

# MPCB

## MAHARASHTRA POLLUTION CONTROL BOARD

**it** took a 26/7 for Mumbai citizens to realise the disastrous consequences of dumping toxic material and dismissing the Mithi river as a 'gutter nallah', and that indiscriminate usage of polybags had throttled the drainage system.

Less dramatic but insidious stories of environmental pollution, however, keep unfolding every day. For example the villagers of Kurkumbh in Pandhrewadi appealed to the Human Rights Commission when effluents from the MIDC rendered their drinking water supply un-potable.

Villagers of Wari, Shingave and Tal in Ahmednagar district discovered that a chemical plant had been responsible for not just polluting the water but also that of the air and soil. This posed a risk to their health and livelihood since the water was not fit to irrigate their crops.

In Mumbai, the frenetic building activity and more cars on the road raised dust levels to alarming levels. The high levels of respirable suspended particulate matter (RSPM) are causing increasing incidences of asthma and can even pose a risk of cancers.

All these cases have demanded a response by the Maharashtra Pollution Control Board (MPCB), the body responsible for implementing environmental legislation in the state.

The rapid pace of industrialisation and India's emergence as a key IT player is a double-edged sword. It has brought cheer to the economists but has to be weighed against growing concerns of irreparable harm to the environment. One of the



'Nirma Bhavan' - A Central Laboratory at Navi Mumbai

greatest challenges for any environmental enforcement agency, therefore, is to facilitate this economic growth without compromising environmental security.

MPCB, which in its initial years was dismissed by skeptics as just a toothless tiger, has demonstrated its ability to respond to this challenge. It has received awards like the Environmental Leadership Award by the United States-Asia Environmental Partnership for its contribution towards environment protection and pollution control. Dr Dilip B Boralkar, Member Secretary of the MPCB, was individually honoured by the same organisation for his efforts.

The Board has also won plaudits for its pro-active actions and positive response from the judiciary and rights bodies. The Bombay High Court lauded its efforts to preserve the environment in the hill stations of Panchgani and Mahabaleshwar. The Supreme Court Monitoring Committee has appreciated the Board's efforts in hazardous waste management and the Human Rights Commission was appreciative of the action taken in the complaint of water pollution by villagers of Kurkumbh.

What is significant is the manner in which the Board has sought to extend the frontiers of its own goalposts. Dr Dilip Boralkar, Member Secretary,



explains how, besides performing its mandated tasks of monitoring and enforcement, MPCB has sought a paradigm shift in functioning by moving towards a knowledge-based style of enforcement rather than command-and-control-based one. By concentrating on increasing public awareness and expanding the common infrastructure of the state for environment protection, MPCB has now evolved in the community from a regulator to a facilitator.

The Board's overarching vision encompasses overall betterment and sustainability, better efficiency, better transparency, better responses and better protection of the State's environment.

Its reiterative response has included various strategies ranging from monitor-

## CHALLENGES

One of the chief functions of the Board is to develop a comprehensive programme for prevention, control and abatement of pollution. The sheer scale and dimension of environmental issues that need to be addressed is mammoth given that Maharashtra is one of the most industrialised states in the country. Even as industry propels GDP growth, it also generates a huge quantum of pollution. Smoke stacks spew out gases and particulate matter into the air, untreated wastewaters add to the chemical and organic load of water bodies. Noise levels soar. In addition, industries also generate large volumes of hazardous waste. The IT field has presented its own challenges in the form of ever-growing bat-

and urbanisation with increasing pollution by industrial effluents and municipal sewage discharges. Overexploitation of groundwater, application of chemical pesticides and fertilisers, and unscientific practices in groundwater extraction have degraded the State's water resources.

Another major source of worry is coastal water pollution. The coastal districts of Thane and Mumbai are highly industrialised and many of the prominent estuaries and creeks are the recipients of a variety of wastes. This, coupled with domestic wastewater discharge, is the major source of degradation of the marine zone which impacts adversely on the health of fishery. MPCB has had to perform a tightrope walk in sustaining these vital marine zones even while

## BOX A

### INTERNAL CAPACITY BUILDING

In the process of evolving from an enforcement-based agency to one that is knowledge-based, MPCB has initiated a number of internal capacity-building initiatives. This includes an Environmental Information Centre that was formed in 2004 by transferring existing staff of the statistics department and recruiting some Junior Research Fellows on contract. The EIC performs the following functions.

**Website management:** The Board's website is maintained and updated daily. It provides all information on various activities including the air quality status in some cities. Website is quite popular and interactive with large database.

**Consent management:** A fast-track mechanism has been put in place for getting consent from the Board. The industries have been categorised into red, orange and green depending on the nature of industry and capital investment. The website displays all information on consents (granted, pending and refused), thereby displaying a greater degree of transparency.

Other measures by MPCB include adding infrastructure by strengthening and modernising laboratories and generating revenue through consent fees and analysis charge, cess and Central assistance and enforcement through levying fines, waste minimization and forfeiture of bank guarantees. Its revenue generation of Rs 82 crores was up by Rs 32 crores as against the previous year. A new building for Central Laboratory in Navi Mumbai, named Nirmal Bhavan, is well equipped with state-of-the-art facilities for pollution survey, assessment and monitoring.



ing and conducting several surveys and studies, inventurisation, enforcement, developing and expanding common infrastructure to conducting special research and development by partnering with various institutions.

In this approach it has realised the need for improving its own dynamics and internal functioning efficiency (See Box A).

Secondly, it has realised the clout of public participation in the legislative process. The Board has sought to dialogue with the public through mass awareness programmes, seminars and by partnering with NGOs and making data available in a free and transparent manner.

terry waste and e-waste (See Box B).

Maharashtra is also the most urbanised state in the nation with the average decadal growth being almost 50 per cent. Mumbai region, the nation's business and financial capital, alone houses 28 per cent of the state's urban population. The task of bolstering the existent infrastructure network of roads, sanitation and energy supply systems is crucial but such development places a high level of stress on natural resources like forests/mangroves.

**Water Pollution:** One of the most crucial natural resources, surface water, has been affected by this spurt in industrialisation



Ganesh Naik  
Hon. Environment Minister,  
Maharashtra

**Improvement in the Board's functional efficiency, transparency in operation and adequate response to growing needs of environmental protection and sustainable development in State of Maharashtra.**

acknowledging the necessity for development in the Konkan region.

It has responded by keeping a strict check on the discharge of effluents into the state's water bodies through directions and notices to local bodies. It has also put into place a water quality monitoring programme and set up a vast network of monitoring stations to assess major rivers and their tributaries, groundwater and coastal waters.

The Board has also carried out a number of studies and surveys to get to the root of the problem. One of the noteworthy ones was the Mithi River Survey in Mumbai in response to a PIL after



## E-WASTE

Although e-waste management is of global concern, it has assumed significant proportions in India because of the rapid growth of IT. E-waste, or electronic waste, is the term used to describe discarded electronic appliances like computers, laptops, refrigerators, TVs, mobile phones and DVD players.

E-waste management poses a particular challenge because recycling is difficult. If improperly carried out can be very hazardous because of the presence of toxic materials. The rapid obsolescence of products in the electronic industry has created an e-waste crisis. Like other environmental agencies, MPCB believes that stringent measures must be taken to immediately ban imports of such wastes in India, extend producer responsibility and make them accountable for the entire lifecycle of products that are sold, product take back like lead acid batteries, remanufacturing to reduce dependence on virgin raw materials and redesigning of computers to ensure safe and clean recovery of raw materials, waste minimisation etc.

MPCB has taken the initiative to create awareness among the various stakeholders especially as Mumbai is the port of import for new and used electronics and the New Mumbai and Pune belts are home to various Info tech parks harboring millions of users of IT products. With partial financial support from UNEP and technical guidance, an Indo-German-Swiss base an e-waste project on assessment of e-waste scenario is being implemented. It is designed to serve as an information 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 organisations to develop a sustainable e-waste recycling and management system.



ture. In more than 50 locations levels of RSPM have exceeded standards. At some locations, SO<sub>2</sub> and NO<sub>x</sub> levels have also exceeded the limits.

The sheer magnitude of the problem has led MPCB to adopt a two-pronged approach. One is enforcement of standards either through persuasion or as a final recourse legal action. Second, and more importantly, is adoption of the knowledge-based approach. The Board aims at adding muscle by raising mass awareness on the causes of poor air quality, source emissions and vehicular pollution. With surveys revealing concentration of pollution even in residential areas, MPCB has roped in the help of the general public.

Some of the methods employed in this strategy include: disseminating air quality data on TV and the MPCB website, through audio visuals and public shows, by holding seminars and exhibitions and in partnering with various non-governmental organisations.

The Board has partnered with the



Dr.D.B.Boralakar  
Member Secretary, MPCB

**PEOPLE'S PARTICIPATION IN THE IMPLEMENTATION OF PROGRAMS ON POLLUTION CONTROL SUPPORTED BY INTERNAL CAPACITY-BUILDING IS VERY NECESSARY FOR EFFECTIVE ENFORCEMENT.**

last year's disastrous flooding. It was on the basis of this very comprehensive survey and notices given to a number of industrial estates along the river banks by the Board that action was initiated by the Mithi River Development and Protection Agency.

**Air Pollution:** An equally crucial environmental medium is clean air. Assessing air quality hinges on a well-distributed and planned monitoring network. Such monitoring can provide the inputs on concentration levels of specific pollutants (oxides of sulphur and nitrogen, particu-



A secured landfill for hazardous waste

late matter and carbon monoxide).

In its effort to beef up its network MPCB has begun utilising high-volume samplers (HVS) and set up a mobile network comprising of mobile vans with sophisticated equipment and computerised data recording systems. In addition, there is a fixed network with 28 stations to assess ambient air quality in the state under the National Air Quality Monitoring Programmes. It has proposed expansion of this and the State Air Quality Monitoring Programme (SAMP) networks. The data collection has revealed an alarming pic-

National Environmental Engineering Research Institute (NEERI) in a programme to use air ambient data meaningfully. Funded by the Central Pollution Control Board and oil companies, source apportionment study of air pollution in Mumbai is also supported by the Board. This will be complimentary to the on ongoing study by the United States Environment Protection Agency.

Another innovative approach carried out by MPCB is a public-private partnership for air quality monitoring through Continuous Ambient Air Quality



Monitoring (CAAQM) stations where monitoring instruments are advanced enough to show/analyse short-duration air quality on line for one to 10 minutes internal response time.

Since the operation of CAAQMs requires a high degree of skill and field experience MPCB has outsourced the operation of these to the supplier possessing requisite expertise.

**Noise Pollution:** The community-based approach is also vital in tackling noise pollution. While industry and vehicles are the primary source there are other factors like air conditioners, noisy equipment, indiscriminate use of loudspeakers and musical equipment and bursting of

that local people had cooperated in keeping the levels lower after 10 pm.

**Waste Pollution:** One category of pollution that puts a huge load on natural resources is waste management. In the case of municipal waste management MPCB has gone beyond the conventional control mechanism and has facilitated the adoption of the latest technologies. It has partnered in solid-waste projects of local bodies and also provided technical guidance to the Municipal Commission of Greater Mumbai in its hospital waste management.

Three demonstration projects set up at Ambad, Sonpeth and Navapur have been completed. They are role models for

Sensing Agency) and attempted to use remote-sensing techniques to identify illegal hazardous waste dumps in and around Tarapur, Dombivli and Ambernath in Thane district.

MPCB has initiated a proposal of developing common infrastructure for environment protection. There are two Common Hazardous Waste Disposal Facilities (CHWTSDF), one at Taloja with 2074 units as members and the other the trans-Thane creek that accommodates 1023 units. Two more sites have been earmarked to handle the growing needs of the state.

The same principle of developing common infrastructure has been used to set



Ravindra Patil  
Hon. Minister of State for  
Environment, Maharashtra

## THE STATE GOVERNMENT IS CONSIDERING THE BOARD'S PROPOSAL TO SET UP A **SPECIAL PURPOSE VEHICLE (SPV)** TO FACILITATE AND **PROMOTE PUBLIC PRIVATE PARTNERSHIPS (PPP)** IN COMMON INFRASTRUCTURE FOR **ENVIRONMENT PROTECTION.**



Common Effluent Treatment plant at Trans Thane Creek

crackers on all festive occasions.

What may seem sweet music to some can be dangerous din for others, particularly the elderly or those suffering from cardiovascular ailments. Loud decibels at festival time can adversely affect one's well-being. In October 2005, the Board undertook an extensive monitoring programme for crackers producing noise above the stipulated levels. One of the fallouts of the sustained campaign against noise pollution is that during both Diwali and Ganpati monitoring communities noted

other cities in terms treatment and disposal of domestic solid waste in an environmentally sound manner.

Industrial hazardous waste management which can have immense potential to cause harm requires special expertise. With Maharashtra producing above 50 per cent of the nation's waste the herculean task of drawing up an inventory has been completed by the Board. It has also set up a system tracking the wastes from the time they are generated until their disposal. The Board collaborated partner with NRSA (National Remote

up common effluent treatment plants for clusters of industries at the trans-Thane Creek, Mahad, Badlapur, Butibori, Patalganga, Chickloli-Morivali, Roha, Dombivli and other industrial clusters in collaboration with MIDC and MoEF. In order to promote the private investments and to facilitate participation of private sector in the field of environment protection, the Board has prepared a proposal to set up a Special Purpose Vehicle (SPV) to develop/promote projects on BOOT/BOO basis. This is being considered by State Government.

### BOX C

Areas of Action	Year 2003-2004	Year 2005-2006
Discharge of Industrial Water Pollution in terms of COD	105,370 MT	36,759 MT
Industrial Hazardous Waste removed	15,000	335,245 MT
Hospital Waste removed	375 MT	15,482 MT
No. of samples analysed (Air/Water/Haz. waste)	23,582	26115
Environmental Surveillance & Monitoring visits	16,172	19,046
No. of Air Quality Monitoring Stations	28	62
No. of Water Quality Monitoring Stations	38	73
Demonstration Projects from Domestic Waste Management	Nil	3
No. of consents granted by Head office under Water/Air/HW Rule	1866	2834
No. of Authorisations issued to local bodies under MSW Rules	74	248
No. of Authorisations issued under Bio-medical Waste Rules	1639	7987
No. of units covered under CESS Assessment	5684	7272
Revenue Generated	Rs. 22 Cr	Rs. 82 Cr