

## **ANNUAL PLAN OF CPCB, 2007-08**

### **1.1 Activities and Achievements of 2006-2007**

#### **1.1.1 Pollution Assessment Survey & Monitoring**

- Water quality monitoring carried out at 1019 stations and statistically processed data on river basin approach is updated for the website of CPCB.
- Three training programmes were organised for central & state agencies under Ministry of Water Resources for integrated water quality monitoring network, data analysis, validation and interpretation.
- Ambient air quality has been monitored in 115 cities/towns covering 329 locations.
- Source apportionment studies which are primarily based on measurement and tracking down the sources through receptor modeling have been initiated in city of Delhi, Bangalore, Pune, Mumbai, Chennai and Kanpur. Sites for ambient air quality monitoring have been finalised in these cities and procurement of monitoring equipment are completed. Standard operating procedures for sampling and analysis have been developed.
- Ambient air quality data from three continuous air quality monitoring stations set up at ITO, Siri Fort and Delhi College of Engineering (in Delhi) is instantly displayed updated data after every 15 minutes through CPCB website.
- A pilot project for establishing on-line transmission of real time data from Pragati Power Corporation Limited has been completed and real time data are transmitted on-line to data base server at CPCB. The emission data of every 60-minute is being updated.

#### **1.1.2 Laboratory Management**

- Samples for PAH analysis collected from NAAQM stations and compounds were successfully extracted and analysed.
- Co-coordinated with State Pollution Control Boards (SPCBs) on initiating bio- mapping studies of State specific rivers. Bio-mapping programme is continued in the States of Kerala, Karnataka, Meghalaya, Tripura, Sikkim and Mizoram.
- A National Referral Trace Organic Laboratory has been set up in CPCB for monitoring of trace levels of persistent organic pollutants (POPs) specially 17 toxic categories of dioxin-furan and poly chlorinated biphenyls (PCBs) congeners with dioxin like toxicity. The laboratory facilities have been further upgraded for analysis of semi

volatile organic compounds (SVOCs), herbicides/ carbamates/ 2,4 D and VOCs.

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- Central Laboratory and Zonal Laboratories of CPCB participated in Proficiency Testing (PT) Programme organised by Environmental Laboratory Approval Programme Wardsworth Centre, New York, State Department of Health, New York for PT samples related with potable water chemistry, non-potable water chemistry, solid and hazardous waste, potable and non-potable water bacteriology.
- The testing as well as installation of OC/EC Analyzer completed and started analysis of samples.

### **1.1.3 Training**

Fifteen training programmes were organised on different subjects relating to abatement of pollution which were attended by more than 300 officials of State Pollution Control Boards (SPCBs)/ Pollution Control Committees (PCCs) and from other Departments.

### **1.1.4 Information (Database) Management & Library**

For setting up of Environmental Data Bank (EDB), modules on air and water quality are made operational. On-line data entry of air and water quality monitoring data is being done by SPCBs/PCCs. EDB could be accessed through CPCB's website. Data of 342 air and 965 water quality monitoring stations is regularly entered.

#### **➤ Environmental Data Bank**

Presently, modules on air quality and water quality are made operational. On-line entry for data on air quality monitored under National Air Monitoring Programme and water quality monitored under GEMS/MINARS is being done regularly by SPCBs/PCCs. EDB could be accessed through CPCB's website (<http://www.cpcb.nic.in>). Raw as well as analyzed data could be viewed, downloaded & used for further analyses/ interpretation. So far, data entry has been initiated in respect of 342 air quality monitoring stations covering 26 States/UTs and 963 water quality monitoring stations covering 33 States/UTs.

#### **➤ On Line Data Transmission from Continuous Ambient air Quality Monitoring Stations.**

CPCB operates continuous ambient air quality monitoring (CAAQM) at three fixed locations viz. ITO, Sirifort & Delhi College of Engineering and one Mobile Van. Various pollutants viz. SO<sub>2</sub>, NO<sub>2</sub>, CO, RSPM,

PM<sub>2.5</sub>, Benzene, Toluene, Xylene, Ozone, etc. are monitored. In order to make these data available to public without any time gap on real-time basis, a network for online real-time data transmission has been established at CPCB

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Data could be viewed through CPCB's website (<http://www.cpcb.nic.in>). Air quality data of every 15 minutes (customizable) is being updated and displayed. Besides, analyzed data (short as well as long-term averages) and comparison with prescribed ambient air quality standards, etc. could also be viewed, downloaded for further interpretation or analysis. The values compared with prescribed standards and violations, if any, are being displayed. Software can also analyze the data as desired normally like comparisons with other stations, hourly, eight hourly, monthly, yearly Data analysis etc

➤ **Online access of emission data from major industries**

A pilot project for establishing online transmission of real-time data from Pragati Power Corporation Limited (PPCL), New Delhi has been completed and real-time data are transmitted online to database server at CPCB - HQ. The emission data of every 60-minute (customizable to 1 min) is being updated and displayed without human interference.

➤ **Strengthening of LAN and Internet facility**

CPCB local area network established in the year 2000 with 108 nodes has been increased to 143 nodes. The network was upgraded to 2Mbps connectivity and is being maintained with smooth and uninterrupted operation through out the year.

### **1.1.5 Industrial Pollution Control**

- Under the NPC project, relevant plastics manufacturing and recycling industries were identified and monitoring carried out in collaboration with officials of National Productivity Council (NPC) for development of emission/effluent standards.
- Out of 2744 units identified under 17 categories of highly polluting industries, 1991 units have been reported as complying, 414 as defaulting and 339 were closed.
- A total of 50 industries were surprisingly checked for verifying compliance status and compliance status has been referred to

concerned State Pollution Control Boards (SPCBs) for taking corrective measures by industries to ensure compliance.

- A total of 54 industries were jointly inspected by CPCB and regional offices of Ministry of Environment and Forests (MoEF) for monitoring of compliance of environmental clearance conditions.
- Issued 37 directions to defaulting units of which 35 directions issued under Section (5) of Environment (Protection) Act, 1986 and two under section 18 (1) (b) of Water (Prevention & Control) of Pollution Act, 1974. Twenty eight directions were issued relating to closure of industries and seven were relating to improvement in industry's process.

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- Reviewed environmental statements in respect of 10 categories of industries and information is utilised for setting up of environmental benchmark for attainment by industries.
- Standards have been finalised/notified or under finalization in respect of various categories of industries like; oil refineries, sulphuric acid plants, petrochemicals. Fertilizers, Ambient air quality criteria, Bulk drugs, Basic organic chemicals, common incinerator, coffee, Hotels, Tea, Poultry, Gelatins, etc.
- Prepared National Chemical Management profile to assess the national infrastructure for the management of chemicals in the country and identifying the gaps for capacity building and priority areas of concern to improve chemicals management.
- Completed study on environmental contamination with Polychlorinated Dioxins
- Cleaner production technologies for the manufacture of vinyl sulphure have been identified including treatment technologies for liquid effluents. Similarly, cleaner production technology for selected during manufacturing units taking Paracetamol as a case study was taken up. The technology evolved suggest replacement of chemical reduction process by iron sludge.
- Developed guidelines for design, operation and tail gas treatment and emission standards for common hazardous waste incinerator as well as for industry-specific hazardous waste incinerator.

#### **1.1.6 Mass Awareness, Publications and NGO Activities**

Fifteen technical reports were brought out on various subjects relating to abatement of pollution and theme based "Parivesh" newsletter & Annual Report were published.

### **1.1.7 Spatial Environmental Planning**

- Out of total 112 Zoning atlas prepared earlier, 94 atlases have been completed and 18 are under finalisation.
- District specific siting guidelines are prepared for 94 atlases.
- One Hundred Six District environmental atlases are prepared and 62 are under preparation. Further, 7 state level environmental atlases are prepared and work for 10 States is under progress.
- Work on Ecocity projects at; Kottayam, Ujjain, Tirupati, Vrindavan and Puri is at different stages.

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### **1.1.8 Hazardous Waste Management**

Coordinated with MoEF and High Power Committee set up by Hon'ble Supreme Court for hazardous waste management activities relating to inventorisation of hazardous waste generating industries, identification of hazardous waste dump sites and matters relating to preparation of remediation plan were coordinated with SPCBs.

## **1.2 Thrust Areas for Abatement of Pollution (2007-08)**

- Continuing on-going programme on Water and Air Quality Monitoring through State Pollution Control Boards (SPCBs) and Pollution Control Committees (PCCs).
- Inter-state water quality monitoring of rivers and assessment of micro pollutants.
- Inventorisation and identification of water bodies requiring action plan for restoration of water quality.
- Completion of ground water quality assessment in metro cities.
- Inventorisation of air polluting sources and thrust on monitoring of Fine Particulate Matter.
- Updating status of management of municipal waste (sewage and solid).

- Assessment of performance of sewage treatment plants and evolving standards for STPs. Exploring possibilities as setting up of decentralized low cost sewage treatment facilities on demo-basis.
- Continuing epidemiological studies on impact of air pollution on human health and particularly in rural areas.
- Continuous ambient air quality monitoring at three locations in Delhi and continuing ambient air quality assessment (manual stations) at seven locations.
- Undertaking analysis of hazardous air pollutants like; Benzene, Poly aromatic hydrocarbons (PAHs), etc. and monitoring of PM<sub>2.5</sub>
- Co-ordination with SPCBs on setting up of Continuous Ambient Air Quality Monitoring Stations (CAAQMS) in 16 cities and pilot project on operation of CAAQMS based on operation control (OC) and Build, Own and Operation (BOO) model.
- Conducting analytical quality control (AQC) tests for laboratories of SPCBs (including for soil and solid wastes).

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- Bactericidal characterization of river Ganga
- Continuation of on-going programme on determining toxicity factor and application of bio-monitoring studies for assessment of water quality.
- Monitoring of Extractable Organic Halides (EOX), trace metal characterization of solid and hazardous waste using ICP-OES and characterization of non-ferrous industries solid waste through EDXRF.
- Monitoring and analysis of PAH, Volatile Organic Compounds (VOCs), Tri-halo-methane (THM), Pesticides and Dioxin (PCDDs) and Furan (PCDF).
- Review of Standards (for liquid effluent and gaseous emissions) and preparing Comprehensive Industrial Documents (COINDS) in respect of different categories of industries; Fertilizer, Dye and Dye Intermediates, Bulk Drug, Basic Organic Chemicals, Pesticides, Petro-chemicals, soda ash, SO<sub>2</sub> & NO<sub>x</sub> for Power Plants, BOD plants for Iron and Steel, non-recovery type coke oven and coal briquetting plants, primary copper, zinc and lead, Aluminum, SO<sub>2</sub> & NO<sub>x</sub> for cement, fermentation maltries/ breweries, soft drinks, soap and detergents, plaster of paris products, tanneries, service stations, dal besan, pickling, starch, plywood etc.

- Follow-up on implementation of Corporate Responsibility for Environmental Protection (CREP) in respect of 17 categories of industries such as; oil refineries, petrochemicals, dye and dye intermediate, sulphuric acid plants, fertilizer, tanneries, pesticides, pharmaceuticals, thermal power plants, iron & steel, cement, etc.
- Undertaking in-depth performance studies of pollution control devices as well as of steps taken to minimize pollution load in selected categories of industries. Specific pollutant monitoring like mercury, carbon-disulphide (CS<sub>2</sub>) and hydrogen sulphide (H<sub>2</sub>S) will also be taken up around industries.
- Steps towards implementation of noise standards for Diesel Generator sets and evolving standards for off-highway vehicles and construction equipment.
- Review of existing and evolving pollution prevention technology and clean technologies for reduction in green house gases for; vapor recovery for gasoline filling stations, tail gas treatment for chemical waste incinerators, offensive odour control, control of volatile organic compounds (VOCs) emissions from industries, asbestos mining, fugitive emission control from coal and fly ash storage section in power plants, management of solid and hazardous waste in integrated iron and steel plants, utilisation of spent wash for composting, utilization of liquid effluents from pulp and paper and distilleries for irrigation, water conservation in sugar industries, distilleries etc.

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- Inventorisation of red category of industries and undertaking assessment of environmental status in a few industrial estates as well as assessing their assimilative carrying capacity of pollution load.
- Identification of hazardous waste streams and minimizing of waste in; paint industries, iron and steel, aluminum, sodium-di-chromate, galvanizing, textile and dyeing industrial sectors.
- Evolving environmentally sound technologies for recycling of electronic wastes.
- Follow-up on Supreme Court's directives on hazardous waste management and particularly relating to; National inventory of hazardous waste generating industries, identification of dump-site and preparing remediation plan for identified sites.

- Developing guidelines, manual on hazardous waste analysis, preparation of remediation plan for dumpsites, etc.
- Co-ordination with SPCBs and concerned Central and State Governments on implementation of rules relating to plastics and municipal solid wastes. Specific attention will be laid on management of waste at hilly regions.
- On-line access of emission data from major industries and real time data transmission from continuous air quality monitoring station in Delhi to CPCB website will be continued.
- Emphasis on designing, development and implementation of integrated environmental management system in CPCB.
- Assessing needs for strengthening of SPCBs and PCCs for effective functioning, particularly for strengthening of laboratories.
- Compliance verification under environment surveillance activities in respect of 17 categories of industries, performance evaluation of sewage treatment plants (STPs), common effluent treatment plants (CETPs), common bio-medical waste treatment facilities (CBMWTF), common treatment storage and disposal facilities.
- Continuing on-going programme on water and air quality monitoring through State Pollution Control Boards (SPCBs) and Pollution Control Committees (PCCs).
- Demonstration Project on Utilisation of Plastics Waste in Road Construction.
- Evolving Environmental Standards for Plastics Manufacturing & Recycling Industries.

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### 1.3 SUMMARY OF SCHEME-WISE ALLOCATIONS FOR 2007-08

S.No.	Project Heads	Allocations (Rs. in lacs)
1	Pollution Assessment – Survey and Monitoring	550.0
2	Laboratory Management	850.0



3	Development of Standards and Guidelines	150.0
4	Training	50.0
5-A	Information (Data Bank) Management	100.0
5-B	Library	25.0
6	Pollution Control Enforcement	1800.0
7	Pollution Control Technology	100.0
8	Mass awareness, Publications and NGOs	50.0
9	Hazardous Waste Management	75.0
	TOTAL	3750.0