Chapter 2

Prevention of Industrial Pollution

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The enhanced pace of developmental activities and rapid urbanization have resulted in stress on natural resources and quality of life. The trend of increasing pollution in various environmental media is evident from the deteriorating air and water quality; higher noise levels; increasing vehicular emission *etc*. Realising the urgent need for arresting the trend, MoEF&CC adopted a policy for abatement of pollution. It provides for several mechanisms in the form of regulations, legislation, agreements, fiscal incentives and other measures. Further, it realized[14] that conventional pollution control approach by treatment was not delivering the desired benefits in terms of resource conservation. As a result, the thrust had been shifted to pollution prevention and control through promotion of clean and low waste technologies, re-use and recycling, *etc.*

In this Chapter the results of audit pertaining to the prevention of industrial pollution have been compiled. The first and foremost requirement for prevention of pollution is the identification of the sources of pollution, nature of pollution and extent of pollution. Hence the chapter begins with an analysis of the efforts made in this regard. Planning and policies for prevention like annual action plans, siting policy of the polluting industries, exploring the cleaner technological options have been commented upon. Results of the Joint Physical Inspection of units of some polluting sectors, supported by photographs, have also be encluded.

According to Water Act 1974 and Air Act 1981, WBPCB was required to plan comprehensive programmes for prevention and control of water and air pollution. For this purpose, identification of the polluting sources and the type and quantity of pollutants discharged were to be assessed. Action taken by the Environment Department/ WBPCB in this respect are discussed in the succeeding paragraphs.

2.1 Adequacy of data for planning pollution prevention

Data relating to environment parameters is important for planning, implementing and monitoring of environment programs/ outcomes. Environmental data had been defined by the Working Group on Environment Auditing (WGEA). Environmental data consists of systematically collected qualitative or quantitative information about different components[15] of the environment or human activities and sectors[16] that affect the environment.

With regard to data adequacy, audit observed the following:

2.1.1 Absence of reliable and updated data regarding pollution load[17]

A reliable database regarding sources of industrial pollution is essential for effective decision-making. CPCB, in the context of classification of industries[18]

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14 *Annual Report of Ministry of Environment, Forest and Climate Change for the year 2002-03.*

15 *Quality and quantity of air, water, natural resources, ecosystems and other environmental health impacts.*

16 *Agriculture, waste, and land development.*

17 *Quantity of pollutants present in an environment.*

18 *Under Red/ Orange/ Green/ White categories.*

had identified (April 2015)[19] gaps in the process of categorisation. It was observed that the pollution due to discharge of emission and effluents and its impact on health was not considered as primary criteria for categorisation of industries. Accordingly, a working group was constituted which was to revisit the process of categorisation on the basis of Comprehensive Environmental Pollution Index[20] (CEPI). Subsequently, CPCB directed[21] (March and April 2016) State Pollution Control Boards (SPCBs) to categorise all industries on the basis of their pollution load in terms of CEPI. CPCB prescribed the formula for calculation of CEPI on the basis of (i) Scale of industrial activity (ii) scale of exceedance of Environmental Quality (level of exposure) (iii) Health related statistics and (iv) Compliance status of industries. The basic framework of the CEPI based on algorithm of Source, Pathway and Receptor was prescribed as shown in ***Appendix-1.3***.

Audit observed that WBPCB had not prepared an inventory of polluting industries giving cognizance to the CEPI. Audit test checked the minutes of the meetings of Categorisation Committee of WBPCB. **Audit noticed that the categorization was done by considering the raw material used and process of manufacturing only. The parameters prescribed by CPCB for CEPI were not considered.** Further, the database of WBPCB showed that the number of red category industries was 8419. This number was 5452 as per the data collected by Audit from all the Regional Offices of the WBPCB. Thus, there was a mismatch in the basic data regarding amount of pollution caused by different industries.

Audit also observed that some industries that had already been closed down[22] or their category has been revised as Orange[23] were still shown as Red category in the database of WBPCB. This indicated that the database of WBPCB was not updated as per the revised norms of CPCB.

Between July 2016 and March 2017, WBPCB had issued 1260 CTEs and 2717 CTOs out of which 506 CTEs and 1117 CTOs were for Red category industries. Audit observed that there was nothing on record to show whether WBPCB had calculated and considered CEPI of the industries at the time of issue of CTEs or CTOs. The evaluated CEPI reflects the environmental quality of the industrial areas which needs to be taken into account before setting up of any industry and thus is an integral component of the CTE/CTO process.

In absence of reliable and updated data regarding pollution load of the industries, the existing mechanism to prevent, control and monitor industrial pollution may not be effective.

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[19] *59th Conference of Chairmen and Member Secretaries of pollution control boards held on 8 April 2015.*

[20] *Comprehensive Environmental Pollution Index is a function of emission, effluents, hazarous wastes generated and consumption of resources.*

[21] *Vide No. B-29012/ ES(CPA)/ 2015-16 dated 7 March 2016 and No. B-29012/ESS(CPA)/ 2015-16 dated 26 April 2016.*

[22] *Eastern Distilleries, Adi Shakti Alloys and East India Pharmaceuticals in Kolkata.*

[23] *Garden Reach Ship Builders, Ankar Industries and West Bengal Pharmaceuticals and Phytochemicals Limited and Pincon Spirits.*

In reply, the Department stated (December 2017) that the WBPCB is in the process of reviewing and updating the database of enlisted industries based on the revised norms of categorisation. However, the fact remains that no action has been taken even after lapse of more than one and half year from the date of issue of instructions.

2.1.2 Inventorisation of Hazardous Waste

According to Hazardous Waste (Management, Handling and Trans-Boundary) Rules, 2016 (HWMHT Rules)[24], WBPCB, *inter alia* was to prepare an inventory of hazardous wastes[25]. The Rules also stipulated for taking action against the violations and also implement programmes to prevent/ reduce/ minimise the generation of hazardous wastes.

WBPCB had taken up (October 2012) the project 'Inventorisation of Hazardous Waste' through a consultant[26]. The project, *inter alia,* included identification of all hazardous waste generating sources in the State and to recommend suitable treatment and disposal practices.

The consultant submitted the report in June 2017, which identified 952 hazardous waste-generating units operating in the State. The report recommended (i) development of careful surveillance and monitoring mechanism, (ii) regular updating of inventories depending upon modifications of manufacturing process, (iii) exploring options for reusing, recovering and recycling of hazardous waste, (iv) augmentation of the capacity of the existing hazardous waste disposal site *etc*. Information regarding implementation of these recommendations was not on record.

Audit observed that the consultant initially identified (January 2013) 6,135 units having potential of generating hazardous wastes. Identification of these units was based on raw materials used, manufacturing process adopted and products manufactured. Subsequently, the consultant conducted field visit of 3,500 units and finalised the inventory of only 952 hazardous wastes generating units. Audit, however, observed that there was nothing on record to show the basis of finalisation of only 16 *per cent* of the total number of units identified as hazardous wastes generating units.

In reply, the Department stated (December 2017) that the main reason for trimming of the list was the removal of common names and based on the site visits and study of files maintained in the WBPCB's regional offices. The reply was, however, not tenable as no records of common names appeared in the lists. Further, the consultant conducted site visits of only 57 *per cent* of the units to finalise the inventory list. The basis of pruning the list from 6,135 to 952 was not on records. In view of the fact that there are 8,419 red category industries in

[24] *Schedule VII under Rule 13 (6) and 21.*

[25] *Hazardous waste means any waste which by reasons of any of its physical chemical, reactive, toxic, flammable, explosive or corrosive characteristics causes danger or is likely to cause danger to health or environment.*

[26] *M/s. EPTISA Servicios de Ingenieria, SL (an international agency selected through global tender)..*

the State, the department's claim of only 952 units generating hazardous waste does not seem tenable.

Thus, the inventory relating to hazardous waste remained incomplete and recommendations made by the consultant were yet to be taken care of by WBPCB.

2.1.3 Updated database based on Source Apportionment Study

National Green Tribunal (NGT) observed (January 2015) that there was no scientific data available with WBPCB regarding major air pollution sources in Kolkata and Howrah[27]. NGT further observed that the air in both the cities was highly polluted. In order to formulate a strategy to combat air pollution, NGT directed WBPCB to collect and generate data on the contribution of various sources of pollution. The compliance report on engagement of agency to undertake the work was to be submitted by WBPCB to NGT within four weeks. The report was to be prepared within three months from the date of directions of NGT.

Audit observed that WBPCB awarded (July 2016) the work of Source Apportionment Study[28] of Kolkata and Howrah after a delay of 17 months from the NGT deadline (February 2015). The work was to be completed within 24 months from the date of receiving first installment of project cost by the agency. As per the records, this was due to delay in finalisation of the scope of work. Audit also observed that the work actually commenced in February 2017 i.e after a delay of seven months from the date of placement of work order, due to delay in release of funds by WBPCB. As of July 2017, the work was in progress.

Thus, due to delay in commencement of the work of Source Apportionment Study in Kolkata and Howrah, WBPCB could not update the data relating to quantum and the sources of air pollution in these two major cities. As a result, it could not formulate necessary steps for its prevention.

In reply, the Department stated (December 2017) that WBPCB was well aware of the sources of air pollution and regularly monitors ambient air quality at various locations in the State. It also stated that the study was likely to be completed by the end of 2018. However, the fact remains that the study was undertaken to provide scientific estimates of air pollution and help in formulation of a more focused air pollution control strategy, which remained unfulfilled for more than two years.

2.2 Environmental Policy and Sustainable Development Goals

The Vision Document of WBPCB (November 2013) for the period 2013-14 to 2015-16, broadly envisaged

- the future challenges;
- identifying long term goals;
- setting achievable targets;

[27] *It is a major industrial cluster and also categorized as critically polluted area as per CPCB.*

[28] *Sampling of Particulate Matter (PM) through sampling at selected sites including establishment of 12 sampling and monitoring stations.*

- deciding appropriate strategies and programs; and
- prioritizing them for implementation.

Further, a Vision Plan of 2016-30 was prepared (June 2016) by the WBPCB and sent to the Environment Department. The Department, after incorporating three Sustainable Development Goals (SDGs)[29] in respect of prevention, control and monitoring of industrial pollution sent (August 2017) the Plan to the Department of Planning, GoWB for approval, which was yet (December 2017) to be approved. As such, the Department presently did not have any vision/ plan/ policy from 2016-17 onwards.

Vision Documents for the period 2013-14 to 2015-16 envisaged various specific steps in relation to the control of industrial pollution. These were (i) environment auditing of Thermal, Oil refinery and Petrochemical plants, (ii) installation of pollution control facilities in small and medium industry clusters, (iii) remediation[30] of illegal hazardous waste dump sites, (iv) setting up new regional offices, (v) up-gradation and accreditation of laboratories, (vi) waste water treatment facility in clusters *etc*. Audit observed that none of these activities were achieved till December 2017 as discussed in the subsequent paragraphs. **As such, there was no strategic vision to coordinate the activities of the various agencies of the Government to conserve and protect the environment.**

In reply, the Department stated (December 2017) that an administrative calendar outlining the activities and targets of each year was prepared incorporating most of the activities of the vision document. It further stated that most of the targets indicated in the administrative calendar were achieved. The reply was, however, not tenable as no substantiative records indicating achievement of any of the activities, as pointed out by audit, were made available.

2.3 Environmental Planning and action plans for prevention of pollution

CPCB guidelines regarding Environment Planning stipulate that Carrying capacity[31] of the environment is limited and some areas or ecosystems are more susceptible to adverse environmental impacts. Unplanned and hapazard location of industries might substantially increase the risks to the environment. Thus, proper Environmental planning including preparation of Zoning Atlas[32] and Siting Policy[33] of Industries is an important planning tool for controlling pollution. As of December 2017, Zoning Atlas for only Bankura district was

[29] *Substantial reduction of the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination by 2030, upgradation of infrastructure of industries to adopt clean and environmentally sound technologies and industrial processes ensuring sustainable consumption and production patterns by 2020, achievement of environmentally sound management of chemicals and wastes reducing their release to air, water and soil minimising their adverse impacts on human health and the environment.*

[30] *Treatment of waste to remove its hazardous properties.*

[31] *The maximum, equilibrium number of organisms of a particular species that can be supported indefinitely in a given environment.*

[32] *Classifies the environment in a District and presents the pollution receiving potential of various sites /zones in the District and the possible alternate sites for industries through easy-to-read maps.*

[33] *Policy to set up industries in specific areas considering environmental aspects.*

prepared by the Council of Science and Technology, GoWB as a pilot project. **However, WBPCB had not prepared Zoning Atlas for the State as a whole or the remaining Districts or even for critically polluted areas like Haldia, Howrah and Asansol,** even though this would have acted as first step to prevent and control pollution.

In reply, the Department accepted (December 2017) that the Zoning Atlas of other districts had not been prepared.

(a) Siting Policy for industries

Ministry of Environment, Forest and Climate Change had issued[34] guidelines for formulating Environmental and Siting policy for industries to minimise the possible adverse effects on environmental resources and quality of life. The guidelines *inter-alia* required identification of ecologically[35] or otherwise sensitive areas on priority basis. These were to be avoided for setting up of certain industries. Besides, it recommended environmental criteria like (i) non-conversion of forest land and prime agricultural land, (ii) physiographic barrier between the industry and the township to be considered for approval of project sites.

The Siting Policy (Policy) for municipal areas of Kolkata, Howrah and Burdwan (Durgapur) was approved (June 2014) by DoE, GoWB and adopted by WBPCB in July 2014. The policy prohibited setting up of any Red category industry within municipal areas of Kolkata Metropolitan Area (KMA) and municipal areas of Burdwan district[36]. Diversification, modernization or expansion of existing Red Category industries situated within the municipal boundaries of KMA were to be dealt with on case to case basis. For that matter assessment of their environmental impact and pollution management proposals were to be taken into account. It was observed that Haldia industrial zone was not included in the policy even though CPCB had identified the zone as critically polluted area. **Audit further observed that the Policy did not identify any ecologically sensitive areas to be avoided while setting up the industries.**

In reply, the Department stated (December 2017) that the WBPCB strictly follows GoI's siting guidelines for industries and the siting policy of the State. However, the fact remains that Haldia, the critically polluted area as identified by the CPCB, was not considered in the siting policy of the State. Moreover, neither any ecologically sensitive area was identified nor it was considered in the siting policy.

In addition, Audit observed following irregularities in implementing the siting policy of the State:

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[34] *Available on the website of Ministry of Environment, Forest and Climate Change.*

[35] *Ecological and/or otherwise sensitive areas include religious and historic places, archaeological monuments, hill and beach resorts, coastal areas rich in mangroves, breeding grounds of specific species, estuaries, biosphere reserves, national parks, sanctuaries, natural lakes and swamps, tribal settlements, areas of scientific and geological interest, border area, airports, etc.*

[36] *Except Jamuria Industrial Estate.*

- Eveready Industries India Limited, a Red category industry, located within Municipal area of Kolkata, proposed (February 2013) for modification of its existing furnaces. WBPCB approved (April 2013) the modification proposal and granted (September 2014) Consent to Establish on the ground that the technology transfer will not increase the pollution load. Audit observed that the approval of WBPCB was not based on i) assessment of the carrying capacity of the location, ii) environmental impact and iii) environmental pollution management proposal for such activity. In reply, the Department stated (December 2017) that the proposal was approved considering 'no additional pollution load contribution'. However, the fact remains that the approval was granted by WBPCB only on the claim of the industry without verifying any document in support of its claim.

- According to Siting Policy of the State, Dyeing and Bleaching industries being Red category industries were prohibited from setting up units within the municipal areas of Kolkata (KMA). Pursuant to directions of National Green Tribunal (NGT), WBPCB had closed down (December 2014) 79 such units which did not have CTOs. It also identified (May 2015) 91 similar units (which had CTOs) which were found operating within the KMA. Audit observed that WBPCB had proposed to relocate all these 170 units to another place (Maheshtala) within KMA. This proposal was against the Siting Policy, as setting-up of these industries was prohibited in KMA. Furthermore, WBPCB proposed (May 2015) to the State Government for the area (Maheshtala) to be designated as an industrial estate with special consideration. **Audit further observed that the relocation had not taken place and those 91 units were continuing their operations in the prohibited area.** WBPCB did not follow proper environment management practices. As such, the whole purpose of the Siting Policy was defeated and these units continued to cause pollution, without consideration of the carrying capacity. Accepting the audit observation the Department, stated (December 2017) that the Government was in process of finding a suitable plot of land and preparing a detailed project report for the purpose of relocation of these industries. However, the Government could not succeed in finding a suitable plot of land even after lapse of more than two years.

(b) Action Plan for control of air pollution

In consequence to the violation of National Ambient Air Quality Standards (NAAQS 2009) by five cities[37] of the State, CPCB requested (August 2012) WBPCB to formulate a time bound action plan to control the air pollution in those cities. The Plan *inter alia* was to incorporate (i) inventorisation of the polluting industries (ii) control of industrial emissions ensuring compliance to standards and (iii) Round the clock vigilance to control clandestine emissions[38] *etc*. It was observed that WBPCB did not prepare any Action Plan for these cities till date (December 2017). As such, subsequent actions to control air pollution in these cities as per the National Ambient Air Quality Standards was not initiated.

CPCB again directed (July 2016) WBPCB to finalise the Action Plan within 45 days and to report the progress of implementation every six months. WBPCB

[37] *Asansol, Haldia, Durgapur, Howrah and Kolkata.*
[38] *Irregular releases of gases, mostly from industrial activities.*

(October 2016) prepared a draft Action plan only for Kolkata as against preparation of action plan for five cities, which was yet to be finalised. WBPCB also formed (October 2016) an Air Quality Management Team (AQMT) to finalise the Action Plan, review the implementation, *etc*. Audit, however, observed that the AQMT had not met since November 2016. As such, air pollution continued unabated and unchecked in these five cities.

In reply, the Department stated (December 2017) that Action Plans for the cities of Kolkata and Howrah were prepared based on the instructions of National Green Tribunal and are in the process of implementation. The reply was, however, not acceptable as WBPCB could not furnish the copy of the Action Plans though called for in January 2018. Further, the fact remains that Action Plans for the other three[39] cities were yet to be prepared.

Despite request by CPCB in August 2012 for preparation of an action plan for achieving NAAQS, WBPCB did not take action. CPCB again directed in July 2016 and fixed timelines for preparation of the Action Plan. Even then no action was taken. This repeated defiance of CPCB instructions indicated lack of seriousness in the efforts of the Government for controlling air pollution in the State.

2.4 Establishment of Environmental Compliance Assistance Centre (ECAC)

WBPCB engaged (August 2012) an agency for consulting services for development of Business Strategy and Plan for Environmental Compliance Assistance Centre (ECAC) in West Bengal. Objectives of ECAC were to assist the industries of the State by providing them information on environment compliance and related issues, legal requirements, technology options, financing opportunities and economic instruments. The centre would act as a bridge between the industries and the environmental regulators through capacity building for all stakeholders, awareness generation among general public on pollution prevention and publishing various technical and statistical reports.

The agency submitted its report in February 2014 to WBPCB which was forwarded (December 2014) to DoE, GoWB. As of December 2017, ECAC had not been established although WBPCP had accepted the report. No reason for non-establishment was found on records.

Even after lapse of more than three years, the report has not been acted upon. Considering the ever-changing nature and levels of environmental pollution as well as the technological advancements in the measures to be followed for prevention, control and monitor the pollution, this report runs the risk of becoming obsolete.

Hence, the objective of establishing a knowledge centre in order to provide assistance to the industrial units to comply with the environment issues could also not be achieved.

The Department did not furnish any reply to this audit observation.

[39] *Durgapur, Haldia and Asansol.*

2.5 Prevention of pollution through cleaner technology options

Clean Technologies are distinct and different from "end -of-pipe"[40] abatement technologies. It minimises the generation of waste in the production processes, rather than treating the wastes after generation. Furthermore, clean technologies are less intensive in using the raw materials and energy than conventional technologies, which rely on pollution abatement after generation.

During 2012-17, WBPCB had undertaken studies on two industrial sectors i.e. (i) Sponge Iron (ii) Tannery and Chrome Chemical. Further, it had taken up one professional exchange programme for the Dyeing and Bleaching industry for promoting cleaner technology options. These sectors had severely polluting industries causing air and water pollution. As per the records of WBPCB, about 1733 industries fall under these three sectors, which is approximately 32 *per cent* of total Red category units of the State. Audit observations relating to studies on clean technology undertaken by WBPCB are discussed below:

(a) Sponge Iron sector

WBPCB had undertaken (September 2012) a study of the Sponge Iron (SI) Industry sector in West Bengal through a consultant at a cost of ₹ 0.54[41] crore. The objective of the study was to explore the feasibility of clean technology options by replacing coal with clean fuel and considering the availability of clean fuel *i.e.* Coal Based Methane (CBM) in the State. The study was also to find out ways for environmental improvement in respect of emission control, water conservation, solid waste management, *etc.* for sponge iron industries.

According to the Study Report (February 2014), the primary cause for unmanageable pollution was (i) ineffectiveness of the air pollution control systems, (ii) short life of the kiln, (iii) inadequate kiln waste gas cleaning, (iv) inadequate water conservation efforts, *etc*. The study report recommended opting for CBM, phasing out of low capacity rotary kilns, industry initiative and institutional capacity building. WBPCB accepted (March 2014) the recommendations.

Further, WBPCB undertook (September 2012) a professional exchange programme in Sponge Iron sector to obtain information regarding implementation of clean technology measures in Gujarat and Maharashtra. The study report of this exchange programme *inter-alia* recommended that Coal based sponge iron units should be discouraged to control higher particulate emission. **Audit, however, observed that WBPCB had not taken adequate action for implementing the recommendations of these study reports.**

In reply, the Department stated (December 2017) that the Board was yet to receive any proposal for new gas based sponge iron units and CBM was not available in sufficient quantity in the State. Regarding implementation of the recommendations of the Study Report the Department stated that total 22 units in the State had installed Waste Heat Recovery facility so far. The reply was not tenable as during 2011-12 to 2015-16, the production of CBM in West Bengal rose from 79.106 to 389.423 MMSCM[42] *i.e.*, the State's share

[40] *Treating the wastes after generation at the point of discharge.*
[41] *Excluding Sales Tax.*
[42] *Million metric standard cubic metres.*

of India's total production expanded from 94 *per cent* to 99 *per cent*. Further, 369.857 MMSCM of CBM (39.12 *per cent* of production in 2015-16 and 2016-17) had to be flared up. Further, only 22 out of 591 industries has adopted the heat recovery process, showing inadequacy of the initiative.

(b) Tannery and Chrome Chemical sectors

WBPCB had undertaken (June 2012) a study of the Tannery and Chrome Chemical sector in the State through a consultant[43] at a cost of ₹ 0.42 crore. The consultant submitted the report in October 2014, which recommended some cleaner processing options[44] for preservation and processing of the raw materials. The study suggested cleaner technologies in i) post-tanning[45] and finishing[46], ii) energy conservation measures and iii) solid waste management. The study also surveyed existing production process and environment of five chrome chemical industries in the State. The study recommended industry specific actions for reducing pollution and achieving zero discharge. The study also laid out roadmaps for implementation of the recommendations.

Scrutiny of the records of WBPCB revealed that even after three years of submission of the study report, no action had been initiated. **As of July 2017, pollution in 628 tanneries' units operating in the State remained unabated.**

The Department stated (December 2017) that tanneries in the State were located in a cluster at Calcutta Leather Complex where Common Effluent Treatment Plant (CETP) and Common Chrome Recovery Units have been set up for treatment of industrial effluent. WBPCB had also directed Department of Micro Small and Medium Enterprises (MSME), West Bengal to put up a common hazardous waste treatment facility at the leather complex. The reply was not tenable as the study report after considering the existing CETP recommended to follow cleaner processing options for preservation and processing of raw materials and suggested industry specific actions for reducing pollution and achieving zero discharge.

(c) Textile Dyeing and Bleaching industrial sector

WBPCB had organised (March 2013) a professional exchange programme of Textile Dyeing and Bleaching industrial sector in Tirupur, Tamil Nadu to develop knowledge and overall capacity building of the regulatory bodies and industries. The study report of the programme suggested that (i) the system of water reuse, (ii) CETP in clusters run by cooperatives and (iii) management of waste water from these sectors in Tirupur had been quite effective. This should be emulated by the clusters of dyeing and bleaching sector in the State. **Audit observed that WBPCB had not taken any initiative for upgradation of effluent treatment system for overall environmental management following Tirupur model.** As a result, the preventive measures to combat pollution impact in 514 dyeing and bleaching industries could not be taken up.

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[43] *Central Leather Research Institute (CLRI), Chennai.*

[44] *Desalting, soaking using enzymes, soaking in drums, green fleshing, cleaner liming, Ammonium free liming, pickling and chrome tanning, etc.*

[45] *In post tanning, operations are performed to add certain properties to the leather products like water repellence.*

[46] *Finishing process enhances the appearance of the leather product like adding gloss and shine etc.*

In reply, the Department stated (December 2017) that initiative had been taken to identify a suitable plot of land through MSME for setting up a CETP for the dyeing and bleaching units in a cluster. However, the facts remain that even after four years of the study, the Department was yet to identify a land for setting up of a CETP.

Thus, two studies conducted through consultants by incurring an expenditure of ₹ 0.96 crore and two professional exchange programmes did not yield any benefit as the recommendations made in the study reports were not implemented. This made the expenditure wasteful.

2.6 Functioning of SEIAA and SEAC in prevention of pollution

As per the Environment Impact Assessment (EIA) Notification, 2006[47], all new projects under category 'B' including expansion, modernisation and change in product mix of existing projects require prior environmental clearance from SEIAA. The State Expert Appraisal Committee (SEAC) screens, scopes and appraises these projects before environment clearance. Both SEIAA and SEAC are constituted by MoEF & CC on the recommendation of GoWB.

During 2012-17, SEIAAs and SEACs were reconstituted three[48] times. Audit observed the following infirmities in the functioning of SEIAA/ SEAC:

DoE, GoWB notified (August 2010, December 2013 and March 2017) that the office of the Chief Environmnt Officer, DoE, GoWB, would act as the Secretariat of SEIAA. Office of Member Secretary of WBPCB would function as Secretariat of SEAC. Audit observed that neither DoE nor WBPCB had designated manpower or resources for the secretariat of SEIAA or SEAC.

The SEIAA and SEAC were to be reconstituted after every three years. Audit, however, observed that during the Audit period, SEIAAs and SEACs were constituted after a delay of 55 days, 185 days and 81 days. This was due to non-submission of credentials, certificate of non-conflict of interest, non-adherence to prescribed age criteria of the members *etc*. **Due to delay in constitution, the first meetings of SEIAA and SEAC were held up for three to nine months, and during these periods, SEIAA did not entertain any application for EC clearance.**

Records further revealed that SEIAA had convened 66 meetings to consider EC applications of 165 industrial projects, of which EC was granted to only 64 industrial units. Audit observed that, SEIAA had taken one to six years in granting ECs to 36 industrial units against the stipulated eight months.

2.7 Prevention of pollution through Environment Clearance process

As per section 4 of The EIA Notification 2006[49], an industry (project proponent) seeking EC had to apply in the prescribed form with a copy of pre-feasibility project report. After screening of the pre-feasibility project report, SEIAA determines whether the project requires an Environment Impact Assessment (EIA) Study. The projects which require EIA study are termed as Category B1

[47] *Notification No.J-11013/56/2004-IA-II (I) dated 14th September, 2006.*
[48] *June 2010, December 2013 and February 2017.*
[49] *S.O. No. 1533 dated 14 September 2006.*

projects and remaining projects are termed Category B2[50]. The objective of EIA is to foresee the potential environmental problems that would arise out of a proposed development and address them in the planning and design stage. In doing so it can enable the integration of environmental concerns and mitigation measures in project development.

SEAC determines the Terms of Reference on which a Category B1 project has to get the EIA study done by any accredited agency. Public Consultation[51] is the next step, which is conducted by WBPCB. Based on EIA study report and the Public Consultation, SEAC appraises the project and gives suitable recommendation to SEIAA for approval or rejection.

During 2012-13 to 2016-17, SEIAA had granted EC to 64 category 'B' industries Audit observed deviations from the laid down process of grant of EC clearance in respect of 24 cases to which EC was granted, as discussed below:

(a) As per EIA Notification 2006, the project proponent should provide to SEIAA, (i) the EIA study report by accredited[52] consultants, (ii) an Environmental Management Plan (EMP) and (iii) a pollution mitigation programme to meet environment standards. It was observed that in two Cement projects[53] under B1 category, SEIAA had accorded EC based on EIA report prepared by the project proponents itself. Besides, no EMP or pollution mitigation measures were furnished by the project proponents. However, clearance was granted. SEIAA also exempted the proponents from conducting public hearing of the projects although they were required to conduct public hearing as per section 7(III) of EIA Notification 2006.

(b) As per EIA Notification 2006, all projects located within 10 km of the Inter-State boundaries, critically polluted areas, *etc*., would be treated as Category 'A' and to be approved by MoEF & CC only. Audit, however, observed that SEIAA, in disregard to the EIA Notification 2006, granted EC to eight projects[54] which were located within 10 km of the Inter-State boundaries.

(c) Mining of minor minerals causes major environmental problems including (i) ground and surface water pollution, (ii) loss of productivity of land, (iii) air and noise pollution, (iv) disturbance of soil strength and (v) deforestation. As per EIA Notification 2006, EC for mining of minor minerals would be accorded based on pre-feasibility report of the project, validity of lease tenure and approved plan. However, Audit observed that SEIAA, in six mining[55] projects, granted (March 2015 to July 2016) ECs where the respective lease tenures had already expired.

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[50] *Do not require environment clearance; hence do not go through the EIA process but are approved/rejected based on the pre-feasibility report submitted by the project proponent.*

[51] *Public Consultation is the process by which the concerns of local persons and others to be affected by the project are ascertained and taken into account in the project design.*

[52] *Accredited by Quality Council of India or National Accreditation Board for Education and Training.*

[53] *M/s Kanjakura Gram Panchayat and Khaitan Cement Pvt. Limited.*

[54] *Shakambhari Ispat & Power Ltd, Md Bazar Stone Crusher, Kamal Stone Quarry, Khan Stone Quarry, Tapas Kumar Dutta & Guljar Mallick, Aryans Stone Quarry, Jayanti Stone Quarry and Saran Alloys Pvt. Ltd.*

[55] *Senera Granite Mine, Kadampur Stone Mine, Paschim Bero Granite Mine, Balliapur Stone Quarry, Fire Clay Mine by WBMDTC and Baradihi Quartz Mine.*

(d) As per EIA Notification 2006, category 'B' industries engaged in production of chemicals, bulk drugs, metallurgical[56] products located within a notified industrial area would be treated as Category 'B-2', which were exempted from conducting public hearing. Audit observed that SEIAA exempted six category 'B' projects[57] from conducting public hearing even though these projects were not located in any notified industrial area.

(e) Cement and sponge iron industries are among the major polluting industries, which also affect human health adversely. As per EIA Notification 2006, cement-grinding units would fall under Category 'B-2' industries and exempted from public hearing subject to the condition that transportation of raw material and finished products are primarily (90 *per cent)* transported through railways. Audit observed that SEIAA had granted EC to two[58] cement industry although the concerned industry were not connected through railway.

Out of total 64 projects, in 24 projects (38 *per cent*) ECs were granted by SEIAA in violation of the conditions of the EIA Notification 2006. SEIAA failed to ensure compliance of the conditions of the EIA effectively as a tool for prevention of industrial pollution in the State. As such, considering environment consequences of these industrial activities, SEIAA should have been more vigilant while granting EC for compliance of EIA.

The Department accepted audit's observation.

Thus, issuance of ECs by the SEIAA to the private sector industries, without ensuring the fulfilment of stipulated conditions indicate disregard of the environmental concerns by the authority. A vigilance angle in such favours cannot be ruled out.

2.8 Prevention of pollution through the mechanism of 'Consent to Establish'

As per Air and Water Act[59], Industries discharging trade effluent into water, stream, well, sewer or on land are required to obtain Consent to Establish (CTE) from WBPCB for establishment of any new unit or before carrying out expansion/ modernisation of any existing unit.

Audit observed that WBPCB did not have any centralised database of industries, which had already obtained CTEs. As such, WBPCB was unaware of whether any industry which had received EC was operating without a CTE. CTE was an important tool to enforce the stipulations contained in the ECs for abatement of water and air pollution. Absence of any centralised database of CTE would affect the pollution prevention and monitoring mechanism.

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[56] *Ferrous and non-ferrous.*

[57] *SSB Chemicals Industries, West Bengal Chemical Industries Ltd, Subham Oils & Resins Ltd, Fresenius Kabi Oncology, Reform Metalics and Gajanan Iron Pvt Ltd.*

[58] *M/s. Icore Super Cement Pvt. Ltd. and Sri Shankar Suwan Estate Pvt. Ltd.*

[59] *Under Section 21 of The Air (Prevention and Control of Pollution) Act 1981 and Section 25/26 of Water (Prevention and Control of Pollution) Act, 1974 as amended.*

Test check of 51 CTE files in four[60] regional offices revealed that **none of the 51 industries had furnished all the prescribed documents; however, the CTEs were issued to them.** These are detailed in **Table No.2.1.**

Table 2.1 : List of documents not furnished by industries

Sl.No.	Number of industries	Documents not furnished
1.	20	Project reports
2.	15	(a) List of machineries (b) Details of emission, effluent and solid waste management plan
3.	11	Details of capital investment
4.	6	Land documents
5.	5	Copy of trade licenses
6.	44	Road map/Route plan
7.	22	Site Plan

However, all these industries were accorded CTEs. WBPCB, however, failed to use the CTE as a tool for the prevention and monitoring of industrial pollution. As a result, mechanism of CTE for prevention of pollution was defeated.

In reply, the Department stated (December 2017) that the audit observation regarding CTE applications was noted and would act accordingly.

[60] *Salt Lake, Asansol, Durgapur and Haldia.*