Thane.

The Board has so far directed 40 industries to pay fines as per Rule 16(3) of the HW rules for illegally storing large quantities of HW in their premises. They were also directed to send the stored HW to the common hazardous waste disposal facilities.

On verification it was found that 29 industries have complied with the Board's directions. Follow up action was taken against the remaining non-compliant industries and fines were recovered to the tune of Rs 2,350,500. Some industries have sought additional time for payment or requested personal hearings to review the fine



Improvement in Board's Functional Efficiency, Transparency in Operations and Adequate Response to Growing Needs of Environmental Protection and Sustainable Development in the State of Maharashtra

-Ms. Sharwaree Gokhale-IAS (Chairperson, MPCB)



amounts. The hazardous waste of 1.5 lakh MT lying in the MIDC Tarapur has been disposed off in a secure landfill and the compliance of this will be closely scrutinized. This type of in-situ disposal has been done first time in the country.

In accordance with the Kyoto Protocol and directions by the Supreme Court MPCB is urging more and more industries to adopt Clean Development Mechanisms or green technologies in which there are reduced emissions or recycling

of wastes. The Board continues ensuring compliance in this regard by issuing public notices, revoking authorisations from defaulting units and issuing consents to compliant units.

The Board has taken the initiative to create awareness about the impacts on environment and health resulting from improper handling of e-waste (electronic waste that is a mixture of almost 1,000 different substances and chemicals many of which are highly toxic). It has brought the various stakeholders together especially as Mumbai is the port for new and used electronics and the Navi Mumbai and Pune belts are being developed as various infotech parks. Under the United Nations Environment Programme partnership an e-waste guide is being developed. It is designed to serve as an information resource centre on e-waste as well as common collaboration work platform for stakeholders. The partners work in close collaboration with manufacturers, users, recyclers and non governmental organizations to develop a sustainable e-waste management

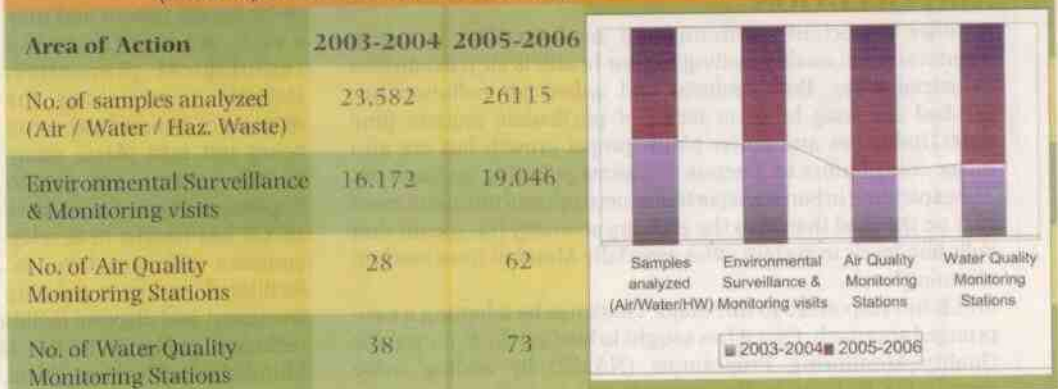
system in India.

MPCB has amply demonstrated how it has gone far beyond the goalposts of its mandated functions of monitoring and enforcement. Its proactive approach and dynamic vision has earned it awards like the United States-Asia partnership Environmental Leadership Award. Member Secretary Dr D B Boralkar was honoured by the same organisation for his sterling contribution to environmental improvement and quality of life in Asia. The Bombay High Court has recognised and appreciated its efforts in environmental protection of Mahableshwar-Panchgani and The Supreme Court for its work in compliance of its order regarding management of Municipal Solid Waste..

CAPACITY BUILDING

In last three years, MPCB has been successful in reducing the load of chemical oxygen demand (COD) from industrial waste waters by 60%, reducing the load from 1,05,370 MT in 2003 to 36,759 MT in 2006. This has been achieved by facilitating construction and operation of common effluent treatment plants (CETPs). MPCB has been operating monitoring and surveillance squads to ensure the CETP operates on satisfactory basis and complies with the applicable standards. Similarly, the approach of setting up of common hazardous wastes disposal facility has helped increasing the collection of industrial hazardous waste from 15,000 MT in 2003 to 3,35,245 MT in the year 2006. The promotion of common bio-medical waste treatment disposal

(Box A) Increased Monitoring and Surveillance Visits



facilities in PPP format has led to an increase in the collect from 375 MT in the year 2003 to 15,482 MT in 2006. All these efforts have reduced the illegal and indiscriminate dumping of industrial wastewaters, solid/hazardous wastes, bio-medical wastes and thereby reducing the damage to the environment considerably.

In terms of monitoring, the Board analyses environmental samples and conducts environmental surveillance and monitoring visits. Box A provides the statistics on the increased monitoring efforts and visits undertaken by MPCB.

In order to improve the issuance of consent, the Board has adopted strategies of decentralization and privatization supported by e-governance. The time concept of issuing consent has reduced substantially from 120 days to almost 20 days. In addition, the Board provides information on the status of the consent on website to allow consent tracking and increase transparency. Increased functional efficiency has helped the Board in raising the financial resources by way of consent fees and water Cess. The revenue generated by MPCB has increased from 22 cores in 2003 to 82 cores in 2006. The Board has used such a built-up of revenue judiciously to improve its internal infrastructure as well as to provide grants to demonstration projects, part financing common environmental infrastructure

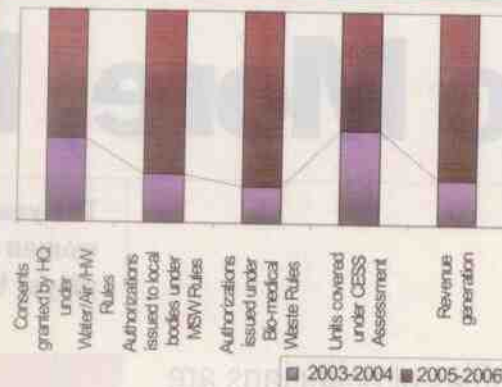
Tackling Plastic Menace

In order to prevent the choking of drains by polybags and prevent flooding the state government introduced the Maharashtra Plastic Carry Bags (Manufacture and Usage) Rules in March, 2006. The minimum thickness of the carry bag should be 50 microns (as that of a milk pouch). The Board is entrusted with the task of regulating manufacture and recycling by issuing registration numbers to all manufacturers.

- A special plastic cell was formed at the MPCB's head office and is given the following tasks:
- Identifying plastic recycling and manufacturing units in Maharashtra.
 - Expedite their registration.
 - Prepare a booklet on the procedure to measure thickness of plastic bags.
 - Issue SCNs to defaulters.
 - Issue closure directions, if required and take legal action.

(Box B) Consents / Authorisations granted, Revenue generated

Areas of Action	2003-2004	2005-2006
Consents granted by HQ under Water/Air /HW Rules	1866	2834
Authorizations issued to local bodies under MSW Rules	74	248
Authorizations issued under Bio-medical Waste Rules	1639	7987
Units covered under CESS Assessment	5684	7272
Revenue generation	Rs.22 cr.	Rs. 82 cr.



facilities as well as conduct intensive surveys and public awareness programmes. Box B shows the increased number of consents/authorizations granted by MPCB between the years 2003-2006

WAY FORWARD

MPCB has been striving for excellence in demonstrating the modern ways of managing environment and take a leadership position. The impact of various measures undertaken by MPCB has already been evident in the country for others to follow. The MPCB today, represents a contemporary, internationally tuned and innovative regulator as a model for environmental governance in India. Many of the actions taken by the Board at the policy, institutional and project level, demonstrate participatory and proactive approaches, which are in many ways new to this country. The outcome of these efforts has led to improvement such as improved compliance, betterment of

environmental quality and reduction in risks and damage to public health and environment.

It is Board's vision that the efforts taken, fructify into new regulatory models to guide other states in the country as well as regulators in the Asian region. It is hoped that the strategic approach will help MPCB in fostering sustainable development by partnering with the community industries and Industry Associations, financial institutions and international bodies.



Style of functioning of the Board is changed to knowledge based and facilitating the compliance of environmental standards rather than "command and control" based.

-Dr. D. B. Boralkar
(Member Secretary, MPCB)

Agenda 2007 - 2010

Common infrastructure for environment protection	<ul style="list-style-type: none"> Setting up SPV to facilitate PPP Promotion of CETP, CHWTSDF, CFBMW
Specific actions for pollution control	<ul style="list-style-type: none"> Implementation of action plans for control of pollution at Chandrapur, Kolhapur, Pune and Solapur
Environmental surveillance and monitoring	<ul style="list-style-type: none"> Setting up of additional continuous air monitoring stations in Mumbai (12), Navi Mumbai (6), Chandrapur (1) and Nagpur (2) Water quality monitoring stations in the State to be increased (200) Coastal water quality monitoring twice in a year Joint vigilance surveillance for monitoring of compliance of environmental standards. Study of impact of air pollution on health in Mumbai and Pune.
Internal capacity building	<ul style="list-style-type: none"> IT Based, online system for issuance of consent, authorisation, filing of returns, etc. Establishment of new Regional Offices at Chandrapur, Nanded, Chiplun and Ports Strengthening of infrastructure laboratories for HAP, VOC and calibration of instruments Office automation and networking/ online accounts Training and improvement in service conditions of employees
Public awareness and participation	<ul style="list-style-type: none"> Environmental information kiosk Web based dissemination of information Pollution awareness and assistance centre Campaign through media
Special Projects	<ul style="list-style-type: none"> Environmental improvement at religious places Finger print analysis and data base for hazardous waste Strengthening emergency response centre for chemical accidents. Demonstration projects for MSW, BMW etc.