ANNUAL REPORT

2017-2018

West Bengal Pollution Control Board

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West Bengal Pollution Control Board
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ডঃ কল্যাণ রুদ্র
চেয়ারম্যান
পশ্চিমবঙ্গ দূষণ নিয়ন্ত্রণ পর্ষদ
(পরিবেশ দপ্তর, পশ্চিমবঙ্গ সরকার)
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FOREWORD

This **Annual Report** of the West Bengal Pollution Control Board for the financial year of **2017-18,** is a comprehensive report describing all the important regulatory activities, orders by Hon'ble National Green Tribunal, environmental campaigns including National Green Corps Programmes and other relevant activities, achievements, different types of programmes and functions performed by the State Board during the aforesaid period. This report contains fifteen (15) chapters and seven (7) annexures, which provide sufficient relevant information in a descriptive manner, necessary data in tabular and graphical forms and photographs focussing on the State Board's multidimensional efforts, like, the procedure and status of issuing Environmental Clearance, management of different classified wastes, industrial and automobile pollution control measures, monitoring of ambient air quality, water quality and noise level, regulatory activities, legal matters, handling of public complaints regarding environmental matters and RTI issues, externally aided projects, various environmental awareness programmes, a number of new significant initiatives etc. throughout the year. So, we must say that the State Board's **Annual Report' 2017-18** is a very significant and resourceful document for the students, researchers and environmentalists especially for the availability of the air and water quality data of West Bengal.

The compilation of the data for preparation and timely publication of this Annual Report was undoubtedly a challenging task. Our team has given all their sincere efforts and devoted a lot of time to take up the challenge and I am very happy to say that they have achieved the target successfully. I further heartily appreciate them for this impressive job and wish them all the best for continuous improvement in future.

(Kalyan Rudra)

About the Annual Report

The Annual Report of the West Bengal Pollution Control Board during the financial year 2017-2018 is a compact and detail informative report. In its first chapter, it describes about the Board - its constitution, composition, statutory mandates, infrastructure and it's functional structure. The remaining chapters elaborates the activities (including necessary data and information) performed by the State Board in various environmental aspects during the period.

Contents

Annexures

Chapter- 1

ABOUT THE WEST BENGAL POLLUTION CONTROL BOARD

1.1 Constitution of the Board

The West Bengal Pollution Control Board was constituted by the Government of West Bengal in the year 1974 under the first federal environmental legislation of the country, the 'Water (Prevention and Control of Pollution) Act'. The West Bengal Pollution Control Board is the statutory authority responsible for abatement and control of environmental pollution within the territorial jurisdiction of the state of West Bengal. During the subsequent years a number of environmental regulations on different environmental issues were promulgated by the Indian Parliament and the State Boards of different states were given the responsibilities to implement those regulations in their respective jurisdictions. The major environmental Acts and Rules being implemented by the State Board are mentioned below.

- **The Water (Prevention and Control of Pollution) Act, 1974, as amended**

This was the first federal environmental legislation of the country, enacted for prevention and control of water pollution. The Central and the State Pollution Control Boards were constituted under this Act for its implementation to implement the Act. The Act provides the State Pollution Control Boards necessary regulatory powers for prevention and control of water pollution from point sources and also to maintain and restore wholesomeness of the water.

- **The Air (Prevention and Control of Pollution) Act, 1981, as amended**

This Act empowered the State Pollution Control Boards for prevention, control and abatement of air pollution. This Act also empowered the State Pollution Control Boards to ensure emission of various gaseous pollutants from different point and non-point sources within the prescribed standards.

- **The Environment (Protection) Act, 1986, as amended**

This umbrella Act was introduced to protect and improve the environment on a holistic basis with a necessary legal framework for ensuring the same. The Act also provides the Government of India the power to notify any Rules, as felt necessary, for protection and improvement of the environment. Some major environmental Rules, as mentioned below, were subsequently notified by the Government of India under this Act.

- **The Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016**

These Rules were notified to ensure safe storage, transport, treatment and disposal of various categories of hazardous wastes specifically mentioned in the Rules. Under the provisions of these Rules, the occupier of different activities generating hazardous wastes becomes legally responsible for taking all practical steps to ensure proper handling and disposal of such wastes.

- **The Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989, as amended**

These Rules provide the State Pollution Control Boards and some other Government Departments necessary power to ensure that various hazardous chemicals, with their respective threshold limits, are manufactured, imported, stored and used in an environmentally safe manner.

- **The Biomedical Waste Management Rules, 2016.**

These Rules were formulated for environment friendly and safe management and handling of Bio-medical wastes generated from different health care facilities.

- **The Plastic Waste Management Rules, 2016.**

These Rules were introduced to ensure recycling of plastic wastes in an environmentally safe manner without creating any environmental problem. It also imposed certain restrictions on the manufacture and use of recycled plastic carry bags and containers.

- **The Solid Waste Management Rules, 2016.**

Under these Rules the duties of different stakeholders, who are legally responsible for ensuring safe management and handling of municipal solid wastes by proper transport, treatment and disposal of such wastes as per the provisions of the rule, have been mentioned.

- **The Noise Pollution (Regulation and Control) Rules, 2000, as amended**

These Rules intend to regulate and control noise-producing and noise-generating sources.

- **The Ozone Depleting Substances (Regulation and Control) Rules, 2000**

These Rules were framed in compliance with the international obligations for gradual phasing out of various Ozone Depleting Substances (ODS) and to provide the major user of ODS to access non-ODS technologies, using international funding.

- **The Batteries (Management and Handling) Rules, 2001, as amended**

These Rules were prepared on the concept of extended producer responsibility, ensuring inter-alia that the generator of batteries takes the responsibility of environmental friendly recycling of used batteries.

- **The E-waste (Management) Rules, 2016.**

These Rules were introduced on the concept of extended producer responsibility to regulate the management and handling of all types of wastes of electric or electronic equipment, whole or in part or rejects from their manufacturing and repair process, which are intended to be discarded.

- **The Construction and Demolition Waste Management Rules, 2016**

The intention of the Rule is to improve the collection, segregations, recycling, treatment and disposal of solid waste in an environmentally sound manner. The Rule Emphasis on the roles and accountability of waste generators and various stakeholders. Thrust is given for segregation, recovery, reuse, recycle at source, address in detail the management of construction and demolition waste.

- **Environmental Impact Assessment Notification, 2006, as amended**

The notification was first published in 1994, necessitating a group of listed activities requiring environmental clearance from the Ministry of Environment and Forests, Government of India. In 1997, the process of public consultation was made mandatory for the listed activities for obtaining environmental clearance. Major restructuring of this notification was done by the Ministry of Environment and Forests, Government of India in the year 2006, whereupon the process was made simpler and unambiguous as also avoiding unnecessary delay in getting environmental clearance for the listed activities. Restructuring of the notification provides formation of State Level Environment Impact Assessment Authority (SEIAA) in addition to the Central Authority and both these authorities were provided with the power to consider the environmental clearance for specified projects as listed in this notification depending on the spatial and temporal impact of such activities.

- **The Public Liability Insurance Act, 1991, as amended**

The Act ensured that chemical industries, using various hazardous chemicals, provide the necessary funding for meeting the financial implication of any chemical accident arising out of manufacture, storage, usage etc. of listed hazardous chemicals. The funds are to be kept with the insurance authority. The district authorities have been empowered to take decisions to compensate the public affected due to any possible chemical accident.

1.2 Composition of the Board

As per the section 4 of the Water (Prevention and Control of Pollution) Act, 1974 and section 5 of the Air

(Prevention and Control of Pollution) Act, 1981, the State Board is comprised of the Chairman, the Member Secretary and fourteen other members nominated by the State Government. The members of the Board include the representatives of government, local authorities and state-controlled corporations and also some technical experts. The composition of the West Bengal Pollution Control Board is as follows:

Chairman

Dr. Kalyan Rudra

Representatives of the State Government

Principal Secretary, Department of Environment, Govt. of West Bengal
Principal Secretary, Department of Commerce and Industries, Govt. of West Bengal
Additional Chief Secretary, Department of Urban Development, Govt. of West Bengal
Principal Secretary, Department of Transport, Govt. of West Bengal
Additional Chief Secretary, Department of Science and Technology, Govt. of West Bengal

Representatives of the Local Authorities

Mayor, Kolkata Municipal Corporation
Chairman, Barasat Municipality
Chief Executive Officer, Asansol Durgapur Development Authority
Chief Executive Officer, Kolkata Metropolitan Development Authority

Representatives of the Technical & Scientific Community

Prof. Sudarshan Neogi,
Dr. Bhaskar Chakraborty
Prof. (Dr.) Debashis Chatterjee

Representatives of the State-controlled Corporations

Principal Chief Conservator of Forests, Directorate of Forests, Govt. of West Bengal
Chairman & Managing Director, West Bengal Power Development Corporation Ltd.

Member Secretary

Dr. Subrat Mukherjee, IFS

1.3 Functions of the Board:

The State Board is primarily responsible to implement the provisions of various environmental regulations within the state of West Bengal. Section 17 of both the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981 has clearly declared the legally mandated responsibilities of the State Pollution Control Boards, which are summarized below:

- To plan a comprehensive program for the prevention, control or abatement of pollution of streams and wells and air pollution in the state and to secure the execution thereof;
- To advise the State Government on any matter concerning the prevention, control or abatement of water and air pollution;
- To collect and disseminate information relating to water and air pollution, and the prevention, control or abatement thereof;
- To collaborate with the Central Board in organizing the training of persons engaged or to be engaged in programmes relating to prevention, control or abatement of water and air pollution and to organize mass education programmes relating thereto.

- To inspect sewage or trade effluents, works and plants for the treatment or sewage and trade effluents and to review plans, specifications or other data relating to plants set up for the treatment of water, works for the purification thereof and the system for the disposal of sewage or trade effluents or in connection with the grant of any consent as required by the Water Act;
- To inspect, at all reasonable times, any control equipment, industrial plant or manufacturing process and to give, by order, such directions to such persons as it may consider necessary to take steps for the prevention, control or abatement of air pollution;
- To inspect air pollution control areas at such intervals as it may think necessary, assess the quality of air therein and take steps for the prevention, control or abatement of air pollution in such areas;
- To encourage, conduct and participate in investigations and research relating to problems of water pollution and prevention, control or abatement of water pollution;
- To lay down, modify or annul effluent standards for the sewage and trade effluents and for the quality of receiving waters (not being water in an inter-State stream) resulting from discharge of effluents and to classify waters of the state;
- To lay down standards of treatment of sewage and trade effluents to be discharged into any particular stream taking into account the minimum fair weather dilution available in that stream and the tolerance limits of pollution permissible in the water of the stream, after the discharge of such effluents;
- To lay down effluent standards to be complied with by persons while causing discharge of sewage or sullage or both and to lay down, modify or annul effluent standards for the sewage and trade effluents;
- To lay down, in consultation with the Central Board and having regard to the standards for the quality of air laid down by the Central Board, standards for emission of air pollutants into the atmosphere from industrial plants and automobiles or for the discharge of any air pollutant into the atmosphere from any other source whatsoever not being a ship or an aircraft:

  Provided that different standards for emission may be laid down under this clause for different industrial plants having regard to the quantity and composition of emission of air pollutants into the atmosphere from such industrial plants;
- To evolve economical and reliable methods of treatment of sewage and trade effluents, having regard to the peculiar conditions of soils, climate and water resources of different regions and more specially the prevailing flow characteristics of water in streams and wells which render it impossible to attain even the minimum degree of dilution;
- To evolve methods of utilisation of sewage and suitable trade effluents in agriculture;
- To evolve efficient methods of disposal of sewage and trade effluents on land, as are necessary on account of the predominant conditions of scant stream flows that do not provide for major part of the year the minimum degree of dilution;
- To make, vary or revoke any order for the prevention, control or abatement of discharge of waste into streams or wells and requiring any person concerned to construct new systems for the disposal of sewage and trade effluents or to modify, alter or extend any such existing system or to adopt such remedial measures as are necessary to prevent control or abate water pollution;
- To advise the State Government with respect to the location of any industry the carrying on of which is likely to pollute a stream or well and with respect to the suitability of any premises or location for carrying on any industry which is likely to cause air pollution;

- To perform such other functions as may be prescribed or as may, from time to time, be entrusted to it by the Central Board or the State Government

Besides implementing its mandated activities, the State Board can go beyond its regulatory role and act as a facilitator to solve various long standing environmental problems by judicious mix of command and control mechanism with economic instruments.

1.4 Infrastructure of the Board

Presently, the State Board functions from its Head Office-cum-Central Laboratory at Kolkata, two (2) Circle Offices (C.O.), eleven (11) Regional Offices and five (5) Regional Laboratories spread over different locations within the state. Most of the Regional Laboratories (R. Lab.) are located along with the Regional Offices (R.O.).

The Board has a sanctioned staff strength of 312 posts, which include engineering, scientific, legal, general administration and accounts. The details of staff strength are given in **Annexure-I.** The details of different offices and laboratories of the Board are given in Table 1.1.

Table 1.1: Location of Offices and Laboratories of the Board

Offices	
Head Office Paribesh Bhawan, 10A, Block LA, Sector III, Bidhannagar, Kolkata – 700 106 Tel: (033) 2335-0261, 2335-0663, 2335-6731, 2335-7428, 2335-8211, 2335-8861, 2335-9088 Fax.: (033) 2335-8073, 2335-2813, 2335-5272 Office of the Chairman; Office of the Member Secretary; Planning Cell, Operation & Execution Cell; Environmental Impact Management Cell; Operation & Maintenance Cell; Waste Management Cell; Air Quality, Noise Monitoring and Training Cell; Public Grievance Cell, Legal Cell; RTI Cell; Public Relation Cell; Publicity and Awareness Cell; National Green Corps Cell; Administration and Establishment Cell; Accounts Cell; Computer Cell; Central Library and Central Laboratory.	
Camac Street Circle Office KIT Building, (1st Floor), 247, Deshpran Shasmal Road, Tollygunge, Kolkata-700033 Tel.: (033) 2417 0270/0250 Telefax: (033) 2282-1449	**Kankinara Circle Office** Panpore More, Kalyani Expressway, Vill. Panpur, P.O. Narayanpur, 24-Parganas (N) – 743 126. Tel.: (033) 2502 1188 Telefax: (033) 2580 3408
Camac Street Regional Office 'Minority Bhawan', 5th Floor, Alipore, Kolkata- 700027. Tel.: (033) 2448 5554 Telefax: (033) 2448 5553	**Salt Lake Regional Office** Paribesh Bhawan, 10A, Block LA, Sector III, Bidhannagar, Kolkata – 700 106. Tel.: (033) 2335 0663
Alipore Regional Office KIT Building, (1st Floor), 247, Deshpran Shasmal Road, Tollygunge, Kolkata-700033 Tel No.: (033) 2417 0235 Telefax: (033) 2417 0121	**Howrah Regional Office** 'Minority Bhawan', 5th Floor, Alipore, Kolkata- 700027. Tel.: (033) 2448-2219, 2220
Barrackpore Regional Office Panpore More, Kalyani Expressway, Vill. Panpur, P.O. Narayanpur, 24-Parganas (N) – 743 126. Telefax: (033) 2580-0573	**Hooghly Regional Office** Himalaya Bhawan, Delhi Road, Dankuni, Hooghly – 712 103. Telefax: (033) 2659 0957

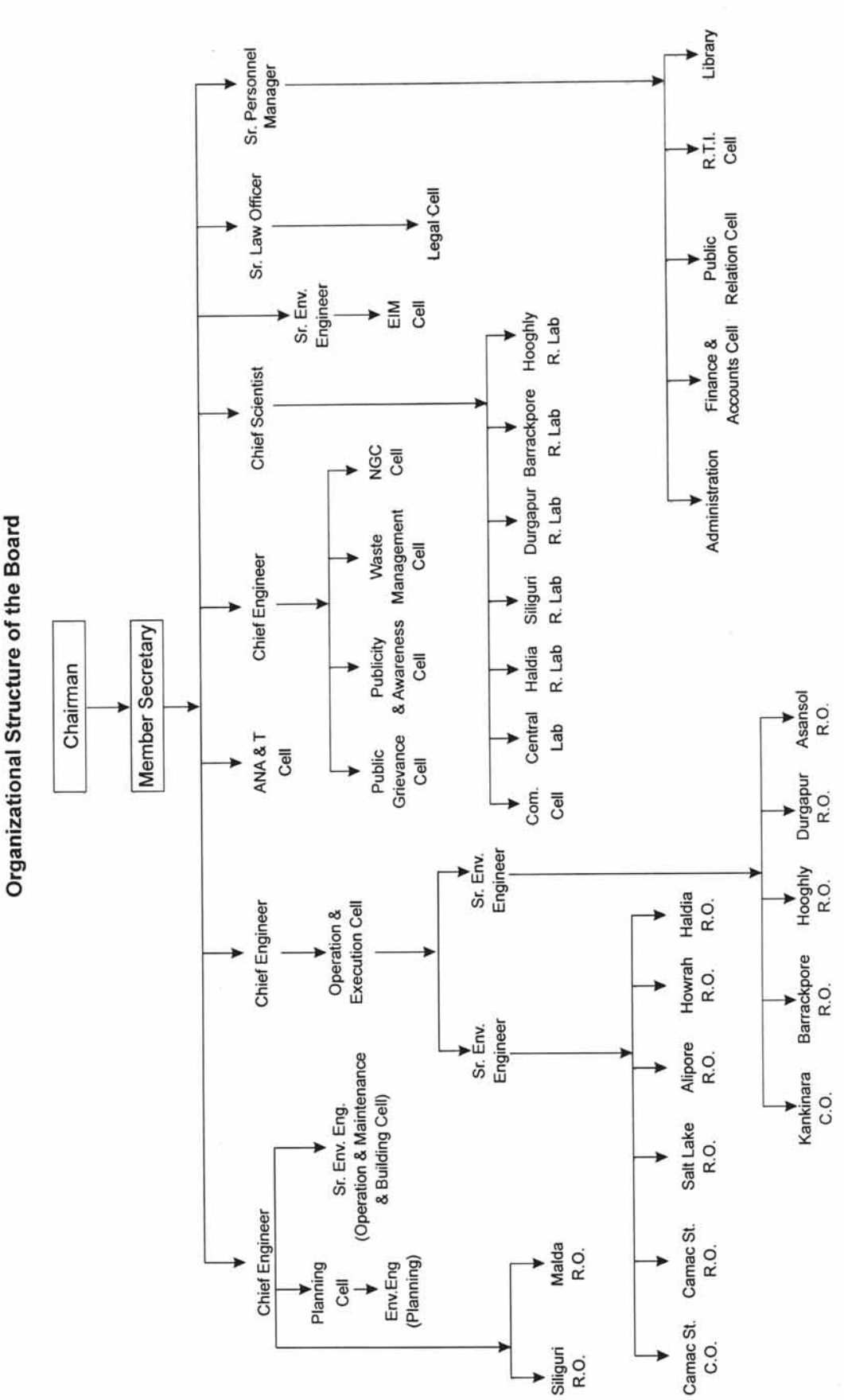
Durgapur Regional Office Sahid Kshudiram Sarani, City Centre, Durgapur, Paschim Bardhaman – 713 216. Tel.: (0343) 254-6708 Telefax: (0343) 254-4915	**Asansol Regional Office** ADDA Commercial Market, 2nd Floor, Opposite Asansol Fire Station, G. T. Road, Asansol, Paschim Bardhaman–713 301. Telefax: (0341) 230-5407
Haldia Regional Office Super Market Building, 3rd Floor, Durgachak, Haldia, Purba Medinipur – 721 602. Telefax: (03224) 274 190	**Malda Regional Office** Paribesh Bhaban, Vill. – Abhirampur, P.O.–Mokdumpur, P.S.–English Bazar, Malda – 732 103. Tel.: (03512) 223-449
Siliguri Regional Office Paribesh Bhaban, Paribahan Nagar, P.O. - Matigara, Siliguri, Darjeeling – 734 010. Tel.: (0353) 257-1115 Telefax: (0353) 257 1113	**Central Laboratory** Paribesh Bhawan, 10A, Block LA, Sector III, Bidhannagar, Kolkata – 700 098. Tel.: (033) 2335-5953
Barrackpore Regional Laboratory Panpore More, Kalyani Expressway, Vill. Panpur, P.O. Narayanpur, 24-Parganas (N) – 743 126. Telefax No. (033) 2580 1189	**Hooghly Regional Laboratory** Himalaya Bhawan, Delhi Road, Dankuni, Hooghly – 712 103. Telefax No. (033) 2659 0957 Presently functioning from Barrackpore Regional Lab.
Durgapur Regional Laboratory Sahid Kshudiram Sarani, City Centre, Durgapur, Paschim Bardhaman – 713 216. Telefax No. (0343) 254 3525	**Haldia Regional Laboratory** Block-05 at 40 Flats Complex, Adjacent to Priyambada Housing Complex, Basudevpur, P.O. – Khanjanchak, Haldia, Purba Medinipur – 721 602. Telefax No. (03224) 276 847
Siliguri Regional Laboratory WEBEL IT Park, Paribahan Nagar, P.O. Matigara, Siliguri, Darjeeling – 734 010. Tel.: (0353) 257-1115 Telefax No. (0353)257-1113	

Table- 1.2: District/ Area of jurisdiction of different Regional Offices of the Board

Regional Offices	District/Area of Jurisdiction
Camac Street Regional Office 'Minority Bhawan', 5th Floor, Alipore, Kolkata- 700027.	KMC (Ward no. 21-28, 36-88, 90-93, 105-107, 133-141), Areas under Kolkata Port Trust and Fort William
Salt Lake Regional Office Paribesh Bhawan, 10A, Block LA, Sector –III, Bidhannagar, Kolkata – 700 106	KMC (Ward no. 1-20, 29-35, 56-58, 108-109) Parts of South 24 Parganas district (Police Station: Sonarpur, Baruipur, Bhangar)
Alipore Regional Office KIT Building (1st Floor), 247 Deshpran Shasmal Road, Tollygunge, Kolkata-700 033	KMC (Ward no. 89, 94-104, 110-132) Parts of South 24 Parganas district (Police Station: Thakurpukur, Metiaburuz, Regent Park, Mahestala, Budge Budge, Bishnupur, Canning Gosaba, Basanti, Joynagar, Kultali), Police Stations under Diamond Harbour Sub Division.

Regional Offices	District/Area of Jurisdiction
Howrah Regional Office 'Minority Bhawan', 5th Floor, Alipore, Kolkata- 700027.	Howrah District
Haldia Regional Office Super Market Building, 3rd Floor, Durgachak Haldia , Purba Medinipur – 721 602	Purba Medinipur District, Paschim Medinipur District, Jhargram District.
Barrackpore Regional Office Panpur More, Kalyani Expressway, Vill. Panpur, P.O. Narrayanpur, Dist. 24 PGS (N), Pin. 743126	Nadia District, Parts of North 24 Parganas District [excepting areas of all the Police Station of Bidhannagar, Lake Town, Baranagar, Airport, Dum Dum, Rajarhat, Nimta and Minakha – I & II blocks]
Hooghly Regional Office Himalaya Bhawan, Delhi Road, Dankuni, Hooghly	Hooghly District.
Durgapur Regional Office Sahid Kshudiram Sarani, City Centre Durgapur, Paschim Bardhaman – 713 216	Purba Bardhaman District, Paschim Bardhaman (except Asansol subdivision) District, Birbhum District, Bankura District.
Asansol Regional Office ADDA, Commercial Market, 2nd Floor, G.T. Road, Opp. to Asansol Fire Station, Asansol, Burdwan	Asansol subdivision in Paschim Bardhaman District, Purulia District.
Malda Regional Office Paribesh Bhaban, Vill.- Abhirampur, P.O.- Mokdumpur, P.S. English Bazar Malda – 732 103	Uttar Dinajpur District, Dakshin Dinajpur District, Murshidabad District, Malda District.
Siliguri Regional Office Module-1E, Webel IT Park, Paribahan Nagar, P.O. Matigara, Siiliguri, Dist.-Darjeeling, Pin – 734 010	Darjeeling District, Jalpaiguri District, Alipurduar District, Cooch behar District, Kalimpong District.

1.5 Functional Structure of the Board



Chapter - 2

EIA NOTIFICATION, 2006 AND ENVIRONMENTAL CLEARANCE PROCEDURE – ROLE OF WEST BENGAL POLLUTION CONTROL BOARD

2.1 Introduction

The Environmental Impact Assessment procedure for large industrial / developmental projects was thoroughly restructured in 2006 through issuance of Notification S.O. 1533 (E) on 14 September, 2006 by the Ministry of Environment & Forests (MoEF), New Delhi. Principal objective of this restructuring of EIA procedure was to decentralize the process from National level to State level and also to bring transparency and speed in the mode of disposal of Environmental Clearance applications. The Ministry has amended the original notification from time to time to streamline and upgrade the process of issuance of Environmental Clearance.

As per EIA Notification- 2006 and its amendments, the West Bengal Pollution Control Board (WBPCB) has been playing a very important role in conducting Public Hearings and also in functioning of SEIAA-SEAC for State Level Environmental Clearance procedure, which is elaborated in the following two sections of this chapter:

2.2 Public Consultation Procedure

❖ **The procedure followed in West Bengal between April, 2017 – March, 2018**

The West Bengal Pollution Control Board conducted twenty six (26) numbers of public hearings during April, 2017 to March, 2018. Out of 26 no. of projects, 15 no. of projects were Category 'A' projects and 11 no. of projects were Category 'B' projects. The sector wise break-up is provided in the following table.

Table 2.1: Public Hearing conducted by the WBPCB during the period from 01st April, 2017 to 31st March, 2018

Sl. No.	Name of the Unit	Category	Proposed project for which public hearing to be conducted	PH held on
1.	Medicare Environmental Management Pvt. Ltd.	B	Common Biomedical Waste Treatment Facility at Mouza – Gopalpur, PS–Duttapukur, Dist–North 24 Parganas	20.04.2017
2.	BRGD Ingot Pvt. Ltd.	A	Expansion of Sponge Iron Plant (1x350 TPD Kiln), along with 12 MW CPP at Vill – Palitpur, PO & Mouza – Mirzapur, PS & Dist – Burdwan.	21.04.2017
3.	Medicare Environmental Management Pvt. Ltd.	B	Common Biomedical Waste Treatment Facility at Illuabari Industrial Estate of WBSIDC, Dist – North Dinajpur.	03.05.2017
4.	Kolkata Port Trust	A	Redevelopment of Cargo Handling Facilities at outer terminal (near 2nd Oil Jetty) at Haldia Dock Complex, Kolkata Port, Haldia, Dist – Purba Medinipur.	16.05.2017
5.	Haldia Petrochemicals Limited	A	Expansion of existing ethylene capacity, along with new product diversification, at Tehsil Sutahata – I, Haldia, Dist – Purba Medinipur.	25.05.2017
6.	Purulia Metal Casting Pvt. Ltd.	A	Mini Blast Furnace (1x65 m3) and Sinter Plant (1x12 m2) at Vill – Bongabari, PO – Vivekanandanagar, Dist – Purulia	25.05.2017

Sl. No.	Name of the Unit	Category	Proposed project for which public hearing to be conducted	PH held on
7.	OCL India Limited.	B	Expansion of existing Cement Grinding Plant from 1.35 MTPA to 4.0 MTPA at Vill – Kulapachuria, PO – Gopaisal, PS – Salboni, Dist. – Paschim Medinipur.	26.05.2017
8.	Super Smelters Ltd.	A	Expansion cum modification of 0.85 MTPA Integrated Steel Plant with 184 MW CPP at Jamuria Industrial Estate in Vill – Ikra, PO – Mondalpur, Dist – Paschim Bardhaman.	30.06.2017
9.	BMA Stainless Ltd.	A	Expansion of Steel Plant at Vill – Debipur, PO – Kalyaneshwari, Dist – Paschim Bardhaman.	21.07.2017
10.	Indian Oil Corporation Ltd.	B	Additional installation of 2 nos. 900 MT mounded bullets for storage of LPG within existing LPG bottling plant at Budge Budge, Dist– 24 Parganas (South).	10.08.2017
11.	Rashmi Metaliks Limited Limited	A	Expansion of Ductile Iron Pipe Plant (2,00,000 TPA to 5,50,000 TPA) at Vill – Gokulpur, PO – Shyamraipur, Dist. – Paschim Midnapur.	29.08.2017
12.	Ma Amba Sponge Iron Limited	A	expansion of existing Steel Plant at Vill – Jemua, PO – Mejia, Dist – Bankura	12.09.2017
13.	Indian Oil Corporation Limited (Pipelines Division)	A	Laying 18" diameter, 535 km long Haldia-Barauni Pipeline through Eco-Sensitive Zones of Wildlife Sanctuaries in Birbhum District.	21.09.2017
14.	Indian Oil Corporation Limited (Pipelines Division)	A	Laying 18" diameter, 535 km long Haldia-Barauni Pipeline through Eco-Sensitive Zones of Wildlife Sanctuaries in Purba Bardhaman District.	12.10.2017
15.	KIC Metaliks Limited	A	Expansion of Pig Iron Plant (from 0.21 MTPA to 0.587 MTPA), Integrated Steel Plant at Raturia Industrial Area, Angadpur, Durgapur, Dist – Paschim Bardhaman.	17.11.2017
16.	Shivam India Limited	B	Expansion of 4x15 Tonnnes Induction Furnaces with Ladle Refining Furnace and Continuous Caster and 180000 Tonnes/ annum Rolling Mill at Raturia, Angadpur, Dist – Paschim Bardhaman.	28.11.2017
17.	Sri Siddhi Vinayak Paper Mills Pvt. Ltd.	A	Modernization and expansion of 20 TPD paper mill to 40 TPD, including bleaching of matching capacity at Vill – Sukhani, Tehsil – Rajganj, Dist – Jalpaiguri, West Bengal.	08.12.2017
18.	IMC Limited	B	Setting up of storage tank terminal of total onsite storage capacity 18496 KL at Budge Budge, Kolkata Port Trust Land, Dist – 24 Parganas (South).	08.12.2017

Sl. No.	Name of the Unit	Category	Proposed project for which public hearing to be conducted	PH held on
19.	BNM Organics Pvt. Ltd.	B	Expansion for production of API's and Fine Chemicals at Mouza & Vill–Sarmastapur, PO – Malancha Mahinagar, PS–Sonarpur, Dist – 24 Parganas (South).	08.12.2017
20.	Supershakti Metaliks Pvt. Ltd. (Formerly Super Smelters Ltd.)	B	Expansion of 45000 TPA TMT bar and 45000 TPA billets to additional 45000 TPA TMT bar and 90000 TPA Hd wire rods at existing plant premises, Kanjilal Avenue, Durgapur, Dist – Burdwan, PIN – 713215.	29.01.2018
21.	GreenTech Environ Management Pvt. Ltd.	B	Common Biomedical Waste Treatment Facility at JL No. 139, Mouza – Saragarah, Dist – Bankura	01.02.2018
22.	Amit Ferro Alloys & Steel Pvt. Ltd.	B	Installation of Induction Furnace (4x15 T) of capacity 150000 TPA Hot Rolling Mill at Plasto Steel Park, Vill – Ghutgoria, PS – Barjora, Dist – Bankura.	06.02.2018
23.	The West Bengal Power Development Corporation Ltd.	A	Barjora North Coal Mine project at Vill - Tikargram, Saharjora, Ghutgoria, Manohar, Baguli, Barapukhuria, Barjora Block, Bankura.	16.02.2018
24.	Oil & Natural Gas Corporation Limited	A	Development plan of Raniganj North CBM Block in West Bengal for Dist – Paschim Bardhaman.	27.02.2018 (for Dugapur Subdivision)
25.	Oil & Natural Gas Corporation Limited	A	Development plan of Raniganj North CBM Block in West Bengal for Dist – Paschim Bardhaman.	28.02.2018 (for Asansol Sadar Subdivision)
26.	Purulia Metal Casting Pvt. Ltd.	B	Expansion of 2x15 T Induction Furnaces in the existing plant at Barakar Road, Vill.– Bongabari, PO – Vivekananda Nagar, PIN – 723147, Dist – Purulia.	09.03.2018

❖ **Methodology followed in Public Consultation process**

In the present system the project proponent prepares the draft EIA / EMP report as per the Terms of Reference (ToR) issued by the Ministry of Environment, Forests & Climate Change (MoEF & CC), New Delhi or the State Expert Appraisal Committee (SEAC), West Bengal and submits the report to the WBPCB. The WBPCB organizes the public hearing after due consultation and confirmation about the date, time and venue of public hearing from the district authorities. The date of public hearing is notified in two leading newspapers (one in English and one in Bengali) at least thirty days before the scheduled date of public hearing. The details are also uploaded in the WBPCB website. The draft EIA is placed in the public domain in strategic locations as per the provisions laid down in EIA restructuring notification. In case the project site covers more than one Panchayat, the draft EIA / EMP report is usually kept in all the concerned Panchayat offices for easy access of the local people. The project proponents are encouraged

and pursued for disseminating information about the project proposal among the local community who resides in the vicinity of project site and who are also the stakeholders for the project. The entire public hearing is videographed. The minutes of the public hearing are finalized immediately after the public hearing and are uploaded in the website of the WBPCB. After observing all due formalities mentioned in the 14th September, 2006 EIA notification and its amendments, the minutes of the public hearing is also forwarded to the MoEF, New Delhi or the SEAC, West Bengal as the case may be.

The communications which are received till date of public hearing and CDs of unedited videography are also forwarded along with the minutes of public hearing to the respective authority.

❖ **Social Outcome of this process**

The public consultation procedure is a major tool of social engineering process in which the project proponent, the district authority, the neighbourhood residents and the environmental regulators can participate together to identify the threat, opportunities and stakes involved in a particular project proposal. The local residents can express their reservations, apprehensions, or expectations about a particular project activity which the project proponent is required to either accept or deny with due clarifications in front of the district authorities and the environmental regulators. This 'open house' discussion frequently acts as a social engineering tool for venting out the grievances about pollution, raising the local environmental concern in right forum, evading confusion or apprehension about any particular industrial activity, understanding the scope of any project, compelling the project proponent to commit realistic Corporate Social Responsibility (CSR) programs. The CSR is expected to boost the local development process. As the environment management scheme is presented before the District Administration as well as before the WBPCB, who are entrusted as environmental watchdog, a democratic platform is formed where different stakeholders can participate and arrive at logical conclusions in a democratic, open and transparent manner.

The common views which have been echoed from different parts of Bengal are:

- People of West Bengal want industrial growth but not environmental destruction.
- The industrialization must improve the scope of employment for the neighbourhood youth in a perceivable manner.
- The new industries would access basic infrastructure and would consume a major share of natural resources, which earlier was primarily used and enjoyed by the local people only. So these industrial groups should come forward with good CSR plans for taking part in local developmental programs for augmenting the infrastructure capacity and also replenishing the natural resources.

The detailed study of minutes available in the website of the West Bengal Pollution Control Board shall substantiate the fact. Ensuring conducive environment for public hearing is a challenging task for district administration and the WBPCB. The minutes of public hearings conducted can be used as a social document for understanding the response of people towards industrial development in their own or the neighbourhood area.

2.3 Introduction of Environmental Clearance procedure at State Level in West Bengal and its social impact

The state of West Bengal was the first state in the country to constitute the State Environment Impact Assessment Authority (SEIAA) and State Level Expert Appraisal Committee (SEAC) under the EIA restructuring Notification S.O. 1533 (E) dated 14th September, 2006 and its amendments.

In West Bengal, the Department of Environment, Government of West Bengal is functioning as Secretariat of SEIAA and WBPCB is entrusted for working as Secretariat of the SEAC. This has enabled the SEIAA and the SEAC to avail the already existing infrastructure for environment protection in the state and also to access to the existing environment information base as and when required. The SEIAA and the SEAC are functioning in co-coordinated and complementary manner with the existing command and control regime of State Pollution Control Board and no administrative complexities has cropped up during this period.

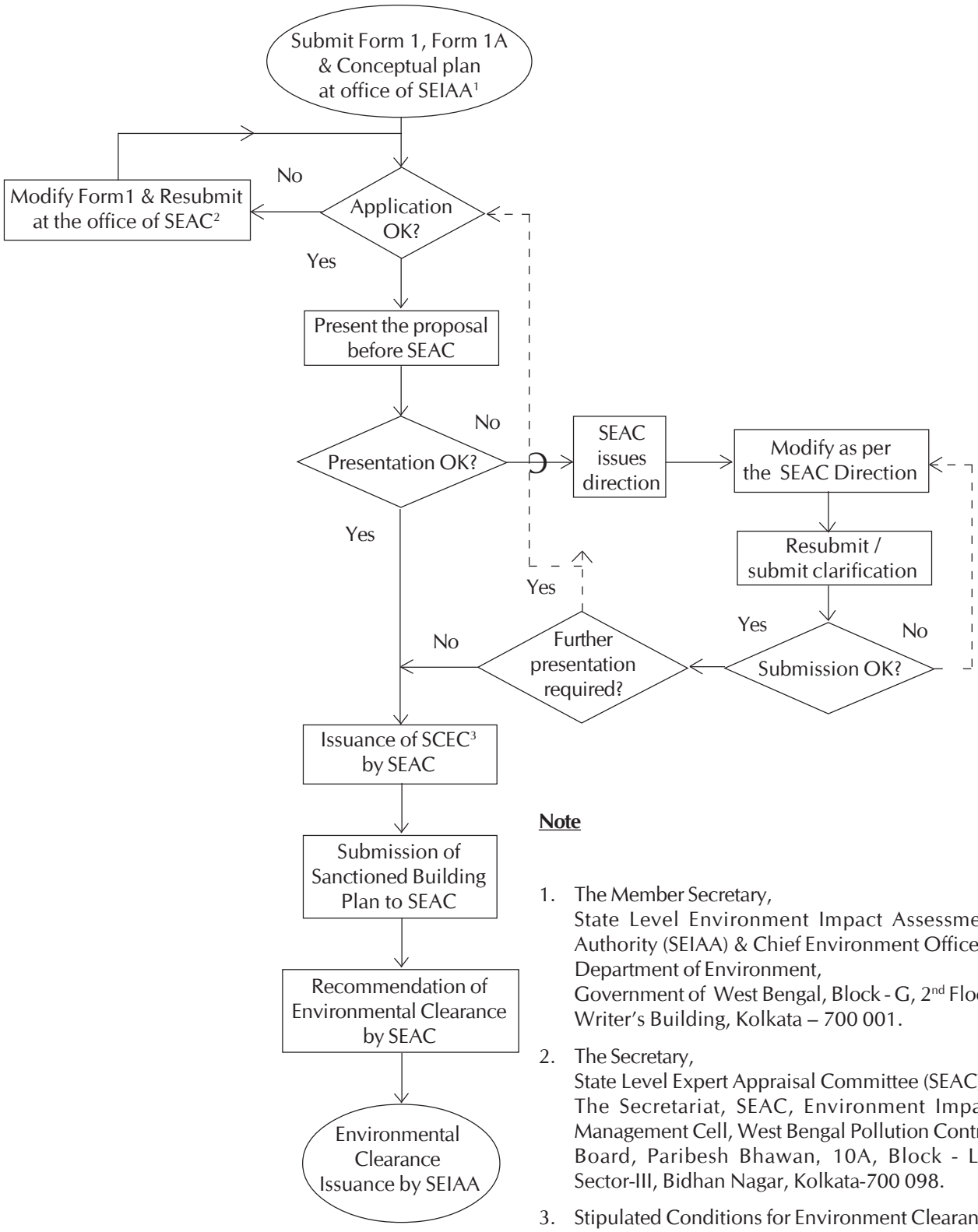
As the WBPCB has closely worked with the SEIAA and the SEAC, WB in past ten years, the views and experience of the WBPCB with this new Environmental Clearance mechanism at state level is summarized below :

❖ **Appraisal by SEAC – SEIAA, West Bengal**

The SEIAA and the SEAC, West Bengal are functioning as per the procedure laid down in the 14th September, 2006 Notification and its amendments. The committee and authority have been constituted with experts and academicians of various related fields. As per the provisions of EIA notification, each term of SEAC – SEIAA shall be three years. After successful completion of the full term (2007 – 2010) of first SEAC – SEIAA, the committee and authority was reconstituted in June, 2010. After successful completion of the full term (2010 – 2013) of second SEAC – SEIAA, the committee and authority was reconstituted in December, 2013. After successful completion of the full term (2013 – 2016) of third SEAC – SEIAA, the committee and authority was reconstituted in March, 2017. There is sufficient competency and experience in the state level experts for appraisal and issuance of Environmental Clearance for the projects with due consideration of environmental impact and examination of Environment Management Plan.

As per this new system, projects are categorized as 'A' Category and 'B' Category projects. 'A' Category projects are appraised at MoEF, New Delhi and the 'B' Category projects are appraised at SEIAA, West Bengal. The 'B' Category projects are also sub categorized into 'B1' and 'B2' Category depending upon environment impact potential. 'B1' Category projects require full-fledged EIA study. The SEAC, West Bengal categorizes projects in 'B1' or 'B2' Category depending upon its environmental impact potential. The SEAC, West Bengal has formulated its own guideline for categorizing any project into 'B1' or 'B2' Category, which has been well accepted in the state by various other stakeholders and till date has not been challenged in any forum. The project proponents are requested to present their proposals through power point presentation before the SEAC. On basis of their written submission in FORM-I and Project Feasibility Report (PFR), power point presentation and technical discussion, the SEAC frames decisions about any project. As per the procedure laid down in the EIA Notification 2006, no separate meeting is organized between the project proponent and the SEIAA. The SEAC meetings are organized on regular basis for direct interaction and technical discussion between the project proponent and the SEAC. The procedure followed for 'B' Category construction projects and the industrial projects are shown in Flow Chart 2.1 and 2.2:

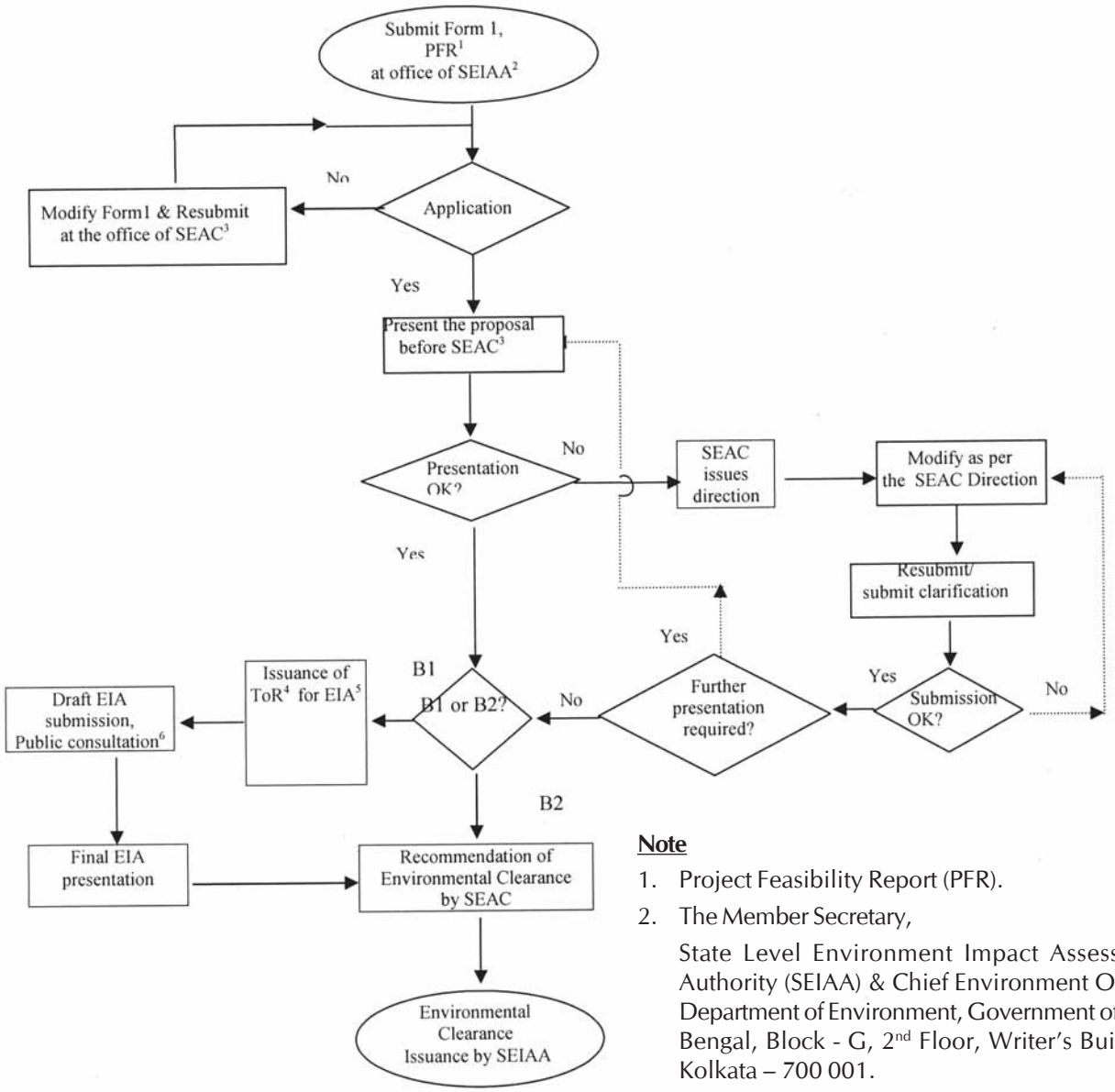
FLOW CHART 2.1
ENVIRONMENT CLEARANCE PROCEDURE FOR BUILDING, CONSTRUCTION PROJECTS, TOWNSHIPS AND AREA DEVELOPMENT PROJECTS AT STATE LEVEL IN WEST BENGAL
(Item No. 8 of Schedule of SO 1533 dated 14.09.2006)



Note

1. The Member Secretary,
   State Level Environment Impact Assessment Authority (SEIAA) & Chief Environment Officer,
   Department of Environment,
   Government of West Bengal, Block - G, 2nd Floor,
   Writer's Building, Kolkata – 700 001.
2. The Secretary,
   State Level Expert Appraisal Committee (SEAC),
   The Secretariat, SEAC, Environment Impact Management Cell, West Bengal Pollution Control Board, Paribesh Bhawan, 10A, Block - LA, Sector-III, Bidhan Nagar, Kolkata-700 098.
3. Stipulated Conditions for Environment Clearance (SCEC).

FLOW CHART 2.2
ENVIRONMENT CLEARANCE PROCEDURE FOR INDUSTRY SECTOR AT STATE LEVEL IN WEST BENGAL
(Item No. 1 to 7 of Schedule of SO 1533 dated 14.09.2006)



Note

1. Project Feasibility Report (PFR).
2. The Member Secretary,

   State Level Environment Impact Assessment Authority (SEIAA) & Chief Environment Officer, Department of Environment, Government of West Bengal, Block - G, 2nd Floor, Writer's Building, Kolkata – 700 001.
3. The Secretary,

   State Level Expert Appraisal Committee (SEAC),

   The Secretariat, SEAC, Environment Impact Management Cell, West Bengal Pollution Control Board, Paribesh Bhawan, 10A, Block - LA, Sector-III, Bidhan Nagar, Kolkata-700 098.
4. Terms of Reference (ToR) for conducting EIA study
5. Environmental Impact Assessment (EIA)
6. The public consultation is organized by West Bengal Pollution Control Board in Consultation with District Administration as per the provision of S. O. 1533(E), dt. 14.09.06.

❖ **Emerging scope of this new State Level Environmental Clearance System**

The SEAC is strongly pursuing the developers and industrial project proponents for:

1. Reuse and recycling of wastewater
2. Introducing energy efficient fixtures
3. Reducing paved surfaces to control heat island effect and encourage natural recharge
4. Green belt plantation
5. Rain water harvesting
6. Generation and utilization of solar power
7. Introducing climate friendly features
8. Use of fly ash based materials
9. Implementation of CSR

Scope of assessment of cumulative impact through this procedure:

As considerable number of projects have already been proposed / cleared in certain areas of state of West Bengal, work has already been initiated for understanding the cumulative impact and assessment of carrying capacity of a particular area.

Ensuing infrastructure capacity:

The SEAC also ensures the availability of adequate infrastructural facility through obtaining assurance from local urban/ municipal bodies to provide necessary facilities to the unit before stipulating conditions for incorporation in Environmental Clearance to any building/ construction project.

Opening new avenues:

Entrepreneurs/ developers are provided with ample scope for improving the Environment Management Plan of their business proposals and cases are cleared only when satisfactory commitments are obtained from industrialists for protection of environment. These persuasive efforts amount to higher rate of approval of industrial proposals with adequate environment management program.

❖ **Status of processing of Environmental Clearance applications at State Level Expert Appraisal Committee (SEAC), West Bengal, during the period of April 2017 to March 2018:**

The SEAC has received 89 applications during April, 2017 to March, 2018. The detailed status of such applications is given below:

Total no. of applications received – 89 (Construction – 50 and Industry – 39)

Table 2.2: Disposal of Environmental Clearance applications by the State Expert Appraisal Committee during April, 2017 – March, 2018

Recommended for Environmental Clearance by SEAC (Nos.)		Recommended for Terms of Reference (ToR) for EIA Study		Recommended Stipulated conditions for Environmental Clearance
Industry	Construction	Industry	Construction	Construction
35	26	24	3	50

Table- 2.3: List of Industries for which Environmental Clearance (EC) recommended by the SEAC during the period from April, 2017 to March, 2018

Sl. No.	Name of the proponent	Type of Industry	Project Address	REC issued on
Industry Sector				
1.	Shree Gopal Concrete Pvt. Ltd.	Expansion of 3x12 MT induction furnace and 2 nos. 6/11 M radius 2-strand continuous billet casting with auxiliaries of existing plant	Vill – Dhasal, JL No. 56, PO – Bahadurpur, Raniganj, Dist – Burdwan, PIN – 713362,	05.04.2017
2.	Shree Cement Ltd.	Cement Grinding Unit of capacity 5 MTPA, Coal & Pet Coke based CPP of 20 MW and residential colony	Vill – Parbatpur & Digha, Tehsil – Raghunathpur, Dist – Purulia,	04.05.2017
3.	Medicare Environmental Management Pvt. Ltd.	Common Bio-Medical Waste Treatment Facility	Block - Polba, Dist. – Hooghly,	15.06.2017
4.	West Bengal Chemical Industries Ltd.	Setting up a chemical/ bulk drug manufacturing unit (Unit-II) of capacity 16 TPD	SI area in Durgapur, Burdwan,	22.06.2017
5.	Shri Chandi Charan Porel	Darakeswar River Bed Sand Mining project	Mouza – Kunjapur, Vill – Kunjapur, Block Indus, PO & PS – Indus, Dist – Bankura,	23.06.2017
6.	Shri Bishu Kora	Jafrabad Mouza River Bed Sand Mining project	Vill & Mouza – Jafrabad, PS – Burdwan Sadar–II, Dist – Burdwan,	23.06.2017
7.	Sri Subrata Bhattacharya	Sand Mining	Dakshin Bengal Riverbed of Kangsabati, Vill – Dakshin Behgai, PS – Kotwali, Dist-Paschim Midnapore,	27.06.2017
8.	Sri Arun Ghosh	Sand Mining	Dakshin Bengal Riverbed of Kangsabati, Mouza & Vill – Jamsole, PS – Kotwali, Dist-Paschim Midnapore,	27.06.2017
9.	Sri Samiran Bhattacharya	Sand Mining	Dakshin Bengal Riverbed of Kangsabati, Vill – Rupnarayanpur, PS – Keshpur, Dist-Paschim Midnapore,	27.06.2017

Sl. No.	Name of the proponent	Type of Industry	Project Address	REC issued on
10.	Smt. Anupama Chakraborty	Sand Mining	Dakshin Bengal Riverbed of Kangsabati, Dist-Paschim Midnapore.	27.06.2017
11.	Alaknanda Sponge Iron Ltd.	Expansion of installation of 2x20 MT Induction Furnaces with Ladle Refining Furnace and 100000 MTPA Rolling Mills	Vill – Gopalpur, PS – Kanksa, Mouza – Bamunara, Dist – Burdwan.	29.06.2017
12.	Nataraj Hydrocarbons Pvt. Ltd.	Synthetic Resin manufacturing unit of capacity 12 TPD	Vill – Belmuri, Mouza-Chhota Khanpur, PS – Dhaniakhali, Dist – Hooghly.	29.06.2017
13.	Amit Metaliks Ltd.	Expansion project by installation of 2x15 MT induction furnace	Dr. Hahneman Sarani, Raturia-Angadpur Industrial Area, Durgapur, Dist – Burdwan, PIN – 713215,	29.06.2017
14.	SRMB Srijan Ltd.	4X20 T Induction Furnaces with matching ladle refining furnaces, continuous billet casting machine along with Hot Rolling Mill	Plasto Steel Park, Vill – Ghutgaria, PS – Barjora, Dist – Bankura.	19.07.2017
15.	JSW Cement Limited	Expansion of Cement Grinding Unit from 2.4 to 3.6 MTPA	Vill – Salboni, Dist – Paschim Medinipur,	10.08.2017
16.	UltraTech Cement Ltd.	Enhancement in Cement production capacity (2.0 MTPA to 2.3 MTPA)	JL No. 80, Vill & Mouza – Panchgarha, PS – Chanditala, Dist – Hooghly.	10.08.2017
17.	Sri Jitendranath Banerjee	Saharjora Fire Clay Mine (Lease area 17.38 acre)	Vill. – Saharjora, Tehsil – Barjora, Dist. – Bankura	10.08.2017
18.	Sarkar Minerals	Chandi Daspur Clay Mine project	JL No. 196, Vill – Chandidaspur, PS – Dubrajpur, Dist – Birbhum.	12.09.2017
19.	Ramco Cements Limited	Expansion of existing stand-alone grinding unit (0.95 MTPA to 2.00 MTPA)	Vill.– Rakshachak, P.O. + P.S. – Kolaghat, Dist.–Purba Medinipur, PIN: 721134	25.09.2017

Sl. No.	Name of the proponent	Type of Industry	Project Address	REC issued on
20.	OCL India Limited	Expansion of Cement Grinding Plant (from 1.35 MTPA to 4.0 MTPA)	Mouza – Durgadaspur, Rana, Jamdargarh, Kulapachuria, Jl. No.–471, 472, 474, 475, Village – Kulapachuria, PO – Godapiasal, PS – Salboni, Dist.-Paschim Midnapur,	18.10.2017
21.	Bengal Shipyard Limited	Development of Marine Industrial Cluster	Kulpi, South 24 Parganas, West Bengal.	06.11.2017
22.	Sudipta Bose	Paschim Dangapara Sand Mine Project	Vill – Hatiagachh, PO & PS – Chopra, Dist – Uttar Dinajpur.	13.11.2017
23.	Md. Safiul	Chittal Ghata Sand Mine Project	Vill – Nalbari, PO – Sonpurhat, PS – Chopra, Dist – Uttar Dinajpur.	13.11.2017
24.	Indian Oil Corporation Ltd.	Additional installation of 2 nos. 900 MT mounded bullets for storage of LPG within existing LPG bottling plant	Budge Budge, Dist – 24 Parganas (South).	30.11.2017
25.	Jafrabad Sand Mines	Jafrabad Sand Mine	Vill – Jafrabad, PS – Burdwan, Dist – Burdwan.	17.01.2018
26.	Syed Mozaffar Hossain	Krishnapur Sand Mine	Mouza – Krishnapur, PS – Jamalpur, Dist – Burdwan.	17.01.2018
27.	Sukriti Pebbles	Dhargram Stone Deposit of capacity 6,00,000 MT/year	Vill – Dhargram, PS – Barabazar, PO – Sabberia, Dist – Purulia.	13.02.2018
28.	Samiran Bhattacharya Balihati,	Sand Mining at the River bed of Kangsabati	Vill & Mouza – Balihati, JL No. 216, Dist-Paschim Midnapore,	15.02.2018
29.	Samiran Bhattacharya Agarboni,	Sand Mining at River bed of Subarnarekha	Vill & Mouza-Agarboni, PS - Gopi II, JL No. 189, Dist – Jhargram,	15.02.2018
30.	Rabindra Ghosh	Sand Mining at River bed of Subarnarekha	Mirzapur, PO-Sonakonia, PS – Dantan, Dist-Paschim Midnapore,	15.02.2018
31.	Swapan Debnath	Sand Mining at the River bed of Kangsabati	Vill – Jinsar, PS – kharagpur (L), Dist-Paschim Midnapore, West Bengal.	15.02.2018

Sl. No.	Name of the proponent	Type of Industry	Project Address	REC issued on
32.	BNM Organics Pvt. Ltd.	Expansion for production of API's and Fine Chemicals	PO-Malancha Mahinagar, PS – Sonarpur, Dist-24 Parganas (South),	08.03.2018
33.	Shivam India Limited	Expansion of installation of 4x15 Tonnes Induction Furnaces with Ladle Refining Furnace and Continuous Caster and 180000 Tonnes/annum Rolling Mill	Raturia, Angadpur Industrial Area, Dist-Paschim Medinipur,	08.03.2018
34.	Gajanan Iron Pvt. Ltd.	Amendment of induction furnace and rolling mill unit	Vill – Mandalpur, Jamuria Industrial Estate, PO & PS – Jamuria, Dist – Burdwan	28.03.2018
35.	Metalik Fuel Private Limited (Formerly known as GSA Commercial Pvt. Ltd.)	Capacity enhancement of Coke Oven plant from 120000 TPA to 156000 TPA	Mouza – Amba, Vill – Gokulpur, PO – Samraipur, PS – Kharagpur (Local), Dist-Paschim Medinipur.	28.03.2018
Construction sector				
1.	Lord Real Estate Pvt. Ltd. & Ors.	Expansion of Residential Complex "Panache"	Mouza – Mahisbathan, Under Bidhannagar Municipality, PS – Rajarhat, Dist.-North 24 Parganas	05.04.2017
2.	Bharat Sevashram Sangha Hospital	Expansion of Hospital (2nd Phase)	Diamond Harbour Road (near Joka), Vill – Sarmaster chawk, Khatian No. Dist – 24 Pgs (South).	11.04.2017
3.	Swadha Nirman Pvt. Ltd. & 99 Others	Residential Complex	Badu Road, Dist – 24 Parganas (North), West Bengal.	25.05.2017
4.	Merlin Projects Ltd.	Residential Complex	Premises No. 1, Raja Rammohan Roy Road, KMC Ward No. 121, Kolkata – 700 041,	25.05.2017
5.	Broad Tie Up Pvt. Ltd. & Others	Residential Complex	Mouza – Khasmallick & Hariharpur, JL No. 35 & 11, PS – Baruipur, Dist-24 Parganas (South)	25.05.2017
6.	Srijan Realty Pvt. Ltd. & Others	Expansion of Residential cum Commercial Complex "South Winds"	Mouza – Manikpur, PS–Sonarpur, JL No. 77, Rajpur - Sonarpur Municipality Ward No.23, Dist–24 Parganas (South)	01.06.2017

Sl. No.	Name of the proponent	Type of Industry	Project Address	REC issued on
7.	Tollygunge Estates Pvt. Ltd.	Residential Complex " Tolly Towers"	Premises No. 3, Netaji Subhash Chandra Bose Road, Kolkata–700 040,	15.06.2017
8.	Swastik Projects Pvt. Ltd.	Residential Complex	Premises No. 46A/1, Biplabi Barin Ghosh Sarani PO – Ultadanga, PS – Maniktala, KMC Ward No. 14, Kolkata – 700 067,	06.07.2017
9.	Anik Industries Ltd.	Expansion of Hotel and Apartment	Premises No. 30-1111, Plot No. BG-9, Action Area-1, New Town, Kolkata-700156,	06.07.2017
10.	PS Group Realty Ltd.	Residential Complex "AURUS"	48, Matheswartala, PS - Pragati PO - Topsia, Maidan, KMC Ward No. 58,	30.08.2017
11.	Bengal Shrachi Housing Development Ltd.	Residential Complex "Greenwood Nest"	Mouza-Ghuni, JL No.23, Ps – New Town, Dist-24 Parganas (North),	30.08.2017
12.	Emporis Properties Pvt. Ltd.	Residential Complex "JIVA"	6/1, Pagladanga Road, KMC Ward No. 57, Kolkata – 700 057.	12.09.2017
13.	Zoom Vanijya Pvt. Ltd. (earlier M/s. Shalimar Industries Ltd.)	Expansion of Residential Complex "MERLIN WATER FRONT"	Premises No. 40, Swarnomoyee Road PS – Shibpur, Dist-Howrah-711 103,	25.09.2017
14.	Realtech Nirman Pvt. Ltd.	Residential Complex	Mouza – Mohammadpur, JL No. 32, PS – Rajarhat, Dist-North 24 Parganas under Rajarhat – Bishnupur 2 No. GP,	25.09.2017
15.	Ideal Unique Realtors Pvt. Ltd.	Residential Complex "Ideal Unique Residency"	162, Sri Arabinda Sarani, KMC Ward No. 11, Kolkata – 700 006	25.09.2017
16.	Emporis Properties Pvt. Ltd.	Residential Complex "JIVA"	6/1, Pagladanga Road, KMC Ward No. 57, Kolkata – 700 057.	12.09.2017
17.	DSK Real Estates Ltd.	Residential Complex	34, D. H. Road, Kolkata – 700 027, West Bengal.	25.10.2017
18.	PS Vinayak Complex LLP	Building and construction project "The 101"	PS – Bishnupur, within Kulerdari Gram Panchayet, Dist.–South 24 Parganas,	06.11.2017

Sl. No.	Name of the proponent	Type of Industry	Project Address	REC issued on
19.	Riya Manbhari Projects LLP	Expansion of residential cum commercial complex	Howrah Amta Road, PS – Domjur, Dist. – Howrah,	14.11.2017
20.	Magus Bengal Estates LLP	Expansion (Phase-2) of Residential Complex "Mani Casadona"	Plot No. IIF/04, Action Area – II, New Town, PS-Rajarhat, New Town,	14.11.2017
21.	PS Vinayak Complex LLP	Expansion of Residential Complex "White Meadows"	Dhamitala, Ward No.25 under Rajpur-Sonarpur Municipality, PS – Sonarpur,	11.12.2017
22.	Aqua View Projects Pvt. Ltd.	Expansion of Residential Complex "Aqua View"	Mouza – Mahishbathan & Takdari, Ward No.28, Bidhannagar Municipality,	17.01.2018
23.	Clarity Barter Pvt. Ltd. and Others	Residential Complex	49A, Manmohan Banerjee Road, Behala, Dist: - South 24 Pgs,	05.02.2018
24.	Marq Plaza LLP	Residential Complex "VERTEX"	Chakpachuria, PS – New Town, Dist–24 Parganas (North),	05.02.2018
25.	Amitis Developers LLP	Residential Complex	Bishnupur, PO – Kulerdari & Rasapunja, Dist–South 24 Parganas,	13.02.2018
26.	South City Projects (Kolkata) Limited	Residential Complex	88, B. L. Saha Road, JL No. 10, PO & PS-Behala, KMC Ward No.116, Kolkata-700 053,	21.03.2018

Table 2.4: List of Industries for which Terms of Reference (ToR) recommended by the SEAC during the period from April, 2017 to March, 2018

Sl. No.	Name of the proponent	Types of Industry	Project Address	ToR issued on
Construction sector				
1.	Calcutta Infrastructure Infotech Projects Ltd.	Township and Area Development Project "Ideal Greens"	591A, Motilal Gupta Road, PS – Thakurpukur, Behala, KMC Ward No. 122, Kolkata – 700 053, West Bengal.	06.07.2017
2.	The Refugee Relief & Rehabilitation Department	Modification and expansion of Residential Complex "Siddha Eden Lakeville"	561, Bonhooghly Arable Land, Holding no. 4 (old no. 1290), Ward No.15 of Baranagar Municipality, PS-Baranagar, Kolkata 700 035, Dist – North 24 Parganas, West Bengal.	17.07.2017

Sl. No.	Name of the proponent	Type of Industry	Project Address	ToR issued on
3.	Ideal Riverview Projects Pvt. Ltd.	Residential project "Ideal Riverview"	39/1, Shalimar Road, PS-Shibpur, Ward No.39, Borough-V, Howrah – 711 103 under Howrah Municipal Corporation, West Bengal.	10.01.2018
Industry Sector				
1.	JSW Cement Limited	Expansion of Cement Grinding Unit from 2.4 to 3.6 MTPA	Vill – Salboni, Dist-Paschim Medinipur, West Bengal.	11.04.2017 amendment 26.04.2017
2.	V. H. Polymers	Synthetic and Alkyd Resin manufacturing unit	Ganesh Complex, Mouza – Raghudevpur, PO – Raghudevpur, PS – Uluberia, Dist – Howrah, West Bengal.	15.05.2017
3.	Ramco Cements Limited	Proposed expansion of existing stand-alone grinding unit (0.95 MTPA to 2.00 MTPA)	Vill.– Rakshachak, P.O. + P.S. – Kolaghat, Dist.– Purba Medinipur, PIN: 721134, West Bengal.	14.06.2017
4.	Dankuni Cement Works (A unit of UltraTech Cement Ltd.)	Enhancement in Cement production capacity (2.0 MTPA to 2.3 MTPA)	JL No. 80, Vill & Mouza – Panchgarha, Ps – Chanditala, Dist – Hooghly, West Bengal.	20.06.2017
5.	Satyam Plywood Industries	Expansion project for setting up manufacturing unit of Synthetic Resin	Vill – Haldibari, PO – Dhankoilhat, PS – Kaliyaganj, Dist – Uttar Dinajpur, West Bengal.	21.06.2017
6.	Shree Shyam Inorganics Pvt. Ltd.	Setting up of manufacturing unit of Acid Slurry (LABSA)	Bhagabatipur, PS-Sankrail, Kandua GP, Dist – Howrah, PIN-711 302, West Bengal.	21.06.2017
7.	Super Smelters Limited	Expansion project	Kanjilal Avenue, Tehsil – Durgapur, Dist – Burdwan, West Bengal.	23.06.2017-Amendment of ToR
8.	Shree Waris Piya Steel Company Pvt. Ltd.	Expansion project	JL No. 58, Vill & PO & Mouza – Bamunara, PS – Kanksha, Dist – Burdwan, Durgapur – 701312, West Bengal.	17.07.2017

Sl. No.	Name of the proponent	Type of Industry	Project Address	ToR issued on
9.	Amit Ferro-Alloys & Steel Pvt. Ltd.	Installation of Induction Furnaces (4x15 T) of capacity 150000 TPA Hot Rolling Mill	Plasto Steel Park, Vill – Ghutgoria, PS-Barjora, Dist-Bankura, West Bengal.	30.08.2017
10.	Orissa Metaliks Pvt. Ltd. 1.0 MTPA Cement Grinding Unit	1.0 MTPA Cement Grinding Unit	Vill – Gokulpur, PO – Shyamraipur, PS – Kharagpur (L), Paschim Medinipur, West Bengal.	07.09.2017
11.	Bansal Cement Pvt. Ltd.	Expansion of Cement Grinding Unit from 0.072 MTPA to 1.45 MTPA	Vill – Kokulpur, PO – Shuamraipur, PS – Kharagpur (L), Paschim Medinipur, West Bengal	07.09.2017
12.	Bharat Petroleum Corporation Ltd.	Capacity expansion of Uluberia LPG Plant	Birshibpur, West Bengal.	03.11.2017
13.	Ashhad Paints & Resin Mfg.	Setting up of manufacturing unit of Synthetic Resin (2050 TPA) and Paint (4.0 Lakh liter/annum)	Jl no. 74, Vill & PO – Narayanpur, PS – Bhangar, Dist–South 24 Parganas, West Bengal.	28.11.2017
14.	Indian Oil Corporation Ltd.	LPG Bottling Plant of 3x600 MT Mounded Storage Vessels and Bottling capacity 120000 MTPA	Plot No. B1 & B2, Vidyasagar Industrial Park, Kharagpur, West Medinipur – 721 301, West Bengal.	28.11.2017
15.	Purulia Metal Casting Pvt. Ltd.	Expansion of 2x15 T Induction Furnaces	JL No. 261, Vill – Bongabari, Dist-Purulia, West Bengal.	28.11.2017
16.	Bansal Cement Pvt. Ltd.	Expansion of Cement Grinding Unit from 0.072 MTPA to 1.45 MTPA	Vill – Kokulpur, PO – Shuamraipur, PS – Kharagpur (L), Paschim Medinipur, West Bengal.	10.01.2018
17.	Durgapur Iron & Steel Co. Pvt. Ltd.	Expansion of 2x7 Tonnes Induction Furnaces with Ladle Refining Furnace and 8000 MT/month Rolling Mill	JL No. 58, 65, Bamunara Industrial Area, Vill & PO – Bamunara, Mouza-Bamunara, PS-Kanksha, Dist-Paschim Bardhamam, West Bengal.	02.02.2018
18.	West Bengal Mineral Development & Trading Corporation Ltd.	Mokdamnagar Tentulberia China Clay and Fire Clay Mines	Vill – Mokdamnagar & Tentulberia, Dist-Birbhum, West Bengal.	13.02.2018
19.	HSCC (India) Limited	Setting up New AIIMS, Kalyani	Mouza – Basantpur, JL No. 90 & Mouza – Ghoragacha, JL No. 91, PS-Chakdah, Dist-Nadia, West Bengal.	07.03.2018

Sl. No.	Name of the proponent	Type of Industry	Project Address	ToR issued on
20.	Metalik Fuel Private Limited	Capacity enhancement of Coke Oven plant from 120000 TPA to 156000 TPA	JL No. 115, Mouza – Amba, Vill – Gokulpur, PO – Samraipur, PS – Kharagpur (Local), Dist – Paschim Medinipur, West Bengal.	07.03.2018
21.	HP Ispat Pvt. Ltd.	Expansion of additional 2x10 Tonnes Induction Furnaces with 1 × 10 Tonnes Ladle Refining Furnace and 1 no. 2 strand Continuous Caster and Rolling Mill	Plot No. 2125(P),2126(P), WBIDC Plasto Steel Park (Phase II), Ghutgoria, Barjora, Dist – Bankura, West Bengal.	07.03.2018
22.	Jai Ambey Metals Pvt. Ltd.	Expansion of existing steel plant by installation of Induction Furnace, CCM & Hot Rolling Mill	Barjora Plasto Steel Park, West Bengal.	20.03.2018
23.	Indian Oil Corporation Ltd.	Construction of Additional tankage and necessary revamping work at Mourigram Terminal	Mourigram Terminal with the existing plant at IOCL, Mourigram, West Bengal	28.03.2018
24.	Indian Oil Corporation Ltd.	Construction of Additional tankage and necessary revamping work at Rajbandh Terminal	Rajbandh Terminal with the existing plant at IOCL, Rajbandh, West Bengal.	28.03.2018

Table 2.5: List of Industries (construction sectors) for which stipulated conditions for Environmental Clearance (SCEC) recommended by the SEAC during the period from April, 2017 to March, 2018

Sl. No.	Name of the proponent	Type of Industry	Project Address	SCEC issued on
1.	Inka Infrastructure Pvt. Ltd. & 3 Others	Housing Complex	Mouza – Sukhchar, B.T. Road, PS– Khardha, Dist –24 Parganas (North),	04.05.2017
2.	Magus Bengal Estates LLP	Expansion (Phase-2) of Residential Complex "Mani Casadona"	Plot No. IIF/04, Action Area – II, New Town, PS – Rajarhat, New Town, Dist – 24 Parganas (North), West Bengal.	25.05.2017
3.	Riya Manbhari Projects LLP	Expansion of residential cum commercial complex	Howrah Amta Road, PS – Domjur, Dist. – Howrah, West Bengal.	29.05.2017
4.	Zoom Vanijya Pvt. Ltd. (earlier M/s. Shalimar Industries Ltd.)	Expansion of Residential Complex "MERLIN WATER FRONT"	Premises No. 40, Swarnomoyee Road (earlier 40 & 41) Ward No. 39 of HMC, PS – Shibpur, Dist – Howrah –711103, West Bengal.	25.05.2017

Sl. No.	Name of the proponent	Type of Industry	Project Address	SCEC issued on
5.	Development Consultants Pvt. Ltd.	Commercial complex "Trade Centre"	Plot – E1, Block EP & GP, Sector – V, Salt lake, Ps – Bidhannagar (North), Dist – 24 Parganas (North), West Bengal.	23.06.2017
6.	PS Vinayak Complex LLP	Building and construction project "The 101"	Mouza – Hanspukuria, JL No. – 20, Mouza – Sarmestarchak, JL No. – 17, Mouza – Daulatpur, JL No. – 79, PO – Pailan Hat, PS – Bishnupur, within Kulerdari Gram Panchayet, Dist. – South 24 Parganas, West Bengal.	23.06.2017
7.	Muktamani Vanijya Pvt. Ltd.	Expansion of housing complex	34B, B. T. Road, Kolkata – 700002, West Bengal.	05.07.2017
8.	Ambey Realtors LLP	Residential Complex	Mouza Atghara, JL No. 10, Biswa Bangla Sarani, Chinar Park, Kolkata 700136, Bidhannagar Municipal Corporation Ward No. 12, PO – Rajarhat Gopalpur, PS – Baguihati, West Bengal.	19.07.2017
9.	Bengal Merlin Housing Ltd.	Expansion of Housing Complex	Mouza – Mahisbathan, JL No. – 18, War No. 1 under Bidhannagar Municipal Corporation, P.O. – Sech Bhawan, P.S. – Electronics Complex Sector V, Dist. – 24 Parganas North, West Bengal.	19.07.2017
10.	Kolkata Heights Pvt. Ltd.	Residential Building	Mouza – Madurdaha, P.S. – Tiljaja, Ward No. 108, Kolkata – 700099, West Bengal.	19.07.2017
11.	DTC Projects Pvt. Ltd.	Expansion of Residential Complex	Diamond Harbor Road, P.O.-Joka, P.S. – Bishnupur, Mouza – Doulatpur, Block – Bishnupur I, JL No. 79, under Kulerdari Gram Panchayat, Dist – 24 Parganas (South), West Bengal.	19.07.2017

Sl. No.	Name of the proponent	Type of Industry	Project Address	SCEC issued on
12.	Bengal Shristi Infrastructure Development Ltd. Durgapur	Residential Complex	Durgapur City Centre, Mouza – Faridpur, JL No. 74, PS – Durgapur, Dist – Burdwan, West Bengal.	19.07.2017
13.	Sunidhi Estates Pvt. Ltd.	Residential Complex	Premises No. 47, Canal Circular Road, Ward No - 31, Borough - III, P.S. – Phoolbagan, Kolkata – 700 054, Under Kolkata Municipal Corporation, West Bengal.	10.08.2017
14.	Aamar Bari Griha Nirman Pvt. Ltd.	Residential Complex "Aamar Bari : Madhukali"	577, Sultanpur, Under Mallickpur Gram Panchayet, JL No. 16, PS – Baruipur, Dist – 24 Parganas (South), West Bengal.	08.08.2017
15.	DSK Real Estates Ltd.	Residential Complex	34, D. H. Road, Kolkata – 700 027, West Bengal.	07.08.2017
16.	PS Vinayak Complex LLP	Expansion of Residential Complex "White Meadows"	1529, Dwarir Road, Mouza – Dhamitala, Ward No. 25 under Rajpur-Sonarpur Municipality, PS – Sonarpur, South 24 Pgs, West Bengal.	10.08.2017
17.	Merlin Projects Ltd.	Residential Complex	Holding No. 24 (Old 112), Basantalal Saha Road, under KMC Ward No. 117, Kolkata – 700 053, West Bengal.	17.08.2017
18.	Trimurti Grihanirman Pvt. Ltd.	Residential Complex	Premises No. 2/1, Husain Shah Road, Ekbalpur, Kolkata 700023, West Bengal.	31.08.2017
19.	Amitis Developers LLP	Residential Complex	Mouza – Banagram & Sarmasterchak, JL No. 16, PS – Bishnupur, PO – Kulerdari & Rasapunja, under Kulerdari & Rasapujna GP, Dist – South 24 Parganas, West Bengal.	15.09.2017

Sl. No.	Name of the proponent	Type of Industry	Project Address	SCEC issued on
20.	Soumita Construction Pvt. Ltd.	Expansion of Residential Complex "The Country"	Mouza – Daulatpur, JL No. 79, Mouza – Bagi, JL No. 78 & Mouza – Amgachia, JL No. 93, PS – Bishnupur, Dist – 24 Parganas (South), West Bengal.	25.09.2017
21.	Jagannath Gupta Institute of Medical Science & Hospital	Expansion of Jagannath Gupta Institute of Medical Science & Hospital	JL No. 33, Vill – Buita, Budge Budge Development Block – I, Dist – South 24 Parganas, Kolkata – 700 137, West Bengal.	18.10.2017
22.	Kolkata Heights Pvt. Ltd.	Housing complex	Mouza – Madurdaha, Ward No. 108 of KMC, Kolkata – 700 099, Dist – 24 Parganas (North), West Bengal.	24.10.2017
23.	Power Point Buildcon Pvt. Ltd.	Expansion of Residential Complex "Siddha Waterfront"	Old Calcutta Road, Mouza – Patulia, Patulia Gram Panchayet, JL No. 4, Dist – 24 Parganas (North), West Bengal.	26.10.2017
24.	Calcutta Infrastructure Infotech Projects Ltd.	Expansion of Township and Area Development Project "Ideal Greens"	591A, Motilal Gupta Road, PS – Thakurpukur, Behala, KMC Ward No. 122, Kolkata – 700 053, West Bengal.	08.11.2017
25.	Lakshmi Group of Realty Pvt. Ltd. & Others	Residential development	Mouza – Takdari, JL No. 19, PS – New Town, Mahishbathan under Bidhannagar Municipal Corporation, Kolkata – 700 102, West Bengal.	08.11.2017
26.	Belmont Devcon Pvt. Ltd.	Residential Complex	Premises No. 271, Sodepur Road (E), Madhyamgram, Dist – North 24 Parganas, West Bengal.	30.11.2017
27.	Genpact India Pvt. Ltd.	IT/ITES Office Building	DP-6, Sector – V, Salt lake, Kolkata 700 091, West Bengal.	30.11.2017

Sl. No.	Name of the proponent	Type of Industry	Project Address	SCEC issued on
28.	Prudent Infrarealty Pvt. Ltd. & Others	Expansion of Residential Complex	272, Boral Main Road, P.O. – Bonhooghly, P.S. - Sonarpur, Ward No. 33 of Rajpur Sonarpur Municipality, Dist. – 24 Parganas South, PIN : 700103, West Bengal.	01.12.2017
29.	Tiru Fine Residency LLP	Expansion of residential complex	JL No. 56, Mouza – Guria, PS – Matigara, Pargana – Patharghata, Dist – Darjeeling, West Bengal.	01.12.2017
30.	Daffodil Homes Pvt. Ltd. & Others "Lakewood Estate"	Expansion of Housing Complex "Lakewood Estate"	Holding No. 266, Garagachha, Rajpur Sonarpur, Mouza – Garagachha, PS – Sonarpur, Ward No. 1, under Rajpur Sonarpur Municipality, Dist – 24 Parganas (South), West Bengal.	01.12.2017
31.	Madgul Developers Pvt. Ltd. & Others	Expansion of Residential Complex	Premises No. 24, Diamond Harbour Road, Kolkata – 700 104, KMC Ward No. 144, Dist – 24 Parganas (South), West Bengal.	01.12.2017
32.	Harmony Vinimay Pvt. Ltd.	Expansion of Residential project "ALTIUS"	67, Christopher Road, Kolkata – 700 046, West Bengal.	04.12.2017
33.	Yashaswi Commercial Pvt. Ltd. & 35 Others	Residential Complex	Mouza – Ghuni, Jl No. 23, PS – New Town, Dist – 24 Parganas (N), West Bengal.	06.12.2017
34.	Tata Housing Development Company Ltd.	Residential Complex	Plot No. IIG/7, Action Area – II, New Town, Rajarhat, Kolkata – 700 156, West Bengal.	11.12.2017
35.	Kaushalya Township Pvt. Ltd. & Others	Residential Building	Plot No. 2149, Mouza – Hudrait, PS – Rajarhat, New Town, North 24 Parganas, West Bengal.	11.12.2017

Sl. No.	Name of the proponent	Type of Industry	Project Address	SCEC issued on
36.	Vedant Fashion Pvt. Ltd.	Office Building	Mouza Recjuani, Plot No. 11E/23, Action Area – IIE, New Town, JL No. 13, PS – Rajarhat, Rajarhat-Bishnupur – I Gram Panchayet, North 24 Parganas, West Bengal.	11.12.2017
37.	Forum Projects Pvt. Ltd.	Expansion of the building complex "Atmosphere"	Plot No. 1001/A, EM Bypass, Mouza – Purba Topsia, JL No. 7, PS – Tiljala, Kolkata-700 046, West Bengal.	11.12.2017
38.	West Bengal Industrial Development Corporation Ltd.	Business Building Garment Park	Budge Budge, Dist – 24 Parganas (South), West Bengal.	11.12.2017
39.	Square Four Housing & Infrastructure Development Pvt. Ltd.	Expansion of Residential Complex "UDDIPA"	Premises No. 1, Kashinath Dutta Road, Baranagar Municipality, Dag No. 921 to 925, JL No. 8, PS – Baranagar, Dist – 24 Parganas (North), West Bengal.	11.12.2017
40.	Lingraj Properties Pvt. Ltd. & Others	Expansion of Residential Complex	Mouza – Kumrakhali, PO – Narendrapur, PS – Sonarpur, 24 Parganas (South), West Bengal.	03.01.2018
41.	DLF Limited	Office cum Residential Building	Plot No. II F/5, Block – II F, Action Area – II, New Town, Rajarhat, Newtown, Kolkata, West Bengal.	17.01.2018
42.	Anant Shri Sukhramji Trust	Expansion cum modification of Residential and Assembly Building	156B, Manicktala Main Road, KMC Ward No. 32, PS – Manicktala, Kolkata – 700 054, West Bengal.	17.01.2018
43.	Broad Tie Up Pvt. Ltd. & Others	Expansion of Residential Complex	Mouza – Khasmallick, JL No. 35, PS – Baruipur, Dist – South 24 Parganas, West Bengal.	13.02.2018

Sl. No.	Name of the proponent	Type of Industry	Project Address	SCEC issued on
44.	Topsel Exim Pvt. Ltd.	Mercantile (Retail) cum Business Building	Plot No. AA-IID/10, Rajarhat, Newtown, Dist – North 24 Parganas, West Bengal.	13.02.2018
45.	Himanga Mercantiles Pvt. Ltd.	Housing Complex "Bhawani Courtyard"	91/1, Jessore Road (South), Madhyamgram 24 Parganas (N), Mouza – Sahara,	08.03.2018
46.	A & J Main & Co (Engineers) Pvt. Ltd.	Residential Complex	Premises No. 151, Andul Road, Howrah, Mouza – Shibpur, Ward No. 38, JL No. 1, PS – Shibpur, Dist – Howrah, West Bengal.	08.03.2018
47.	Muskan Highrise Pvt. Ltd.	Residential Complex	Premises No. 11, Deshpran Sasmal Road, KMC Ward No. 89, Borough X, PO – Tollygunge, PS – Charu Market, Kolkata – 700033, West Bengal.	08.03.2018
48.	Orbit Projects Pvt. Ltd.	Residential Building	Premises No. 116, Roy Bahadur Road, Kolkata – 700 053, West Bengal.	08.03.2018
49.	Nirvana Devcon LLP	Residential cum Commercial Complex – Mixed Use Development	Plot No. 257/A, Deshpran Shasmal Road, Ward No. 094 under KMC, Kolkata – 700 033, Kolkata, West Bengal.	08.03.2018
50.	Allworth Tradecom Pvt. Ltd. & Others	Residential Complex "VYOM-II"	Buroshibtala, Premises No. 48, Manmohan Banerjee Road, Ward No. 118, PS – Behala, Kolkata – 700 038, West Bengal.	08.03.2018

❖ ***Status of processing Consent to Establish applications of EC attracting units by West Bengal Pollution Control Board, during the period of April 2017 to March 2018***

The WBPCB has received 68 applications for Consent to Establish from EC attracting units during April 2017 to March 2018. The detailed status of such applications is given below:

Table 2.6: Status of Consent to Establish applications received by the Board

Sl. No.	Name of the unit	Address of the unit	Type of Industry	Category	NOC issue date
1	Shyam Steel Manufacturing Ltd. (Formerly Sova Ispat Ltd.)	Jemua, Mouza, Mejia Block, Dist - Bankura, JL NO. 11	Setting up of Grain Based Distillery unit (200 KLPD)	A	03.04.2017
2	Svaksha Distillery Ltd.	Vill Dakshin Simla, PS - Kharagpur, Tehsil Kharagpur I, Dist - West Medinipur	Grain Based Distillery unit (200 KLPD)	A	03.04.2017
3	Tata Metaliks Ltd.	Gokulpur, PO-Samraipur, Kharagpur, Paschim Medinipur	Expansion of Steel Plant from 345000 TPA Pig Iron production to 500000 TPA Hot Metal Production	A	06.04.2017
4	Bharat Petroleum Corporation Ltd.,	Rajbandh Chatty, Durgapur 713212, Plot No. 532 and 539, JL No. 64, Kanksa, Amlajora, Burdwan	Additional Mounded Bullet of LPG with allied facilities	B	06.04.2017
5	Bengal Shriram High Tech City Pvt. Ltd.	PO - Hindmotors, PS - Uttarpara, Uttarpara Kotrung Municipality, Dist - Hooghly, PIN - 712233	Development of Residential parcel "Shriram Grand City" Phase - I	B	07.04.2017
6	Orissa Metaliks Pvt. Ltd.	Mouza Mathurakismat & Amba, Vill Gokulpur, Shyamraipur, Dist Paschim Medinipur	0.6 MTPA (10×20T) induction furnace of SMS & 0.55 MTPA Rolling Mill	A	12.04.2017
7	Tandhan Cotton Mills Pvt. Ltd.	Mouza - Subsit, PO & PS - Bagnan, Howrah	Denim Fabric 1650000 mts/month	SWC	11.05.2017
8	Hindustan Aegis LPG Ltd. (formerly Aegis Logistics Ltd.)	Durgachak, Haldia	Change of name and ownership	B	15.05.2017

Sl. No.	Name of the unit	Address of the unit	Type of Industry	Category	NOC issue date
9	Fabworth Promoters Pvt. Ltd.	4A JBS Haledn Avenue, Kolkata 104	Expansion cum modification of 5 star hotel and serviced apartment, JW Marriott and Marriott Residence	B	23.05.2017
10	Orissa Metaliks Pvt. Ltd.	Vill Gokulpur, PS - kharagpur, Dist Paschim Medinipur	1 × 320 m2 MBF for production of 300000 TPA hot metal / pig iron	A	24.05.2017
11	Sharp Ferro Alloys Ltd.	Nachan Road, Kamalpur, Durgapur.	Setting up of Jigging Plant and Briquette Plant for expansion of ferro alloy plant	A	05.06.2017
12	Apollo Gleneagles Hospital Ltd.	58, Canal Circular Road	Pansion of Daycare and Oncology buildings and alterations of Service Block and new meditation centre	B	08.06.2017
13	Bravo Sponge Iron Pvt. Ltd.	Vill- Mahuda, PO- Rukni, PS- Para, Dist- Purulia.	0.19 MTPA Integrated Steel Plant	A	09.06.2017
14	Shree Ganeshaya Infraporjects Ltd.	Rajpur Sonarpur, South 24 Parganas	Residential Complex	B	09.06.2017
15	Emami Cement Ltd.	Panagarh Industrial Park of WBIDC, Block Aushgram-II, Dist Burdwan.	Additional equipments without increasing production capacity of Cement Grinding Unit of 2.0 MTPA alongwith 10 MW CPP	B	09.06.2017
16	West Bengal Housing Board	Plot No. AA-IID/BLK-8, JL No. 2, Mouza Gopalpur, PS - Rajarhat, Dist North 24 Parganas.	Residential Complex "Sunray Housing Project"	B	09.06.2017
17	Shreegopal Concrete Pvt. Ltd.	Vill - Dhasal, JL No. 56, PO - Bahadurpur, Raniganj, Dist - Paschim Bardhaman.	Expansion of 3 × 12 MT induction and 2 nos.6/11 M radius 2 strand continuous Billet Casting	B	14.06.2017

Sl. No.	Name of the unit	Address of the unit	Type of Industry	Category	NOC issue date
18	Emami Cement Ltd.	Panagarh Industrial Park, Block Aushgram II, Burdwan	Cement grinding unit of 2.0 MTPA and CPP of 10 MW	B	27.06.2017
19	Bengal Peerless Housing Development Company ltd.	At Dag No. 125 (part) and 126(Part), Mouza Barakhola, JL No. 21, PS Purba Jadavpur, KMC Ward No. 109, Dist South 24 Parganas.	Expansion of residential complex Avidipta	B	27.06.2017
20	Indian Institute of Technology (IIT), Kharagpur 721 302	Super specialty Hospital with other facilities at Dr. B C Roy Institute of Medical Sciences & Research	IIT, Kharagpur	B	10.07.2017
21	Eastern Coalfields Ltd.	Raniganj, Burdwan.	Cluster 11 for Shankarpur Jambad OCP/Mine	A	19.07.2017
22	Reshmi Metaliks Ltd.	Vill Gokulpur, PO Shyamraipur, PS- Kharagpur, Dist - Purba Medinipur.	Addition of 250000 TPA Hot Rolled Product	B	25.07.2017
23	Eastern Coalfields Ltd.	Raniganj, Burdwan.	Siduli OCP Mine Cluster 11	A	25.07.2017
24	Eastern Coalfields Ltd.	Kalyanpur, Asansol, Paschim Bardhaman	Cluster 7	A	01.08.2017
25	Orissa Metaliks Pvt.Ltd.	Dhekia, Paschim Medinipur	1.2 MTPA Pellet Plant & 75000 Gas Plant etc.	A	09.08.2017
26	Candor Kolkata One Hi-Tech Structures Pvt. Ltd. (Formerly Unitech Hi-Tech Structures Ltd.)	AA-ID, New Town, Rajarhat, Kolkata 700156.	Name change from Unitech Hi-Tech Structures Ltd. to Candor Kolkata One Hi-Tech Structures Pvt. Ltd.	B	18.08.2017
27	Electrosteel Castings Ltd.	Haldia, Dist - Purba Medinipur.	Installation of Ferro Alloys Plant	A	24.08.2017
28	West Bengal Chemical Industries Pvt. Ltd.	lease hold land at Gopinathpur of S I Area, Durgapur	API/Fine Chemical manufacturing plant Unit II	B	23.08.2017
29	Srijan Realty Pvt. Ltd. & Ors	Manikpur, Sonarpur, South 24 Pgns.	Expansion cum modernization of residential Complex "South Winds"	B	01.09.2017

Sl. No.	Name of the unit	Address of the unit	Type of Industry	Category	NOC issue date
30	ITC Limited	Panchla, Howrah	Amendment of Integrated consumer goods mfg. and logistic facility	SWC	01.09.2017
31	Kolkata Port Trust, Haldia	Haldia Dock Complex, Kolkata Port Trust, Haldia	Setting up mini bulk carriers handling facility of 3rd oil jetty	A	04.09.2017
32	Hindusthan Adhesive & Chemicals	Iswaripur, Khardah, Bandipur, North 24 pgs.	Synthetic resin plant	B	13.09.2017
33	Super Smelters Ltd.	Jamuria Industrial Estate, Mondalpur, Ikra, Jamuria, Paschim Bardhaman	6000 TPM (0.072 MTPA) angle/ channel, joint,flate, square,round hexa ground	A	15.09.2017
34	Nuvoco Vistas Corporation Ltd. (Lafarge India Pvt. Ltd.)	Vill - Amdanga, PS - Gangajal Ghati, Bankura	Increase in production capacity from 1.5 to 1.65 MTPA	B	22.09.2017
35	Swadha Nirman Pvt. Ltd. & Others	Mouza Degberia, Madhyamgram and Kutulsahi, Barasat, North 24 Parganas	Residential complex	B	26.10.2017
36	Lord Real Estate Pvt Ltd. & Others	3, Mahisbathan, PS - Rajarhat, Dist 24 Pgns (North).	Expansion of residential complex "Panache"	B	31.10.2017
37	Director of Tourism & Ex-Officio Commissioner, Tourism Department, Govt. of West Bengal,	Gajaldoba, Jalpaiguri, Mouza - Jungle Mohal, PS - Bhaktinagar, Dist - Jalpaiguri	Eco Tourism park, Bhorer Alo	B	31.10.2017
38	Saran Alloys Pvt. Ltd.	Bamunara Industrial Area, PO & Vill - Bamunara, PS - Kanksa, Dist - Paschim Bardhaman.	Expansion of MS Ingots of 30000 TPA	A	01.11.2017
39	Vigneshwara Cement Pvt. Ltd.	Vill Purandarpur, Kanchanpur, Bankura,	Cement grinding unit (120000 TPA)	B	07.11.2017
40	Maithan Steel & Power Ltd. Unit II	Nakrajoria, Salanpur, Paschim Bardhaman	Increase in TMT bars from 7500 to 15000 TPM		13.11.2017

Sl. No.	Name of the unit	Address of the unit	Type of Industry	Category	NOC issue date
41	Shree Shyam Udyog (Chandan Super Cement Industries)	Chingra, PO - Loupara, Beliaberab, Paschim Medinipur	Change of name and ownership from Magnox Super Cement to Shree Shyam Udyog	B	20.11.2017
42	Lalwani Ferro Alloys Ltd.	Plasto Ssteel Park, WBIDC, Mouza Ghutgoria, Barjora Bankura	2×9 MVA SAF for 36960 TPA FeMn, 26400 TPA SiMn, 13200 TPA FeSi	A	21.11.2017
43	Broad Tie Up Pvt. Ltd.	Baruipur, South 24 parganas	Construction of Residential complex	B	01.12.2017
44	Calstar Sponge Ltd.	Jamuria Industrial Estate, Ikra Jamuria, Paschim Burdwan.	Sponge Ion Plant into steel plant		01.12.2017
45	West Bengal Mineral Development & Trading corporation Ltd.	Paschim Bero, under Raghunathpur Block of Dist – Purulia, West Bengal.	Paschim Bero Granite Mine	B	01.12.2017
46	PS Group Realty Limited & Others	48, Matheswartala Road, Kolkata - 46, PO - Topsia, KMC Ward No. 58.	Residential Complex "AURUS"	B	01.12.2017
47	Candice Tower Pvt. Ltd. & Others	Barasat, Mouza - Siti JL No. 101, PO & PS - Barasat, Barasat Municipality, 24 Pgns (N)	Residential cum Commercial Complex	B	01.12.2017
48	Oil & Natural Gas Corporation Ltd.	Action Area – II, New Town, Rajarhat, Kolkata – 700 156,	Office Building	B	01.12.2017
49	Rashmi Metaliks Ltd.	Mouza Khidirpur, JL No. 140, Vill Gokulpur, Shyamraipur, Kharagpur Paschim Medinipur	1×60 TPD Oxygen Plant	A	06.12.2017
50	National Building Construction Corporation Ltd. (NBCC(India) Ltd.)	Action Area III of New Town, Kolkata, Dist - North 24 Parganas.	Commercial cum Office Complex "NBCC SQUARE"	B	11.12.2017
51	DSK Real Estates Ltd.	D H Road, Kolkata - 700 027	Residential complex	B	08.12.2017

Sl. No.	Name of the unit	Address of the unit	Type of Industry	Category	NOC issue date
52	JSW Cement Ltd.	Salboni, Paschim Medinipur	expansion of 2.4 MTPA cement grinding unit to 3.6 MTPA and 2×18 MW CPP	B	15.12.2017
53	Shyam Steel Manufacturing Ltd. (Formerly Sova Ispat Ltd.)	Jemua Mouza, Mejia Block, Bankura	Modification of capacity of induction furnace	A	22.12.2017
54	Tata Metaliks Ltd.	Gokulpur, Shyamraipur, Paschim Medinipur	Change of name from Tata Metaliks DI Pipes Ltd. to Tata Metaliks Ltd.	A	08.01.2018
55	Emporis Properties Pvt. Ltd.	6 Pagladanga Road, Ward NO. 57 of KMC Kolkata - 700015	Residential complex **"JIVA"**	B	11.01.2018
56	OCL Bengal Cement Works (A Unit of OCL India Ltd.)	Durgadaspur, Rana, Jamdargarh, Kulapachuria, PS- Salboni, Paschim Medinipur	Cement Grinding Unit	B	11.01.2018
57	Purulia Metal Casting Pvt. Ltd.	Bongabari, Vivekanandanagar, Dist - Purulia	Mini Blast Furnace (1×65m3) and Sinter Plant (1×12 m2)	B	10.01.2018
58	Alaknanda Sponge Iron Ltd.	vill - Gopalpur, PS - Kanksa, Mouza - Bamunara, Dist - Paschim Bardhaman	Expansion of installation of 2×20 MT Induction Furnace etc.	A	10.01.2018
59	The Ramco Cement Limited	Vill Rakshachak Anchal, Amalhanda, Kolaghat, Purba Medinipur	Expansion in valuing enhancement in Cement production capacity	B	05.02.2018
60	Shree Cement Ltd.	Vill - Parbatpur & Digha, Raghunathpur, Purulia	Cement Grinding Unit of capacity 5 MTPA & CPP of capacity 20 MW	B	05.02.2018
61	Century Plyboards (India) Ltd.	D H Road, Vill Kanchowki, Bishnupur, 24 Pgns South	Machineries for achieving the sanctioned production capacity	A	12.02.2018
62	Essar Oil & Gas Exploration and Production Ltd.	Khatgoria as a part III project at Raniganj	Drilling of 15 wells for production of 3375000 nm3/month	A	12.02.2018

Sl. No.	Name of the unit	Address of the unit	Type of Industry	Category	NOC issue date
63	Sachis Kiron Roy Memorial Trust	Barbaria, Paschim Khilkapur Sadarpur, Jl No. 32, Nilganj GP, Barasat Barackpore Road,	Educational Complex	B	23.02.2018
64	Rashmi Metaliks Ltd.	Shyamraipur, Gokulpur Kharagpur, Paschim Medinpur	1 × 70 m2 Sinter Plant (500000 TPA, MBF & SMS)	A	28.02.2018
65	St. Xavier's College (Autonomous)	Plot No. AA-IIIB/1, IIIB-1, AA- IIIB, Mouza Patharghata, PS - New Town, Kolkata 700156.	St. Xavier's college campus	B	13.03.2018
66	Kolkata Port Trust	Haldia Dock Complex, Purba Medinipur	Redevelopment of Cargo Handling Facilities at outer Terminal (Near 2nd Oil Jetty)	A	13.03.2018
67	Eastern Coalfields Ltd.	Itapara OC, Salanpur Area	Itapara OCP	A	28.03.2018
68	PS Vinayak Complex LLP	Dwarir Road, Rajpur-Sonarpur Municipality, PS – Sonarpur, South 24 Pgs,	Residential Complex **"White Meadows"**	B	28.03.2018

❖ **Ensuring transparency in the process**

- The proceedings of all SEAC meetings are maintained for the sake of transparency. All the environmental Clearance granted by the SEIAA, are uploaded in the website: *www.enviswb.gov.in.*
- Since May 2007, the project proponents are mandatorily required to notify in two newspapers about obtaining Environmental Clearance from central as well as state authority.
- The details of project proposals and schedules of Public Hearing are uploaded in the website of West Bengal Pollution Control Board: www.wbpcb.gov.in. The proceedings of Public Hearing of Category A as well as Category B projects are also uploaded in the same website immediately after the Public Hearing. Anyone can visit the website of the WBPCB and also access those proceedings.

❖ **Monitoring compliances and scope of follow up actions**

- Although the WBPCB keeps strict vigil on compliance of any unit with conditions imposed in Environmental Clearance as well as conditions imposed in Consent to Establish, a separate monitoring committee has been constituted by the Department of Environment, for monitoring the level of compliance of any unit with regard to the conditions imposed by central authority as well as the state authority in the Environmental Clearance.
- In case of violation of Environmental Clearance as per the Section 5 of Environment Protection Act, actions will be initiated against any errant unit.

❖ **Recent Important Notifications of MoEF & CC and Resulting Changes in the Clearance Process**

- The MoEF & CC notified S.O.3518(E), dated 23.11.2016, wherein it is stated that any change in product-mix, change in quantities within products or number of products in the same category for which environmental clearance has been granted shall be exempt from the requirement of prior environmental clearance provided that there is no change in the total capacity sanctioned in prior environmental clearance granted earlier under this notification and there is no increase in pollution load. The project proponent shall follow the procedure for obtaining "No Increase in Pollution Load" certificate from the concerned State Pollution Control Board. As per provisions given in the said notification the State board constituted a Technical Committee for evaluating such cases and issuance of 'No Increase in Pollution Load' certificate vide order dated 06.03.2017. Meetings of the Committee are convened at least once in a month and the process is running smoothly since the formation of the Committee.

- The MoEF & CC notified S.O.3999(E), dated 09.12.2016, wherein provisions for integration of environmental conditions in building bye-laws have been incorporated. According to the provisions of this notification States may incorporate such environmental conditions in their building bye-laws and send the same for concurrence of the MoEF & CC. Once such concurrence is obtained, the modified by-laws will be notified and the the Central Government may issue an order stating that no separate environmental clearance is required for buildings to be constructed in the States or local authority areas. Such concurrence has already been obtained from the MoEF & CC through its Office Memorandum dated 23.10.2017 for West Bengal Municipal (Building) Rules, 2007, Kolkata Municipal Corporation Building Rules, 2009 and Building Regulations for Industrial Growth Centres and Parks of WBIIDC, 2016. Further progress in this regard is under process. Once this process is streamlined and implemented, individual Building and Construction projects having total built up area up to 150000 square meter will be exempted from obtaining Environmental Clearance and will be given consolidated clearance by the respective local authorities.

❖ **The social outcome of this new State Level Environmental Clearance System**

In this two tire system of SEAC – SEIAA, West Bengal, the SEAC directly interacts with the project proponent and pursue the project proponent for expanding the business and accelerating growth without compromising the environmental protection requirement. As a good number of the project proponents have submitted more than one project proposal, the regular and repeated persuasion from the expert members of the SEAC for integrating environmental management plan in the business model is now re-orienting the entire business perspectives of the owners and top level management of different corporate houses. The developers and architects over the time have started to appreciate the need for energy conservation, water recycling, ensuring natural recharge through limiting the paved area, keeping mandatory green belt zones and other pro-environment initiatives. The power point presentation before the SEAC followed by the detailed technical discussion have ample scope of understanding the difficulties usually faced by the project proponent to design proper environment management program and to find out the remedial measures. This system is expected to bring a significant change in the approach of developers towards large building projects. However, a more detailed study on the SEAC interaction and its follow-up impact on developers / industrialists may be required to asses potential of this "niche" movement for creating positive social and environmental impacts, through implementing a-multi pronged strategy using different mechanisms like relentless persuasion, stipulating environmental conditions and imposing regulatory pressure, pointing out the scope of financial benefit in environment friendly venture at the conceptual stage of any large project.

Chapter - 3

INDUSTRIAL POLLUTION CONTROL

3.1 Industrial scenario of West Bengal

The large scale urbanization and industrialization has led to deterioration of environmental quality posing a threat to human existence and the ecological functions in recent years. This is a transition period for many developing economies like India, so there is a strong need to strike a balance between industrial development and natural environment to reduce the intensity of pollution. Realising the rapid deterioration in the Water and Air quality, the government of India introduced relevant acts which are administered by the Central Pollution Control Board and State Pollution Control Boards with the primary objective of prevention and control of pollution.

West Bengal has abundant natural resources of minerals and suitable agro-climatic conditions for agriculture, horticulture and fisheries. Moreover, the mineral rich states like Jharkhand, Bihar and Odisha are located in close proximity of West Bengal. The state is also the gateway for eastern India, the Northeast, Nepal and Bhutan because of its locational advantage. It is also a strategic entry point for markets in Southeast Asia. West Bengal is home to many industrial sectors such as iron and steel, petroleum and petrochemicals, power, coal, leather, jute products, tea, fisheries, IT, automobile and auto components, gems and jewelry. West Bengal is also a leading exporter of leather and about 22-25 per cent of India's tanning activity is undertaken in South 24 Parganas District, at Bantala area, near to Kolkata.

Major industrial activities have been agglomerated in various districts of West Bengal like Howrah, North 24 Parganas, South 24 Parganas, Nadia, Purba Bardhaman and Paschim Bardhaman, Purba Medinipur and Paschim Medinipur. Also a number of different Industrial Parks have been set up and a few of them are in progress at Bankura, Paschim Bardhman, Purulia, Howrah, Kolkata, Paschim Medinipur, Purba Medinipur and North 24 Parganas (N) for different sectors of industries. There are exclusive growth centres in the state for electronics, software technology and export processing and it has mainly been developed in Salt Lake, Sector V area in Kolkata. In this connection, the Naba Diganta industrial township was set up in 2006, in Salt Lake, Bidhannagar to encourage IT and related industries.

Industrial activities should comply with the regulatory norms for prevention and control of pollution. Alongside it is desirable to go beyond compliance through adoption of clean technologies and improvement in management practices. Commitment to regulatory compliance, together with with voluntary initiatives of industry for responsible care of the environment, will pave the way for sustainable development. As per the provisions of the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, any industry, operation or process or an extension and addition thereto, which is likely to discharge sewage or trade effluent into the environment or likely to emit any air pollution into the atmosphere will have to obtain consent from the State Pollution Control Board. The West Bengal Pollution Control Board aims to reduce industrial emission or effluent generation or any other form of pollution and to control the quality of the same within safe limits. The WBPCB issues two types of consent as mentioned hereunder.

- **Consent to Establish:** All the industries and activities requiring consent must obtain consent to establish before actual commencement of work for establishing the industry/activity.
- **Consent to Operate:** This consent, which is valid for certain duration of time, needs to be taken before actual commencement of operation. The consent to operate is renewed after certain period.

3.2 Industrial categorisation

The CPCB had under section 18(1)(b) of the Water (Prevention and Control of Pollution) Act 1974 has developed an uniform categorisation of industries for grant of Consent, inventorisation of industries and other related activities. The West Bengal Pollution Control Board, in suppression of all previous orders

adopted new categorisation along with siting policy of industries with effect from 30.06.2016. Depending upon the pollution potential, the industrial units are classified into four different categories.

i) Red category units have maximum pollution potential

ii) Orange category units have moderate pollution potential

iii) Green units have the low pollution potential

iv) White category units have least pollution potential

v) A few units with no pollution potential are classified as 'Exempted' category units.

Annexure II shows the different categories of industries.

Table 3.1: Validity periods for Consent Applications

Item	Revised maximum validity Period (in years)
Consent to Establish	
New Project	7
Expansion of the existing units	7
Consent to Operate	
Red Category Units	5
Orange Category Units	5
Green Category Units	7

3.3 Siting policy

The WBPCB ensures that compliance to environmental standards is attained through negotiated agreements and technical guidance. Under the current siting policy of the Board, the Red industries are not permitted in Kolkata Metropolitan Area (KMA) areas and Orange industries are not permitted in Kolkata Municipal Corporation (KMC) and Howrah Municipal Corporation (HMC) areas, excepting the industrial estates of KMC and HMC. The Board also do not give permission to any new or expansion/diversification of the existing Red Category units in the areas falling under the Asansol Durgapur Development Authority (ADDA). The siting policy of the Board does not permit a few water-intensive and highly polluting industrial units, having high water consumption, within 10-km radius of the Calcutta Leather Complex at Bantala.

Annexure III details the industrial siting policy of the WBPCB for combating industrial pollution in West Bengal.

3.4 Consent administration

A. Environmental Clearance

The Ministry of Environment and Forests, Government of India re-engineered the EIA (Environmental Impact Assessment) notification (vide S.O. 1533 on September 14, 2006) by superseding the earlier notification vide S.O. 60(E) dated January 27, 1994. As per the new notification, the activities requiring EIA clearance have been grouped as A or B, depending on its potential impacts on human health and natural and man-made resources to be processed, for environmental clearance by Environmental Impact Assessment Authority of the Government of India and the Government of West Bengal respectively. For

constitution of the State Environment Impact Assessment Authority (SEIAA) and the State Level Expert Appraisal Committee (SEAC), the Department of Environment, Government of West Bengal shall forward the names to the Ministry of Environment and Forests, Government of India. The SEIAA shall base its decision on the recommendations of the SEAC constituted for West Bengal. The Government of West Bengal would have to notify the SEAC to provide all support and act as the Secretariat for the Authority.

The Group B projects, to be cleared by the State Environment Impact Assessment Authority (SEIAA), would be screened for sub-categorisation either as B1 or B2 after the screening process of the environmental information submitted by the project proponent in Form 1 annexed with the said notification. Such sub-categorisation, however, will be made following the guidelines to be published by the MoEF, Government of India time to time. The following sequential processes would be followed by the Environment Impact Assessment Authority for environmental clearance of the project activities specified in the notification.

Screening (Stage 1): The screening process required for category B projects or activities will be aimed to ascertain whether further environmental studies will be required for preparation of Environment Impact Assessment Report in addition to that submitted in Form 1 by the applicant requiring further processing through public consultation, terming it as B1 category project. Otherwise, the project will be termed as B2 and shall not required full-fledged Environment Impact Assessment Report and public consultation through Environmental Public Hearing.

Scoping (Stage 2): The Expert Appraisal Committee is required to scope the project or activity, requiring environmental clearance, to determine the detailed Terms of Reference for the preparation of Environment Impact Assessment Report by assessing the information submitted by the applicant in Form 1.

Public Consultation (Stage 3): This is the process by which the concerns of people likely to be affected by the project activity and others who have plausible stake in the environmental aspects of the project are ascertained. This stage of the EIA process is to comprise of two aspects: a public hearing process, in which only local affected people can participate and a process for obtaining written comments from others who are concerned citizens. However, there are six sets of activities which have been exempted from the process of public consultation.

Appraisal (Stage 4): Appraisal means the detailed scrutiny of the application and other documents like the Final EIA Report and outcome of public consultations. The Expert Appraisal Committee or the State Level Expert Appraisal Committee concerned shall make categorical recommendation to the regulatory authority on whether or not the environmental clearance is recommended for granting. However, the projects which do not need to conduct EIA studies or go through public consultation will be appraised on the basis of information provided in the application form and site visits.

B. Consent administration of the Board

The Board has adopted and implemented Online Consent Management with effect from 01.06.2015. Under the Online Consent Management, all applicants (project proponent/entrepreneur/ local body etc.) are required to file applications for Consent and Authorisation through Board's Environment Management Information System (EMIS).

The fees required for granting consent are collected at any branch of the United Bank of India. The revised consent fee structure of the Board is given in Annexure-IV. In addition to the existing offline system, the new online payment system, i.e. payment through net banking facility has been implemented with effect from 30.06.2016.

The number of 'Consent to Establish', 'Consent to Operate' and 'Bio-medical Waste Authorisation' granted by the Board during the Financial Year 2017-18 are given in **Table 3.2**.

Table 3.2: Consent to Establish, Consent to Operate and Biomedical Waste Authorisation granted in Financial Year 2017-18

Month	Consent to Establish			Consent to Operate			Bio-medical Authorisation
	Red	Orange	Green	Red	Orange	Green	
April, 2017	51	70	1	61	136	4	55
May, 2017	43	91	2	89	161	2	59
June, 2017	41	105	6	91	164	4	58
July, 2017	60	168	2	100	214	7	103
August, 2017	55	137	7	90	187	13	76
September, 2017	52	95	1	106	190	4	75
October, 2017	36	74	3	70	153	1	66
November, 2017	33	91	2	126	152	5	50
December, 2017	40	91	2	105	179	8	64
January, 2018	38	113	0	105	207	2	107
February, 2018	49	111	6	97	237	6	82
March, 2018	55	113	9	138	288	6	115
Total	**553**	**1259**	**41**	**1176**	**2268**	**62**	**910**

3.5 Surveillance on industries

The Board has identified the grossly polluting industries based on the pollution potential. These units are inspected and monitored monthly. In addition, Board has also identified 17 categories of polluting industries which are monitored in a fixed schedule either monthly/ bimonthly/quarterly/half-yearly/yearly basis. Major Cess paying industries are also inspected at regular intervals since any detection of non–compliance with permissible standards disallows industries from being eligible to claim Rebate on Water Cess.

The list of 17 category industries and grossly polluting industries are given in **Annexure-V.**

The number of inspections conducted during the year 2017-18 are given in **Table - 3.3**.

Table 3.3: Inspections conducted during the year 2017-18

Month	GPI /17 Categories/ Major Air/ Water Polluting	Red category (except GPI etc.)	NOC category	Orange category	Green category	Complaint cases	Supreme court/ High court/	Others
April, 2017	114	47	6	16	0	8	6	131
May, 2017	90	77	1	13	0	12	7	5
June, 2017	150	44	1	22	0	27	7	32
July, 2017	147	60	2	20	2	10	3	39

Month	GPI /17 Categories/ Major Air/ Water Polluting	Red category (except GPI etc.)	NOC category	Orange category	Green category	Complaint cases	Supreme court/ High court/	Others
August, 2017	150	49	6	23	1	14	4	9
September, 2017	119	111	1	9	0	4	0	55
October, 2017	88	77	0	18	0	5	1	49
November, 2017	141	54	4	35	6	15	3	30
December, 2017	106	79	5	41	3	26	1	33
January, 2018	118	33	6	36	0	20	1	29
February, 2018	113	53	0	34	1	10	5	16
March, 2018	142	63	0	43	0	55	3	20
Total	**1478**	**747**	**32**	**310**	**13**	**206**	**41**	**448**

3.5.1 Installation of Online Continuous Effluent Monitoring system by GPIs

As per Direction of CPCB No. B-190019/NGRBA/CPCB/2011-12/5445 dt.05.02.2014, 43 numbers of Grossly Polluting Industries (GPI) located in the Ganga River Basin were directed by the State Board to install online continuous effluent monitoring system. The said industries were issued this direction under section 33A of the Water (Prevention and Control of Pollution) Act, 1974 in order to strengthen the monitoring of industrial effluent for effective compliance through self-regulatory mechanism.

42 numbers of GPIs have already installed the online effluent monitoring system and M/s Durgapur Projects Ltd., Burdwan is in the process of installing the same.

3.6 Regulatory role

As a part of its regulatory role, the Board officials conduct regular inspections of the industries. In case of any non-compliance noticed, the industries are allowed reasonable time to comply with the environmental statutes. On repetitive violation of environmental norms, the defaulting units are served with show-cause notices, followed by technical hearing, imposition of bank guarantee for ensuring time-bound compliance and imposition of pollution fines. Repeated non-compliance leads to closure of the units along with disconnection of electricity, under extreme circumstances. After adoption of adequate pollution control measures, the closure order is suspended with restoration of electricity and the industry is allowed to resume operation. **Annexure VI, VII and VIII** respectively gives the details of Hearings conducted, Bank Guarantee imposed and Closure order issued to the industries during the financial year 2017-2018.

Chapter - 4

MANAGEMENT OF CLASSIFIED WASTES

4.1 Introduction

The Ministry of Environment, Forest and Climate Change notified six new waste management rules under the Environment (Protection) Act, 1986 in 2016 for Hazardous & Other Waste, Solid Waste, Biomedical Waste, Plastic Waste, E-Waste and Construction & Demolition Waste. Each rule specifies the waste segregation, storage, treatment and disposal norms for the specific waste types and also the roles and responsibilities of various local, district, state and central authorities. The West Bengal Pollution Control Board is one such authority empowered under these Rules to enforce certain provisions of the rules in the state of West Bengal.

The Board grants authorization to hazardous waste generating and recycling industries, healthcare units generating bio-medical wastes, municipal authorities for solid waste management, e-waste refurbishing, dismantling and recycling units and common waste treatment and dispsosal facilities. Registration is granted to traders of certain specified hazardous wastes (one-time) and to plastic waste recyclers and plastic carry bag manufacturers. As mandated in the rules, all such units are required to submit reports to the Board and these are compiled by the Board to prepare state level reports that are sent to the Central Pollution Control Board.

Other than granting clearances under the prescribed rules, the Board interacts regularly with concerned state level and local authorities to ensure coordination and smooth implementation of the rules. Through such interaction and participation, the Board has been able to ensure the following developments in the state :

4.2 Biomedical Waste Management

- For implementation of the Bio-medical Waste Management Rules, 2016, the Board works closely with the Department of Health and Family Welfare, Govt. of West Bengal. The said department has :-
    - ✓ constituted the State Level Advisory Committee on Bio-medical Waste as mandated in Rule 11 (1) of the rules. The representative of the Board is a member of this Committee.
    - ✓ constituted the District level Monitoring Committees for Bio-medical Waste Management in all districts as mandated in Section 12(4) of the rules. The regional level officers of the WBPCB are members of these committees.
- The Board has developed online application portal for receiving application for Bio-medical Waste Authorisation and with the help of the Health & Family Welfare Department, GOWB the Board is trying to ensure that all healthcare units obtain such Authorisation from the Board. The Health Department has also given due priority to the issue and because of such sustained efforts, the compliance status is gradually improving.
- The Board has requested the District Magistrates of a few districts to identify suitable land in their areas for development of Common BMW Treatment Facilities so that more such facilities can come up in the state.

4.3 Solid Waste and Plastic Waste Management

- For implementation of the Solid Waste Management Rules, 2016 and the Plastic Waste Management Rules, 2016, the Board is in regular contact with the Urban Development & Municipal Affairs Department, Govt. of West Bengal.

- As mandated in Section 23 of the Solid Waste Management Rules, 2016, the UD & MA Department has already constituted the State Level Advisory Committee for solid waste management and the WBPCB has a representative as a member of this Committee.
- The UD & MA Department, GoWB has also notified the State Policy and Strategy for Solid Waste Management and the State Policy and Strategy for Plastic Waste Management. Both these documents are available on the website of the said department. As per the State Policy, the UD & MA Department will set up 64 cluster projects and stand-alone projects for solid waste management in the state.
- To encourage the use of solid waste for energy generation, the Board provided financial assistance to Swami Vivekananda State Police Academy, Barrackpore for setting up a kitchen waste based bio-methanation plant. The said plant has been successfully installed and is in operation. The biogas generated is used for cooking.

4.4 Hazardous Waste

- Sikkim State Pollution Control Board had requested the WBPCB to allow the transfer of incinerable hazardous waste generated in Sikkim to the Common Hazardous Waste Treatment Storage and Disposal facility in Haldia. The earlier agreement for such waste transfer between the Sikkim SPCB and the WBPCB had expired on 01/12/2017. After obtaining clearance from the Department of Environment, Govt. of West Bengal the WBPCB renewed the agreement for transfer of 600TPA of incinerable hazardous waste from Sikkim to Haldia for incineration in the Common incinerator. The said agreement will remain valid till 01/12/2019.
- The Common Hazardous Waste incinerator at Haldia has been provided with Continuous Emission Monitoring System (CEMS) and data is being transmitted to Central Pollution Control Board server.

4.5 E-Waste Management

- The Ministry of Electronics and Information Technology, Govt. of India has conducted an e-waste inventorisation study in West Bengal. As per the said study, the e-waste generation in the state was estimated as 5842.43 MT in 2016 and was projected to grow to 7125.15 MT in the year 2021.
- At present there are two authorized e-waste dismantlers in the state and another unit has applied for Authrorisation recently.

To ensure better implementation of the new waste management rules in the state, the WBPCB keeps regular contact with concerned authorities. A number of workshops and interactive meets have been organized either directly by the Board or through district authorities. The Board officials have also participated in awareness programmes organized by other organisations. A list of such programmes is given below :

Table- 4.1: Workshops organized by the Board

Sl. No.	Topic	Location	Date
1	All Waste Management Rules	Paribesh Bhawan	08/06/2017
2	Bio-medical Waste Management	Medinipur	31/08/2017
3	Construction & Demolition Waste Management	New Town	22/09/2017
4	Bio-medical Waste Management	NRS Medical College	02/02/2018

Table- 4.2: Workshops on new Waste Management Rules organised by the District Authority funded by the WBPCB

Sl. No.	Location	Date
1	Howrah	20/06/2017
2	Malda	22/06/2017
3	Dakshin Dinajpur	29/06/2017
4	Birbhum	20/07/2017
5	Purulia	27/07/2017
6	Cooch behar	07/08/2017
7	Alipurduar	18/08/2017
8	Nadia	08/11/2017
9	Kalimpong	30/11/2017
10	Darjeeling	12 & 13/12/2017

Table- 4.3: Other programmes attended by Board officials

Sl. No.	Topic	Organized by	Date
1	E-Waste Management	Consumer Electronics and Manufacturers' Association (CEAMA)	11/07/2017
2	Solid Waste Management	Toxics Link	11/08/2017
3	Used Lead Acid Batteries Management	Centre for Science & Environment	17/11/2017
4	E-Waste Management	Karo Sambhav	25/01/2018

Chapter - 5

AUTOMOBILE POLLUTION CONTROL

5.1 Introduction

The principal air-quality pollutant emissions from petrol, diesel, and alternative-fuel engines are carbon monoxide, oxides of nitrogen, un-burnt hydrocarbons and particulate matter. It is emissions of these pollutants that are regulated by the Bharat Stage emissions standards. Modern cars, if kept in good condition, produce only small quantities of the air quality pollutants but the emissions from large numbers of cars add to a significant air quality problem. Carbon monoxide, oxides of nitrogen, and un-burnt hydrocarbons are gases and are generally invisible. Particulate matter is usually invisible although under certain operating conditions diesel engines will produce visible particles, appearing as smoke. Petrol engines will also produce visible particles if they are burning engine oil or running "rich", for example, following a cold start. Fine particles can also be produced by tyre and brake wear. Pollutant emission levels depend more on vehicle technology and the state of maintenance of the vehicle.

The growth of vehicular traffic on roads has been far greater than the growth in road network; as a result the main arteries face capacity saturation. Slow growth of road infrastructure and high growth of number of vehicles imply that Indian roads are reaching a saturation point in utilising the existing capacities, hence, leading to congestion and further contributing to air pollution load. A drastic increase in the number of vehicles has resulted in a significant increase in the emission load of various pollutants. In recent years, air pollution has acquired critical dimensions and the air quality in most Indian cities that monitor outdoor air pollution fail to meet WHO guidelines for safe levels. The levels of PM2.5 and PM10 (Air-borne particles smaller than 2.5 micrometres in diameter and 10 micrometres in diameter respectively) as well as concentration of dangerous carcinogenic substances such as Sulphur Dioxide (SO2) and Nitrogen Dioxide (NO2) have reached alarming proportions in most Indian cities, putting people at additional risk of respiratory diseases and other health problems. Motor vehicle pollution also contributes to the formation of acid rain and adds to the greenhouse gases that cause climate change. Pollutants emitted directly from vehicles are not the only cause for concern. On warm, sunny days, hydrocarbons react with oxides of nitrogen to create a secondary pollutant, ozone. In many urban areas, motor vehicles are the single largest contributor to ground-level ozone which is a common component of smog. Ozone causes coughing; wheezing and shortness of breath, and can bring on permanent lung damage, making it a cause of crucial public health problems.

In order to control emissions from automobile exhausts, the West Bengal Pollution Control Board (WBPCB) with active support from the State Government, has undertaken a number of actions.

5.2 Auto Emission Testing Centres (AETCs) in West Bengal

In association with the Transport Department, Govt. of W.B, the WBPCB has facilitated the setting up of computerised and upgraded Auto Emission Testing Centres (AETCs) in West Bengal. The AETCs have upgraded their testing facilities with opacity meter (for smoke density testing of diesel driven vehicles), four gas analysers (for testing of exhaust emission of petrol driven vehicles), web camera and compatible software. The AETCs are also equipped with engine revolution per minute (RPM) sensor and engine oil temperature sensor. The AETCs provide PUC (Pollution Under Control) certificates to the in-use vehicles.

The emission standards for the in-use vehicles, under Sub-Rule 2 of Rule 115 of the Central Motor Vehicles Rules 1989 has been amended vide GSR 111 (E) dated 10.02.2004.

5.3 Tail Pipe Emission Standard of in-use Vehicles

Table 5.1: Petrol / CNG / LPG shall comply with the idling emission standards for Carbon Monoxide (CO) and Hydro Carbon (HC)

Sl. No.	Vehicle Type	CO%	*HC (n-hexane equivalent) ppm
1.	2 & 3 – Wheelers (2 / 4 – stroke) (Vehicles manufactured on and before 31st March, 2000)	4.5	9,000
2.	2 & 3 – Wheelers (2 – stroke) (Vehicles manufactured after 31st March, 2000)	3.5	6,000
3.	2 & 3 – Wheelers (4 – stroke) (Vehicles manufactured after 31st March, 2000)	3.5	4,500
4.	4 – wheelers manufactured other than Bharat Stage – II norms	3.0	1,500
5.	4 – wheelers manufactured as per Bharat Stage – II norms, Bharat Stage – III norms	0.5	750
6.	4 – wheelers manufactured as per Bharat Stage – IV norms (Idle Emission Test)	0.3	200

* For CNG: NMHC = 0.3 × HC and for LPG: RHC = 0.5 × HC

Note: 1. Test shall be carried out by using type approved instrument.

2. The sampling probe shall be inserted into the vehicle exhaust system to a depth not less than 300 mm.

Table 5.2: Smoke density for all diesel driven vehicles

Method of Test	Maximum Smoke Density	
	Light absorption coefficient (1/m)	Hartidge units
Free acceleration test for turbo charged engine and naturally aspirated engine complying BS III and below norms.	2.45	65
Free acceleration test for turbo charged engine and naturally aspirated engine complying BS IV norms.	1.62	50

The vehicle gear change control shall be set in the neutral position and the drive between engine and gearbox engaged. With the engine idling, the accelerator control shall be operated quickly but not violently, so as to obtain maximum delivery from the injection pump. This position shall be maintained until maximum engine speed is reached and the governor comes into action. For vehicles with automatic transmission, the engine speed specified by the vehicle manufacturer shall be achieved. As soon as this speed is reached the accelerator shall be released until the engine resumes its idling speed and the opacity meter reverts to the corresponding conditions. Typically the maximum time for acceleration shall be 5s and for the stabilization at maximum no load speed shall be 2s. The time duration between the two free accelerations shall be between 5-20s.

After the expiry of a period of six months from the date on which the motor vehicle was first registered, every such vehicle shall carry a valid 'pollution under control' certificate issued by an agency authorized

for this purpose by the State Government. The validity of the certificate shall be for six months for vehicles complying BS III and below norms and one year for vehicles complying BS IV norms. The certificate shall always be carried in the vehicle and produced on demand by the officers referred to in sub-rule (1) of rule 116.

Table 5.3: Technical recommendation issued to the AETCs during 2017-18 for renewal of license by the ANA&T Cell of the State Board

Sl. No.	Name of the District	Number of AETCs recommended for renewal of license
1.	Kolkata	01
2.	Howrah	00
3.	North 24 parganas	01
4.	South 24 Parganas	00
5.	Hooghly	06
6.	Nadia	04

Table 5.4 : Recommendation issued by the State Board for new license of Auto Emission Testing Centres during the period from April, 2017 – March, 2018

Sl. No.	Name of the AETCs	Address of the AETCs	Issued date of Technical Evaluation Letter
01	M/s. Ghosh Car Service Centre	P.O – Ponchpota, P.S – Gaighata, Dist. – North 24 Parganas, Pin- 743273	30.05.2017
02	M/s. Mallick Motors	Teghoria, Mallick Para, P.O – Jugberia, Dist. – North 24 Parganas, Kolkata – 700110	26.07.2017
03	M/s. Mallick Pollution Centre	Vill& P.O. – Andhar Manick, P.S – Baduria, Dist. – North 24 Parganas, Pin- 743401	05.03.2018
04	M/s. The Country Motors	513, Krishnanagar Road, P.O- Noapara P.S – Barasat, Dist. – North 24 Parganas, Pin- 700125	11.08.2017
05	M/s. Anjuna Auto Emission Centre	39F/1A & E, Broad Street, Kolkata- 700019	17.01.2018
06	M/s. Karuna Traders	E. M. Bypass P.O – Garia, P.S- Sonarpur, Dist. – South 24 Parganas, Pin- 700084	30.05.2017
07	M/s. Mallick Auto Pollution Testing Centre	Budge Budge Trunk Road, P.O. Chandannagar, P.S. Maheshtala, Dist. – South 24 Parganas, Kolkata- 700139	30.05.2017
08	M/s. Amtala Pollution Centre	D.H. Road, NH-117, P.O. & P.S. Bishnupur, Dist.- South 24 Parganas, Pin- 743503	30.05.2017
09	M/s. Pratima Service Station	Nawabad, P.O. Rasapunja, P.S. Bishnupur, Dist – South 24 Parganas, Pin- 700104	27.06.2017
10	M/s. jai Jagadamba Co.	5, N.S. Dock Gate, circular Gardenreach P.O. S.E. Railway, P.S. West Port, Dist.- South 24 Parganas, Kolkata- 700043	27.06.2017

Sl. No.	Name of the AETCs	Address of the AETCs	Issued date of Technical Evaluation Letter
11	M/s. City Of Joy Fuel Station	D – 832, Taratala Road, Nature Park, Kolkata- 700088	07.07.2017
12	M/s. BBS Auto Emission Testing Centre	Vill- Khashmallick Bypass, P.O- DakshinGobindapur, P.S- Baruipur, Dist.- South 24 Parganas, Pin- 700145	11.08.2017
13	M/s. Chakraborty Auto Emission Centre	Coastal Namkhana, P.O & P.S – Fresergunge, Dist. – South 24 Parganas, Pin- 743357	25.10.2017
14	M/s. Chatterjee Service Station	Sonarpur Station Road, Rajpur Sonarpur, P.S – Sonarpur, Dist – South 24 Parganas, Pin – 700103	03.11.2017
15	M/s. Budge Budge Service Station	Budge Budge Trunk Road, P.S – Maheshtala, Dist.- South 24 Parganas, Pin- 700137	09.01.2018
16	M/s. Swarnalata Service Station	P.O & P.S – Raidighi Dist. – South 24 Parganas, Pin- 743383	08.02.2018
17	M/s. Baidya pollution Checking Centre	Mathurapur – Raidighi Road, Vill- Baribhanga, P.O – Baribhangabad, P.S – Raidighi, Dist. – South 24 Parganas, Pin- 743349	07.03.2018
18	M/s. Ramnagar Service Centre	1, Harimohan Ghosh Road, P.O & P.S – Gardenreach, Dist. – South 24 Parganas, Pin- 700024	07.03.2018
19	M/s. Mahabir Pollution centre	Howrah- Amta Road, Vill – Hafejpur, P.O – Munshrihat, P.S – Jagatballavpur, Dist. – Howrah, Pin – 711410	12.12.2017
20	M/s. Chaya Service Station	G.T. Road, P.O & P.S – Pandua, Dist. – Hooghly, Pin- 712149	19.02.2018
21	M/s. Subhas Service Station	Vill & P.O – Rabindranagar, P.S – Chinsurah, Dist – Hooghly, Pin- 712106	07.03.2018
22	M/s. Lokenath Auto Emission Testing Centre	Karimpur, P.O – Ghurni, P.S – Katwali, Dist. – Nadia, Pin- 741103	04.08.2017
23	M/s. Aloka Auto Emission Testing Centre	Vill- Farm More, P.O – Karimpur, P.S- Karimpur Dist- Nadia	03.11.2017
24	M/s. Chakraborty Auto Service Centre	Hapania bazar, P.O – Nagarukhra, P.S – Haringhata, Dist. – Nadia, Pin- 741257	08.01.2018
25	M/s. Sagar Auto Emission Testing Centre	Bhatpara, Chnadanga, Chakdaha, Dist. – Nadia	12.02.2018
26	M/s. D.M.A Enterprise	Vill – Churnipota, P.O – Nadia Bishnupur, P.S – Kotwali, Dist. – Nadia, Pin- 741103	14.03.2018
27	M/s. Lakshmi Narayan Service Station	D.L. Roy Road, Krishnagar, P.S – Kotwali, Dist. – Nadia, Pin- 741101	14.03.2018

Sl. No.	Name of the AETCs	Address of the AETCs	Issued date of Technical Evaluation Letter
28	M/s. Bishnu Auto Emission Testing Centre	Ratulia Dalbar, P.O – Ratulia, P.S- Panskura, Purba Medinipur	26.04.2017
29	M/s. Star Auto Emission Testing Centre	Brindabanpur, P.O – Mecheda, P.S – Kolaghat, Purba Medinipur	19.06.2017
30	M/s. Bhakti Pollution Centre	Vill& P.O – Dakshin Changrachak, P.S – Moyna, Purba Medinipur	19.06.2017
31	M/s. Rameswar Prasad Auto Emission Testing Centre	Vill – Nalagola Road, P.O – Bulbulchandi, P.S – Habibpur, Dist. – Malda, Pin- 732122	10.04.2017
32	M/s. Kalim Auto Emission Testing Centre	Vill- Jadupur, P.O- Jadupur, P.S- Kaliachak, Dist. – Malda, Pin- 732201	10.04.2017
33	M/s. Sairam Enterprise	Vill- Krishnamati (Haridasmati), P.O – Balarampur, P.S- Berhampore, Dist. – Murshidabad, Pin- 742165	26.04.2017
34	M/s. M/s. Aktar PUC Testing Centre	Vill& P.O- Sanmatinagar, P.S- Raghunathganj, Dist. – Murshidabad, Pin -742213	25.05.2017
35	M/s. KGN Smoke Testing Centre	Rasakhowa, Oppo. Of Petrol Pump, P.O – Rasakhowa, P.S – Karandighi, Dist.- Uttar Dinajpur, Pin- 733201	14.07.2017
36	M/s. Tubai Auto Emission Testing centre	Vill- Nasirhat, P.O – Dhankoi Hat, P.S – Kaliyaganj, Dist. – Uttar Dinajpur, Pin- 733129	14.07.2017
37	M/s. Das Auto Emission Testing Centre	Vill & P.O – Bhagwangola, P.S – Bhagwangola, Dist. – Murshidabad, Pin- 742135	25.08.2017
38	M/s. Bharatpur PUC Testing Centre	Vill.& P.O + P.S – Bharatpur, Dist. – Murshidabad, Pin- 742301	25.08.2017
39	M/s. Jiaganj Auto Emission Testing Centre	Villbagdagar, P.O. & P.S – Jaiganj, Dist. – Murshidabad, Pin- 742123	25.08.2017
40	M/s. Shiv Shakti Pollution Testing Centre	P.O – Tungidighi, P.S- Karandighi, Dist. – Uttar Dinajpur, Pin – 733215	13.09.2017
41	M/s. Buban Auto Emission Testing Centre	Vill P.O – Samsi, P.S- Ratun, Dist. – Malda, Pin- 732123	22.09.2017
42	M/a. Dey Auto Emission Testing Centre	Vill& P.O- Kotwali, P.S – English Bazar, Dist. – Malda, Pin- 732144	22.09.2017
43	M/s. Bogram Smoke Testing Centre	SH-10, Bogram, P.O – Karanjora, P.S- Raiganj, Dist.- Uttar Dinajpur, Pin- 733130	14.12.2017
44	M/s. Radha Krishna Auto Emission Testing Centre	NH-34, Kalibari, P.O – Bhapalpur, P.S – Raiganj, Dist.- Uttar Dinajpur, Pin – 733143	14.12.2017
45	M/s. MaaTaldanga PUC Testing Centre	Vill& P.O + P.S – Saktipur, Beside Saktipur Highway, Dist- Murshidabad, Pin – 742163	17.01.2018

Sl. No.	Name of the AETCs	Address of the AETCs	Issued date of Technical Evaluation Letter
46	M/s. Kiran Pollution Check Centre	Vill& P.O + P.S -Daulatabad, Dist. – Murshidabad, Pin -742302	15.02.2018
47	M/s. Dada Bhai Auto Emission Testing Centre	Vill – Sujapur (NH-34), P.O – Sujapur, P.S – Kaliachak, Dist. – Malda, Pin- 732206	08.03.2018
48	M/s. Joy MaaMonosa Auto Emission Testing Centre	Vill – MadiaGhat Road, P.O- Araidanga, P.S – Pukhuria, Dist – Malda, Pin – 732204	08.03.2018
49	M/s. Dalkhola Smoke Testing Centre	Nichitpur, (NH310), P.O – Dalkhola, Dist. – Uttar Dinajpur, Pin- 733201	15.03.2018

5.3 Various Training Programmes organised by the State Board during April 2017 to March 2018 for In-Service Police Personnel

Like earlier, this year also West Bengal pollution Control Board arranged about ten nos. training programmes for in-service Police Personnel of West Bengal and Kolkata Police Authority. Besides basic air, water, noise and Auto pollution control, a special training for exhaust emission testing of in use Petrol/LPG and diesel vehicles was also arranged for them. A practical demonstration was arranged at the Board's Auto Emission Testing room. Machine manufacturers also deliberated their valuable suggestions on auto exhaust emission testing procedure.

Course outlines of Training cum Awareness Programme for in-service police personnel:

1. Fundamentals of air, water and noise pollution
2. Automobile Pollution with practical training for exhaust emission testing of in use vehicles.
3. Waste management
4. Sources of pollution and their effects on human being
5. Instruments used for various pollution measurements
6. Environmental Laws and Legal provisions on pollution control
7. Audio-visual show on environmental pollution.

Table-5.5 : Training-Cum-Awareness Programme for In – Service Police Personnel during the period from April, 2017 – March, 2018

Sl. No.	Date of training	No. of persons trained
01	25.05.2017	30
02	27.07.2017	27
03	07.12.2017	31
04	08.02.2018	33
05	22.02.2018	27
06	22.03.2018	21
Total		**169**

Chapter- 6

ENVIRONMENTAL MONITORING PROGRAMME

6. A. Air Quality Monitoring

6.A.1. Introduction

Environmental considerations, at present, are gaining increasing significance due to rapid industrialization and urbanization throughout the world. Different pollutants released due to various industrial as well as other man-made activities including fast expanding vehicular traffic are causing deep concern to all kind of living organisms on the earth, adversely affecting their health.

Air pollutants are added in the atmosphere from variety of sources that change the composition of atmosphere and affect the biotic environment. The concentration of air pollutants depends not only on the quantities that are emitted from air pollution sources but also on the ability of the atmosphere to either absorb or disperse these emissions. The air pollution concentration varies spatially and temporarily causing the air pollution pattern to change with different locations and time due to changes in meteorological and topographical condition. The sources of air pollutants include vehicles, industries, domestic sources and natural sources. Because of the presence of high concentration of air pollutants in the ambient air, the health of the population and property is getting adversely affected. In order to arrest the deterioration in air quality, Govt. of India has enacted Air (Prevention and Control of Pollution) Act in 1981. The responsibility has been further emphasized under Environment (Protection) Act, 1986. It is necessary to assess the present and anticipated air pollution through continuous air quality survey/ monitoring programs. Therefore, the Central Pollution Control Board (CPCB), way back in 1984, initiated National Ambient Air Quality Monitoring (NAAQM) at national level to regularly monitor ambient air quality of selected major urban cities and industrial towns of the country. The objective of the NAAQM was to determine the present air quality status and trends, to assess the health hazards and damage to the property, to provide background air quality data as needed for industrial siting and town planning and to control and regulate pollution from industrial and other sources to meet the National Ambient Air Quality Standards (NAAQS). Although the NAAQM was started with 7 stations in Agra and Anpara, since then the number of monitoring stations has increased steadily, over the period covering all states and Union Territories. The programme was later renamed as National Air Monitoring Programme.

6.A.2 National Ambient Air Quality Standards (NAAQS)

The Central Pollution Control Board had adopted first ambient air quality standards on November 11, 1982 as per section 16 (2) (h) of the Air (Prevention and Control of Pollution) Act, 1981. The air quality standards have been revised by the Central Pollution Control Board on April 11, 1994 for industrial, residential and sensitive areas for seven parameters i.e. Suspended Particulate Matter (SPM), Respirable Particulate Matter (RPM), Sulphur Dioxide (SO_2), Oxides of Nitrogen (NO_x), Carbon Monoxide (CO), Ammonia (NH_3) and Lead (Pb), and were notified in Gazette of India, Extraordinary Part-II Section 3, sub section (ii), dated May 20, 1994. These standards were based on the land use and other factors of the area and provide the basis for protecting the public health from adverse effect of air pollution and limiting those contaminants of air that are known or likely to be hazardous to human beings, vegetation, animals and national heritage monuments within the adequate margin of safety.

Following a gap of fifteen (15) years, the Ministry of Environment and Forest (MoEF) has notified fourth version of **National Ambient Air Quality Standards (NAAQS 2009)** on 16th November 2009 vide G.S.R. 826(E) dated 16.11.2009. This revised national standard aims to provide uniform air quality for all, irrespective of land use pattern, across the country. There are twelve (12) identified health based parameters (**PM_{10}, $PM_{2.5}$, SO_2, NO_2, Ammonia, Ozone, Carbon monoxide, Benzene, Benzo (a) pyrene, Lead, Nickel, and Arsenic)** for that purpose.

Table- 6.A.1: National Ambient Air Quality Standards (NAAQS)

Pollutants	Time weighted average	NAAQS 20th May 1994 Concentration in ambient air			NAAQS 16th Nov 2009 Concentration in ambient air	
		Industrial area	Residential area	Sensitive area	Industrial, Residential, Rural & other areas	Ecologically sensitive area
Sulphur Dioxide (SO_2) in $\mu g/m^3$	Annual*	80	60	15	50	20
	24 Hours**	120	80	30	80	80
Nitrogen Dioxide (NO_2) in $\mu g/m^3$	Annual*	80	60	15	40	30
	24 Hours**	120	80	30	80	80
Suspended Particulate Matter (SPM) in $\mu g/m^3$	Annual*	360	140	70	-	-
	24 Hours**	500	200	100	-	-
Particulate Matter (Size <10ìm) or PM_{10} in $\mu g/m^3$	Annual*	120	60	50	60	60
	24 Hours**	150	100	75	100	100
Particulate Matter (Size <2.5 ìm) or $PM_{2.5}$ in $\mu g/m^3$	Annual*	-	-	-	40	40
	24 Hours**	-	-	-	60	60
Ozone (O_3), in ig/m^3	8 Hours**	-	-	-	100	100
	1 Hour**	-	-	-	180	180
Lead (Pb) in $\mu g/m^3$	Annual*	1.0	0.75	0.50	0.50	0.50
	24 Hours**	1.5	1.0	0.75	1.0	1.0
Carbon Monoxide (CO) in mg/m^3	8 Hours**	5	2	1	2	2
	1 Hour**	10	4	2	4	4
Ammonia (NH_3) in $\mu g/m^3$	Annual*	100			100	100
	24 Hours**		400		400	400
Benzene (C_6H_6)in $\mu g/m^3$	Annual*	-	-	-	05	05
Benzo(a)Pyrene (BaP) - particulate phase only in ng/m^3	Annual*	-	-	-	1	1
Arsenic (As) in ng/m^3	Annual*	-	-	-	6	6
Nickel (Ni) in ng/m^3	Annual*	-	-	-	20	20

NOTE : *Annual Arithmetic mean of minimum 104 measurements in a year twice a week 24 hourly at uniform interval.

** 24 hourly/8 hourly values should be met 98% of the time in a year. However, 2% of the time, it may exceed but not on two consecutive days.

6.A.3 Air quality monitoring in West Bengal

In West Bengal, the regular ambient air quality monitoring under NAMP was started at Kolkata, Howrah and Haldia and subsequently Durgapur and Asansol were included in the said network. Besides, these NAMP stations, the West Bengal Pollution Control Board have been regularly operating a large network monitoring stations in some other urban towns in this state under State Air Monitoring Programme (SAMP) since back.

The West Bengal Pollution Control Board has been monitoring ambient air quality in major urban cities and industrial areas of West Bengal through a large network of 75 stations located in all districts of West Bengal. All of 12 parameters [PM10, PM2.5, SO2, NO2, NH3, C_6H_6, O3, CO, B(a)P, Pb, Ni. As], for which standard have been notified under National Ambient Air Quality Standard (NAAQS-2009), are monitored at 4 stations and at remaining 62 stations air quality was monitored with respect to three major parameters [PM10, SO2, NO2]. In nine stations four parameters [PM_{10}, $PM_{2.5}$ SO2, NO_2] are being monitored. The entire monitoring network has been distributed in 7 groups.

During the year 2017-2018, data were generated from these stations and are made available in website of the Board (www.wbpcb.gov.in). These data are used for identifying the hot spots and also in preparation of both short term long term strategic planning for control and abatement of air pollution in this state. Besides, air quality data are also accessed by the general public and also by the students and academicians for various studies and research activities related to air pollution and its impact. The air quality data of are regularly sent to the CPCB for uploading the same in Environmental Data Bank. Details of the stations and parameters monitored in such stations are given below :

Table- 6.A.2: Semi-automated (Manual) Ambient Air Quality monitoring Stations with Parameters in West Bengal

Sl. No.	Station Name	Parameters
Group-1 - Kolkata & 24-Pgs(S) ([PM_{10} = 15 stn.]; [$PM_{2.5}$, Set1 = 2 stn.]; [$PM_{2.5}$, Set2 = 2 stn.]) Total – 19 Stations		
1	Dunlop Bridge	PM_{10}, SO_2, NO_2
2	Picnic Garden	PM_{10}, SO_2, NO_2
3	Tollygunge	PM_{10}, SO_2, NO_2
4	Hyde Road	PM_{10}, SO_2, NO_2
5	Behala Chowrasta	PM_{10}, SO_2, NO_2, $PM_{2.5}$, NH_3, O_3, CO, C_6H_6, B(a)P, Pb, Ni, As
6	Beliaghata	PM_{10}, SO_2, NO_2
7	Salt Lake	PM_{10}, SO_2, NO_2
8	Topsia	PM_{10}, SO_2, NO_2
9	Baishnabghata	PM_{10}, SO_2, NO_2
10	Ultadanga	PM_{10}, SO_2, NO_2
11	Mominpore	PM_{10}, SO_2, NO_2
12	Moulali	PM_{10}, SO_2, NO_2 + $PM_{2.5}$
13	Shyambazar	PM_{10}, SO_2, NO_2, $PM_{2.5}$, NH_3, O_3, CO, C_6H_6, B(a)P, Pb, Ni, As
14	Gariahat	PM_{10}, SO_2, NO_2
15	Minto Park	PM_{10}, SO_2, NO_2 + $PM_{2.5}$
16	Rajarhat	PM_{10}, SO_2, NO_2
17	Paribesh Bhawan	PM_{10}, SO_2, NO_2
18	Amtala	PM_{10}, SO_2, NO_2
19	Baruipur	PM_{10}, SO_2, NO_2

Sl. No.	Station Name	Parameters
Group-2 - Howrah ([PM_{10} = 7 stn.]; [$PM_{2.5}$, Set2 = 2 stn.]); Total – 9 Stations		
20	HMC	PM_{10}, SO_2, NO_2 + $PM_{2.5}$
21	Bator	PM_{10}, SO_2, NO_2 + $PM_{2.5}$
22	Bandhaghat	PM_{10}, SO_2, NO_2
23	Ghusuri	PM_{10}, SO_2, NO_2
24	Dhulagarh	PM_{10}, SO_2, NO_2
25	Sankrail	PM_{10}, SO_2, NO_2
26	Bagnan	PM_{10}, SO_2, NO_2
27	Amta	PM_{10}, SO_2, NO_2
28	Uluberia	PM_{10}, SO_2, NO_2
Group-3 - 24-Pgs (N), Nadia & Murshidabad ([PM_{10} = 6 stn.]; [$PM_{2.5}$, Set1 = 1 stn.]; [$PM_{2.5}$, Set2 = 1 stn.]) Total – 8 Stations		
29	Dum Dum	PM_{10}, SO_2, NO_2
30	Barrackpore	PM_{10}, SO_2, NO_2, $PM_{2.5}$, NH_3, O_3, CO, C_6H_6, B(a)P, Pb Ni, As
31	Khardah	PM_{10}, SO_2, NO_2
32	Barasat	PM_{10}, SO_2, NO_2
33	Kalyani	PM_{10}, SO_2, NO_2 + $PM_{2.5}$
34	Ranaghat	PM_{10}, SO_2, NO_2
35	Krishnanagar	PM_{10}, SO_2, NO_2
36	Baharampur	PM_{10}, SO_2, NO_2
Group-4 - Hooghly ([PM_{10} = 4 stn.]); Total – 4 Stations		
37	Dankuni	PM_{10}, SO_2, NO_2
38	Rishra	PM_{10}, SO_2, NO_2
39	Chinsurah	PM_{10}, SO_2, NO_2
40	Tribeni	PM_{10}, SO_2, NO_2
Group-5 – Purba Medinipur, Paschim Medinipur & Jhargram ([PM_{10} = 8 stn.]; [$PM_{2.5}$, Set2 = 1 stn.]); Total – 9 Stations		
41	Supermarket	PM_{10}, SO_2, NO_2 + $PM_{2.5}$
42	WBIIDC	PM_{10}, SO_2, NO_2
43	Bhabanipur	PM_{10}, SO_2, NO_2
44	Bhunia Raichak	PM_{10}, SO_2, NO_2
45	Kharagpur	PM_{10}, SO_2, NO_2
46	Medinipur Town	PM_{10}, SO_2, NO_2
47	Ghatal	PM_{10}, SO_2, NO_2
48	Tamluk	PM_{10}, SO_2, NO_2
49	Jhargram	PM_{10}, SO_2, NO_2

Sl. No.	Station Name	Parameters
Group-6 – Purba bardhaman, Paschim bardhaman, Bankura, Birbhum & Purulia ([PM_{10} = 14 stn.]; [$PM_{2.5}$, Set1 = 1 stn.]; [$PM_{2.5}$, Set2 = 1 stn.]); Total – 16 Stations		
50	Benachity	PM_{10}, SO_2, NO_2
51	PCBL More	PM_{10}, SO_2, NO_2
52	Bidhannagar	PM_{10}, SO_2, NO_2, $PM_{2.5}$, NH_3, O_3, CO, C_6H_6, B(a)P, Pb, Ni, As
53	Angadpur	PM_{10}, SO_2, NO_2
54	Mangalpur	PM_{10}, SO_2, NO_2
55	Raniganj	PM_{10}, SO_2, NO_2
56	Jamuria	PM_{10}, SO_2, NO_2
57	Asansol	PM_{10}, SO_2, NO_2 + $PM_{2.5}$
58	Burnpur	PM_{10}, SO_2, NO_2
59	Bardhaman Town	PM_{10}, SO_2, NO_2
60	Barjora	PM_{10}, SO_2, NO_2
61	Bankura Town	PM_{10}, SO_2, NO_2
62	Suri Town	PM_{10}, SO_2, NO_2
63	Rampurhat Town	PM_{10}, SO_2, NO_2
64	Bolpur Town	PM_{10}, SO_2, NO_2
65	Purulia Town	PM_{10}, SO_2, NO_2
Group-7 – North Bengal ([PM_{10} = 8 stn.]; [$PM_{2.5}$, Set2 = 2 stn.]); Total 10 Stations		
66	Malda (WBPCB Office)	PM_{10}, SO_2, NO_2
67	Siliguri	PM_{10}, SO_2, NO_2 + $PM_{2.5}$
68	Jalpaiguri Ramnagar, WBIIDC	PM_{10}, SO_2, NO_2
69	Darjeeling	PM_{10}, SO_2, NO_2 + $PM_{2.5}$
70	Coochbihar B.M. Seal College	PM_{10}, SO_2, NO_2
71	Uttarbanga Krishi Vishvavidyalaya	PM_{10}, SO_2, NO_2
72	Balurghat College	PM_{10}, SO_2, NO_2
73	Raigunj College	PM_{10}, SO_2, NO_2
74	Kalimpong Municipality	PM_{10}, SO_2, NO_2
75	Alipurduar, Rabikanta High School	PM_{10}, SO_2, NO_2

Besides these manual (semi-automatic) stations, the Board also monitors air quality round the clock through eight automatic air quality monitoring stations at the following stations. These automatic stations continuously monitor air quality parameters like PM_{10}, $PM_{2.5}$, SO_2, NO_2, NO_2, NH_3, O_3, CO, C_6H_6 and meteorological parameters like wind speed, wind direction, relative humidity, temperature etc.

Table- 6.A.3: District wise Continuous (Automated) Stations

District	Sl. No.	Monitoring Location/Stations	Parameters
Kolkata	1	Victoria Memorial Hall	PM_{10}, $PM_{2.5}$, SO_2, NO_2, NH_3, O_3, CO, C_6H_6
	2	Rabindra Bharati University	Being upgraded
Howrah	1	Ghusuri Pumping Station, Howrah	PM_{10}, $PM_{2.5}$, SO_2, NO_2, NH_3, O_3, CO, C_6H_6
	2	Padma Pukur Water Works, Howrah	PM_{10}, $PM_{2.5}$, SO_2, NO_2, NH_3, O_3, CO, C_6H_6
Purba Medinipur	1	Priyambada Housing Estate, Haldia	PM_{10}, SO_2, NO_2, O_3, CO
Purba Bardhaman		City Centre, Sidhu Kanu Dahar Stadium, Durgapur	PM_{10}, SO_2, NO_2, O_3, CO
Paschim Bardhaman	1	Asansol, SDO Residence	PM_{10}, $PM_{2.5}$, SO_2, NO_2, NH_3, O_3, CO, C_6H_6
Darjeeling		Siliguri, Tinbatti More	PM_{10}, $PM_{2.5}$, SO_2, NO_2, NH_3, O_3, CO, C_6H_6

(A) Air Quality of Kolkata

Air Quality of different regions, in the city of Kolkata is fast deteriorating, inviting immediate attention from every quarter of the society to contain the release of various pollutants to the desired level, through the adoption of both technological measures and the legislative imposition.

Hence, Air Quality Monitoring assumes a significant dimension to arrive at any meaningful conclusion to take any decision in this regard. Air quality of Kolkata was monitored through seventen (17) semi automated (manual) and two (2) continous (automated) stations for obtaining representative air quality information. Parameters monitored in these seventeen stations during April, 2017 – March, 2018 are shown in Tables 6.A.4 (a) – 6.A.4 (q) and in Figures 6.A.1 (a) – 6.A.1(d).

Table- 6.A.4: Ambient air quality of Kolkata during 2017-2018

	Dunlop								(a)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	107.33	-	4.73	37.35	-	-	-	-	-	-	-	-
May'17	93.23	-	3.67	35.43	-	-	-	-	-	-	-	-
Jun'17	73.67	-	3.65	32.13	-	-	-	-	-	-	-	-
July'17	74.54	-	3.60	32.35	-	-	-	-	-	-	-	-
Aug'17	87.59	-	4.15	33.20	-	-	-	-	-	-	-	-
Sep'17	85.04	-	4.65	35.52	-	-	-	-	-	-	-	-
Oct'17	104.93	-	5.15	38.89	-	-	-	-	-	-	-	-
Nov'17	194.33	-	8.69	53.43	-	-	-	-	-	-	-	-
Dec'17	257.42	-	11.48	63.31	-	-	-	-	-	-	-	-
Jan'18	326.14	-	13.67	72.49	-	-	-	-	-	-	-	-
Feb'18	249.33	-	10.57	59.02	-	-	-	-	-	-	-	-
Mar'18	164.00	-	6.46	44.48	-	-	-	-	-	-	-	-

Ultadanga									(b)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	98.37	-	3.87	35.46	-	-	-	-	-	-	-	-
May'17	87.88	-	3.31	31.94	-	-	-	-	-	-	-	-
Jun'17	66.56	-	2.93	29.87	-	-	-	-	-	-	-	-
July'17	62.74	-	2.81	29.02	-	-	-	-	-	-	-	-
Aug'17	73.85	-	3.63	29.61	-	-	-	-	-	-	-	-
Sep'17	90.79	-	4.69	37.04	-	-	-	-	-	-	-	-
Oct'17	89.31	-	4.43	35.53	-	-	-	-	-	-	-	-
Nov'17	161.07	-	6.76	45.17	-	-	-	-	-	-	-	-
Dec'17	241.63	-	9.57	58.28	-	-	-	-	-	-	-	-
Jan'18	298.78	-	11.07	65.44	-	-	-	-	-	-	-	-
Feb'18	227.94	-	8.38	51.90	-	-	-	-	-	-	-	-
Mar'18	153.41	-	5.15	39.98	-	-	-	-	-	-	-	-

Salt Lake									(c)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	80.70	-	2.35	28.93	-	-	-	-	-	-	-	-
May'17	73.37	-	2.59	27.76	-	-	-	-	-	-	-	-
Jun'17	61.29	-	2.46	26.02	-	-	-	-	-	-	-	-
July'17	60.89	-	2.37	25.02	-	-	-	-	-	-	-	-
Aug'17	58.78	-	2.46	24.72	-	-	-	-	-	-	-	-
Sep'17	71.22	-	3.24	30.06	-	-	-	-	-	-	-	-
Oct'17	72.27	-	2.82	28.85	-	-	-	-	-	-	-	-
Nov'17	122.42	-	3.44	35.90	-	-	-	-	-	-	-	-
Dec'17	180.89	-	5.50	43.69	-	-	-	-	-	-	-	-
Jan'18	224.25	-	6.87	49.12	-	-	-	-	-	-	-	-
Feb'18	160.13	-	4.18	39.34	-	-	-	-	-	-	-	-
Mar'18	125.63	-	3.04	31.57	-	-	-	-	-	-	-	-

Paribesh Bhawan									(d)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	89.63	-	3.35	32.81	-	-	-	-	-	-	-	-
May'17	75.70	-	2.73	29.68	-	-	-	-	-	-	-	-
Jun'17	55.75	-	2.42	24.98	-	-	-	-	-	-	-	-
July'17	60.33	-	2.60	26.79	-	-	-	-	-	-	-	-
Aug'17	62.89	-	2.65	26.83	-	-	-	-	-	-	-	-
Sep'17	68.48	-	3.24	30.93	-	-	-	-	-	-	-	-
Oct'17	81.19	-	3.46	31.90	-	-	-	-	-	-	-	-
Nov'17	171.52	-	6.07	44.20	-	-	-	-	-	-	-	-
Dec'17	219.00	-	7.29	52.60	-	-	-	-	-	-	-	-
Jan'18	250.73	-	8.46	57.31	-	-	-	-	-	-	-	-
Feb'18	194.88	-	6.07	45.32	-	-	-	-	-	-	-	-
Mar'18	139.38	-	3.96	35.06	-	-	-	-	-	-	-	-

Moulali More									(e)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	107.70	49.56	4.33	37.26	-	-	-	-	-	-	-	-
May'17	99.13	45.13	4.06	34.40	-	-	-	-	-	-	-	-
Jun'17	73.67	38.44	3.24	32.20	-	-	-	-	-	-	-	-
July'17	71.15	41.89	3.31	31.13	-	-	-	-	-	-	-	-
Aug'17	84.41	48.00	4.26	32.28	-	-	-	-	-	-	-	-
Sep'17	100.42	55.38	5.44	38.71	-	-	-	-	-	-	-	-
Oct'17	101.86	56.83	5.36	38.85	-	-	-	-	-	-	-	-
Nov'17	169.15	86.56	7.48	47.33	-	-	-	-	-	-	-	-
Dec'17	256.78	138.78	10.50	60.96	-	-	-	-	-	-	-	-
Jan'18	325.37	170.58	13.16	71.78	-	-	-	-	-	-	-	-
Feb'18	250.85	130.21	10.51	57.42	-	-	-	-	-	-	-	-
Mar'18	150.15	72.89	5.98	41.76	-	-	-	-	-	-	-	-

Minto Park More									(f)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	87.54	45.75	3.08	31.73	-	-	-	-	-	-	-	-
May'17	83.67	38.50	2.85	31.43	-	-	-	-	-	-	-	-
Jun'17	75.58	38.25	3.17	29.46	-	-	-	-	-	-	-	-
July'17	73.37	40.78	3.22	29.20	-	-	-	-	-	-	-	-
Aug'17	70.04	39.50	3.19	28.08	-	-	-	-	-	-	-	-
Sep'17	71.19	43.33	3.57	30.91	-	-	-	-	-	-	-	-
Oct'17	84.89	48.67	3.57	33.04	-	-	-	-	-	-	-	-
Nov'17	151.81	83.33	5.54	43.06	-	-	-	-	-	-	-	-
Dec'17	212.58	120.63	8.06	53.88	-	-	-	-	-	-	-	-
Jan'18	260.44	138.03	8.60	58.71	-	-	-	-	-	-	-	-
Feb'18	190.36	97.29	6.23	46.82	-	-	-	-	-	-	-	-
Mar'18	137.11	69.89	4.33	36.41	-	-	-	-	-	-	-	-

Baishnabghata									(g)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	80.17	-	2.42	28.42	-	-	-	-	-	-	-	-
May'17	69.73	-	2.22	26.90	-	-	-	-	-	-	-	-
Jun'17	52.46	-	2.19	23.33	-	-	-	-	-	-	-	-
July'17	57.54	-	2.25	24.27	-	-	-	-	-	-	-	-
Aug'17	56.78	-	2.28	24.85	-	-	-	-	-	-	-	-
Sep'17	61.81	-	2.81	27.89	-	-	-	-	-	-	-	-
Oct'17	69.93	-	2.59	28.24	-	-	-	-	-	-	-	-
Nov'17	139.63	-	4.07	36.89	-	-	-	-	-	-	-	-
Dec'17	188.50	-	4.81	43.79	-	-	-	-	-	-	-	-
Jan'18	227.56	-	6.51	49.61	-	-	-	-	-	-	-	-
Feb'18	162.93	-	4.40	38.70	-	-	-	-	-	-	-	-
Mar'18	119.33	-	3.30	32.19	-	-	-	-	-	-	-	-

Shyam Bazar									(h)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	101.92	51.25	4.00	36.67	24.27	29.64	0.77	2.56	0.39	0.95	0.11	4.00
May'17	90.59	43.00	3.59	32.61	22.66	28.54	0.75	2.21	0.36	0.84	0.10	4.33
Jun'17	72.00	38.33	3.37	30.37	18.25	24.53	0.69	2.41	0.12	0.80	0.08	4.00
July'17	87.04	49.13	3.83	33.00	15.81	17.89	0.71	2.33	0.27	0.85	0.10	4.75
Aug'17	78.67	43.89	3.41	30.69	18.62	18.56	0.70	2.32	0.15	0.84	0.08	4.00
Sep'17	96.29	53.75	5.13	37.27	21.21	22.95	0.75	2.29	0.27	0.80	0.09	4.58
Oct'17	103.30	54.22	4.61	36.37	19.55	19.41	0.74	2.32	0.49	1.06	0.12	5.92
Nov'17	171.58	83.75	7.04	47.50	24.11	26.66	0.81	2.72	1.24	1.98	0.17	13.46
Dec'17	243.27	118.70	9.67	58.58	31.75	27.59	0.90	3.83	1.47	6.03	0.44	25.93
Jan'18	294.57	157.10	11.53	66.29	33.23	32.10	0.93	4.40	1.76	6.75	0.31	27.50
Feb'18	215.35	114.00	8.39	52.67	28.18	27.74	0.86	4.12	1.65	3.06	0.26	22.84
Mar'18	151.67	74.44	5.35	41.56	21.13	24.32	0.79	3.42	1.15	1.82	0.16	14.09

Behala Chowrasta									(i)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	96.00	45.44	3.81	34.98	23.83	28.62	0.78	2.64	0.30	0.84	0.11	4.00
May'17	93.41	42.89	3.52	32.20	21.63	28.12	0.77	2.34	0.38	0.89	0.10	4.67
Jun'17	71.04	37.13	3.13	30.10	18.32	23.61	0.71	2.43	0.12	0.80	0.08	4.00
July'17	73.67	42.22	3.07	30.20	15.45	16.15	0.66	2.26	0.15	0.80	0.08	4.00
Aug'17	67.70	40.67	3.09	27.80	18.59	19.25	0.68	2.20	0.12	0.80	0.07	4.00
Sep'17	84.74	47.33	4.44	34.74	18.25	18.30	0.70	2.16	0.12	0.80	0.07	4.00
Oct'17	88.37	49.56	3.81	33.09	18.23	18.33	0.71	2.27	0.31	0.93	0.10	5.08
Nov'17	167.88	85.25	6.00	45.42	24.61	26.48	0.82	2.71	0.98	1.97	0.18	14.84
Dec'17	248.70	129.78	9.59	56.19	28.72	26.09	0.88	3.74	1.36	5.81	0.29	21.46
Jan'18	290.14	155.71	11.75	64.47	33.05	32.46	0.95	4.39	1.77	6.44	0.31	27.99
Feb'18	213.00	112.14	7.93	51.97	28.29	27.30	0.85	4.03	1.56	3.26	0.22	19.85
Mar'18	149.33	73.89	4.94	39.87	22.32	24.82	0.82	3.45	1.10	1.73	0.15	11.44

Picnic Garden									(j)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	74.67	-	2.31	27.94	-	-	-	-	-	-	-	-
May'17	67.79	-	2.27	25.85	-	-	-	-	-	-	-	-
Jun'17	47.63	-	2.04	23.59	-	-	-	-	-	-	-	-
July'17	46.19	-	2.07	23.43	-	-	-	-	-	-	-	-
Aug'17	45.85	-	2.11	23.37	-	-	-	-	-	-	-	-
Sep'17	66.29	-	2.83	29.35	-	-	-	-	-	-	-	-
Oct'17	66.15	-	2.69	28.91	-	-	-	-	-	-	-	-
Nov'17	127.37	-	3.80	33.52	-	-	-	-	-	-	-	-
Dec'17	188.22	-	5.31	42.41	-	-	-	-	-	-	-	-
Jan'18	211.72	-	5.79	48.03	-	-	-	-	-	-	-	-
Feb'18	159.65	-	4.05	37.83	-	-	-	-	-	-	-	-
Mar'18	107.30	-	2.72	29.57	-	-	-	-	-	-	-	-

Tollygunge									(k)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	86.83	-	2.90	30.69	-	-	-	-	-	-	-	-
May'17	71.33	-	2.33	27.63	-	-	-	-	-	-	-	-
Jun'17	52.70	-	2.15	24.44	-	-	-	-	-	-	-	-
July'17	54.44	-	2.31	24.39	-	-	-	-	-	-	-	-
Aug'17	50.48	-	2.15	24.46	-	-	-	-	-	-	-	-
Sep'17	77.83	-	3.52	31.94	-	-	-	-	-	-	-	-
Oct'17	74.89	-	3.02	30.46	-	-	-	-	-	-	-	-
Nov'17	140.00	-	4.33	38.52	-	-	-	-	-	-	-	-
Dec'17	184.87	-	5.92	45.55	-	-	-	-	-	-	-	-
Jan'18	241.60	-	7.45	52.53	-	-	-	-	-	-	-	-
Feb'18	166.69	-	4.68	43.55	-	-	-	-	-	-	-	-
Mar'18	120.30	-	3.39	32.65	-	-	-	-	-	-	-	-

Hyde Road									(l)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	143.96	-	5.19	42.17	-	-	-	-	-	-	-	-
May'17	121.56	-	4.89	37.06	-	-	-	-	-	-	-	-
Jun'17	92.26	-	3.96	33.26	-	-	-	-	-	-	-	-
July'17	113.04	-	4.54	35.13	-	-	-	-	-	-	-	-
Aug'17	90.93	-	4.02	32.37	-	-	-	-	-	-	-	-
Sep'17	121.38	-	5.90	40.98	-	-	-	-	-	-	-	-
Oct'17	124.52	-	5.46	40.09	-	-	-	-	-	-	-	-
Nov'17	201.38	-	8.17	51.88	-	-	-	-	-	-	-	-
Dec'17	271.23	-	11.47	63.18	-	-	-	-	-	-	-	-
Jan'18	334.59	-	13.01	70.41	-	-	-	-	-	-	-	-
Feb'18	256.51	-	10.34	58.02	-	-	-	-	-	-	-	-
Mar'18	169.56	-	6.59	45.87	-	-	-	-	-	-	-	-

Beliaghata									(m)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	78.29	-	2.56	29.38	-	-	-	-	-	-	-	-
May'17	61.22	-	2.15	26.44	-	-	-	-	-	-	-	-
Jun'17	50.81	-	2.11	25.17	-	-	-	-	-	-	-	-
July'17	53.15	-	2.33	24.50	-	-	-	-	-	-	-	-
Aug'17	50.89	-	2.22	24.24	-	-	-	-	-	-	-	-
Sep'17	78.38	-	3.63	31.98	-	-	-	-	-	-	-	-
Oct'17	73.44	-	3.01	30.01	-	-	-	-	-	-	-	-
Nov'17	139.67	-	4.50	37.90	-	-	-	-	-	-	-	-
Dec'17	200.07	-	6.87	46.65	-	-	-	-	-	-	-	-
Jan'18	239.69	-	7.36	54.94	-	-	-	-	-	-	-	-
Feb'18	171.75	-	4.91	43.50	-	-	-	-	-	-	-	-
Mar'18	127.19	-	3.31	33.11	-	-	-	-	-	-	-	-

Topsia									(n)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	119.07	-	5.00	38.76	-	-	-	-	-	-	-	-
May'17	103.00	-	4.28	34.65	-	-	-	-	-	-	-	-
Jun'17	75.71	-	3.54	32.52	-	-	-	-	-	-	-	-
July'17	72.59	-	3.33	30.31	-	-	-	-	-	-	-	-
Aug'17	69.93	-	3.20	29.09	-	-	-	-	-	-	-	-
Sep'17	86.93	-	4.56	35.17	-	-	-	-	-	-	-	-
Oct'17	89.19	-	4.02	33.13	-	-	-	-	-	-	-	-
Nov'17	159.88	-	6.29	46.56	-	-	-	-	-	-	-	-
Dec'17	239.93	-	9.83	57.83	-	-	-	-	-	-	-	-
Jan'18	294.79	-	12.93	65.52	-	-	-	-	-	-	-	-
Feb'18	217.67	-	9.13	52.80	-	-	-	-	-	-	-	-
Mar'18	160.15	-	6.02	42.80	-	-	-	-	-	-	-	-

Mominpur									(o)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	83.33	-	2.65	30.78	-	-	-	-	-	-	-	-
May'17	67.78	-	2.37	26.72	-	-	-	-	-	-	-	-
Jun'17	55.75	-	2.19	24.69	-	-	-	-	-	-	-	-
July'17	48.78	-	2.19	23.11	-	-	-	-	-	-	-	-
Aug'17	50.00	-	2.11	23.00	-	-	-	-	-	-	-	-
Sep'17	65.52	-	3.04	28.56	-	-	-	-	-	-	-	-
Oct'17	63.78	-	2.57	27.02	-	-	-	-	-	-	-	-
Nov'17	126.13	-	3.77	36.35	-	-	-	-	-	-	-	-
Dec'17	184.78	-	5.94	44.91	-	-	-	-	-	-	-	-
Jan'18	223.52	-	7.19	50.30	-	-	-	-	-	-	-	-
Feb'18	166.87	-	4.92	41.93	-	-	-	-	-	-	-	-
Mar'18	134.04	-	3.41	34.00	-	-	-	-	-	-	-	-

Gariahat									(p)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	86.07	-	2.91	31.39	-	-	-	-	-	-	-	-
May'17	75.92	-	2.54	28.44	-	-	-	-	-	-	-	-
Jun'17	55.22	-	2.19	26.09	-	-	-	-	-	-	-	-
July'17	51.56	-	2.26	25.74	-	-	-	-	-	-	-	-
Aug'17	56.96	-	2.41	25.85	-	-	-	-	-	-	-	-
Sep'17	81.00	-	3.65	33.19	-	-	-	-	-	-	-	-
Oct'17	76.41	-	3.31	31.91	-	-	-	-	-	-	-	-
Nov'17	138.11	-	4.91	38.67	-	-	-	-	-	-	-	-
Dec'17	211.56	-	7.09	49.15	-	-	-	-	-	-	-	-
Jan'18	259.42	-	7.99	56.51	-	-	-	-	-	-	-	-
Feb'18	199.46	-	6.38	45.24	-	-	-	-	-	-	-	-
Mar'18	128.78	-	3.87	35.46	-	-	-	-	-	-	-	-

Rajarhat												(q)
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	59.30	-	2.11	24.65	-	-	-	-	-	-	-	-
May'17	53.83	-	2.04	23.23	-	-	-	-	-	-	-	-
Jun'17	38.67	-	2.00	21.09	-	-	-	-	-	-	-	-
July'17	40.63	-	2.00	21.63	-	-	-	-	-	-	-	-
Aug'17	41.67	-	2.04	21.37	-	-	-	-	-	-	-	-
Sep'17	51.33	-	2.48	25.33	-	-	-	-	-	-	-	-
Oct'17	53.67	-	2.29	25.11	-	-	-	-	-	-	-	-
Nov'17	110.96	-	3.00	29.24	-	-	-	-	-	-	-	-
Dec'17	163.78	-	3.89	35.37	-	-	-	-	-	-	-	-
Jan'18	179.93	-	4.54	41.04	-	-	-	-	-	-	-	-
Feb'18	133.94	-	3.15	33.77	-	-	-	-	-	-	-	-
Mar'18	84.70	-	2.22	27.24	-	-	-	-	-	-	-	-

Figure - 6.A.1 (a)

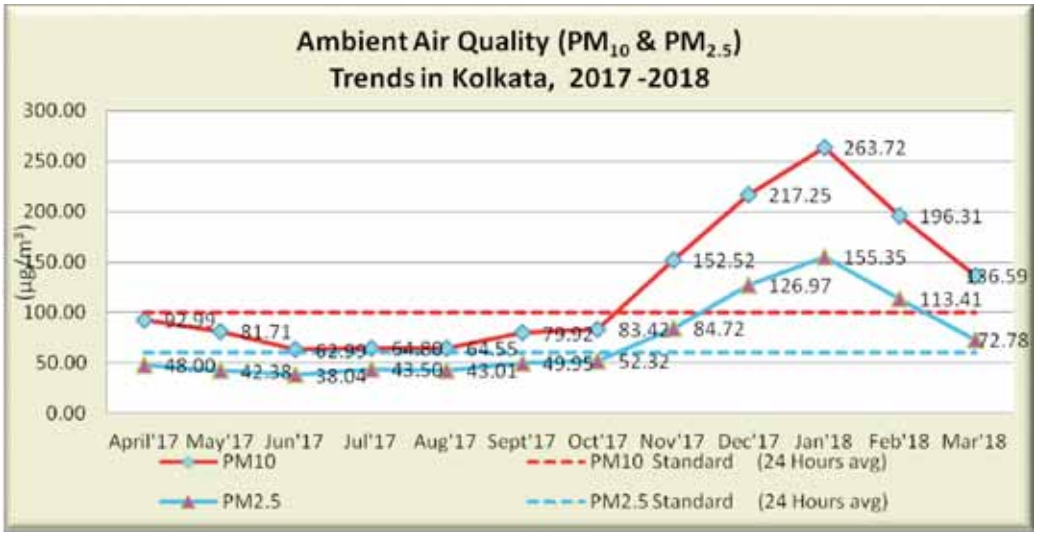


Figure - 6.A.1 (b)

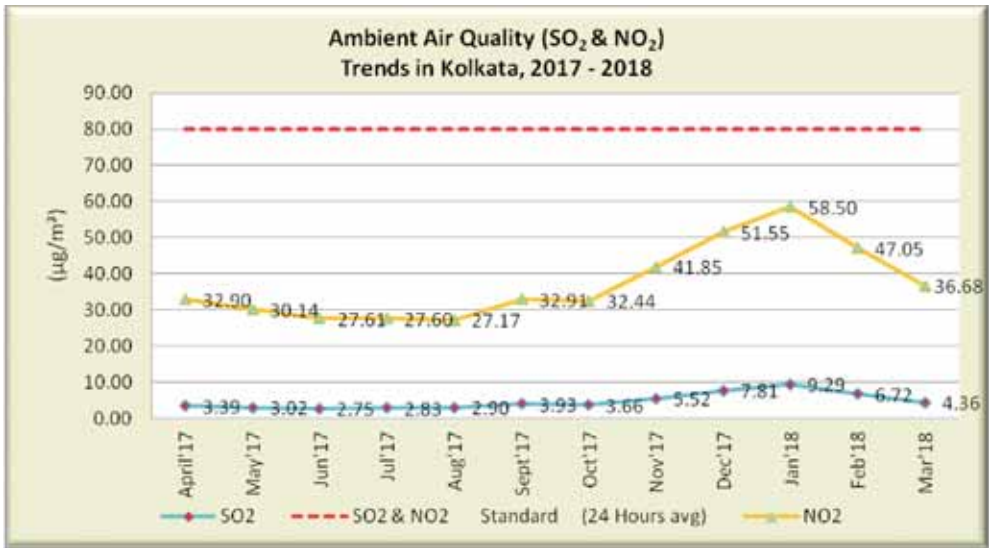


Figure - 6.A.1 (c)

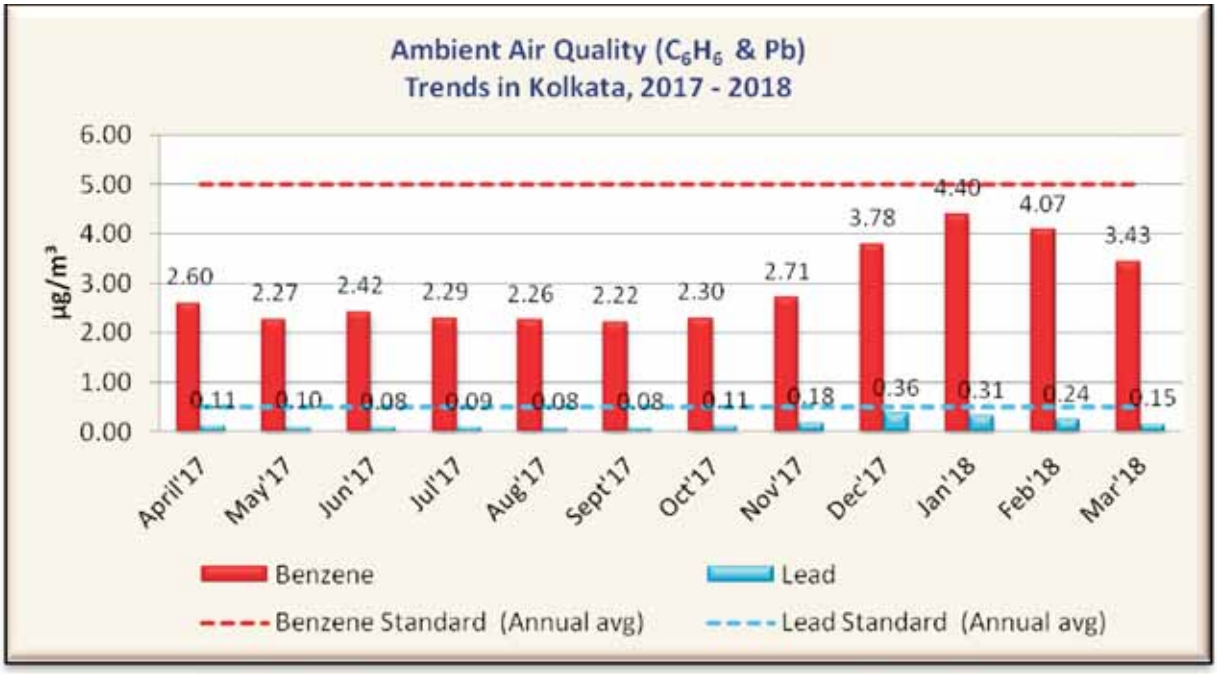
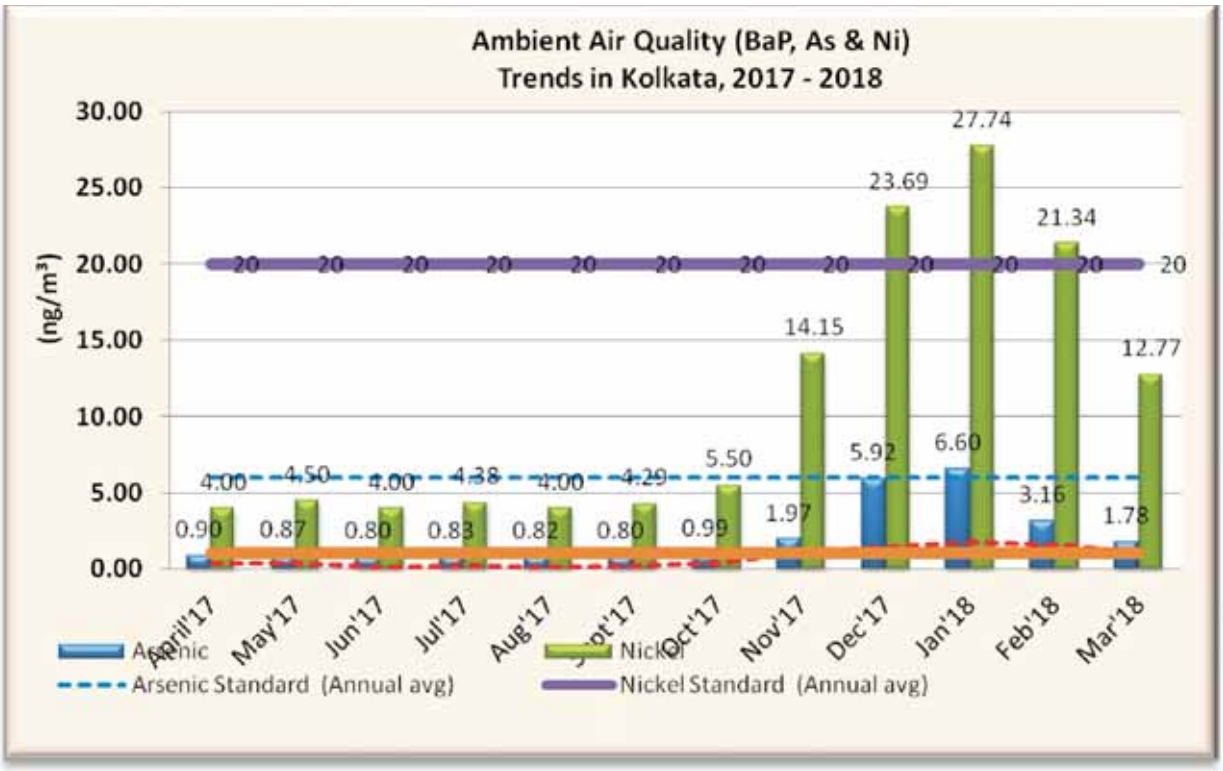


Figure - 6.A.1 (d)



(B) Air quality of Howrah district

During April, 2017 – April, 2018, air quality of Howrah district was monitored through nine (9) semi-automated (manual) & 2 (two) continous (automated) station. Parameters monitored in these stations are shown in Tables 6.A.5 (a) – 6.A.5 (i) and in Figures 6.A.2(a) – 6.A.2(b).

Table- 6.A.5: Ambient air quality of Howrah during 2017-18

Batore (Howrah)												2(a)
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	79.00	43.00	8.20	53.10	-	-	-	-	-	-	-	-
May'17	81.00	38.00	7.40	52.40	-	-	-	-	-	-	-	-
Jun'17	53.00	31.00	7.20	52.20	-	-	-	-	-	-	-	-
July'17	46.00	29.00	6.70	47.80	-	-	-	-	-	-	-	-
Aug'17	46.00	27.00	6.80	53.00	-	-	-	-	-	-	-	-
Sep'17	53.00	31.00	7.30	50.80	-	-	-	-	-	-	-	-
Oct'17	61.00	36.00	8.20	47.50	-	-	-	-	-	-	-	-
Nov'17	145.00	81.00	9.10	65.60	-	-	-	-	-	-	-	-
Dec'17	196.00	135.00	10.10	67.80	-	-	-	-	-	-	-	-
Jan'18	296.00	165.00	11.60	85.30	-	-	-	-	-	-	-	-
Feb'18	191.00	106.00	10.40	76.60	-	-	-	-	-	-	-	-
Mar'18	136.00	74.00	7.30	58.40	-	-	-	-	-	-	-	-

HMC (Howrah)												Table - (b)
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	82.00	44.00	10.70	67.50	-	-	-	-	-	-	-	-
May'17	75.00	37.00	8.60	63.30	-	-	-	-	-	-	-	-
Jun'17	47.00	27.00	7.90	59.00	-	-	-	-	-	-	-	-
July'17	47.00	29.00	7.40	50.60	-	-	-	-	-	-	-	-
Aug'17	53.00	30.00	7.80	57.50	-	-	-	-	-	-	-	-
Sep'17	66.00	41.00	8.40	53.50	-	-	-	-	-	-	-	-
Oct'17	70.00	38.00	9.50	46.10	-	-	-	-	-	-	-	-
Nov'17	216.00	91.00	10.10	81.20	-	-	-	-	-	-	-	-
Dec'17	291.00	136.00	13.40	106.50	-	-	-	-	-	-	-	-
Jan'18	378.00	193.00	15.00	133.90	-	-	-	-	-	-	-	-
Feb'18	263.00	128.00	13.70	110.10	-	-	-	-	-	-	-	-
Mar'18	194.00	94.00	9.40	87.60	-	-	-	-	-	-	-	-

Bandhaghat (HMC)												2 (c)
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	72.00	-	11.70	64.20	-	-	-	-	-	-	-	-
May'17	72.00	-	8.90	59.80	-	-	-	-	-	-	-	-
Jun'17	54.00	-	9.20	63.00	-	-	-	-	-	-	-	-
July'17	47.00	-	8.00	54.20	-	-	-	-	-	-	-	-
Aug'17	52.00	-	9.30	58.80	-	-	-	-	-	-	-	-
Sep'17	58.00	-	9.20	59.90	-	-	-	-	-	-	-	-
Oct'17	73.00	-	10.00	57.00	-	-	-	-	-	-	-	-
Nov'17	167.00	-	14.40	73.20	-	-	-	-	-	-	-	-
Dec'17	237.00	-	15.80	80.80	-	-	-	-	-	-	-	-
Jan'18	340.00	-	18.10	104.60	-	-	-	-	-	-	-	-
Feb'18	195.00	-	18.50	92.20	-	-	-	-	-	-	-	-
Mar'18	133.00	-	10.50	73.00	-	-	-	-	-	-	-	-

Month	Ghusuri (Howrah)											(d)
	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	67.00	-	10.90	45.70	-	-	-	-	-	-	-	-
May'17	57.00	-	8.60	44.10	-	-	-	-	-	-	-	-
Jun'17	44.00	-	6.50	40.00	-	-	-	-	-	-	-	-
July'17	38.00	-	6.10	39.30	-	-	-	-	-	-	-	-
Aug'17	39.00	-	6.00	41.20	-	-	-	-	-	-	-	-
Sep'17	49.00	-	6.00	37.90	-	-	-	-	-	-	-	-
Oct'17	62.00	-	9.10	37.70	-	-	-	-	-	-	-	-
Nov'17	172.00	-	10.40	53.60	-	-	-	-	-	-	-	-
Dec'17	251.00	-	11.50	73.60	-	-	-	-	-	-	-	-
Jan'18	316.00	-	14.10	74.80	-	-	-	-	-	-	-	-
Feb'18	191.00	-	13.90	68.20	-	-	-	-	-	-	-	-
Mar'18	124.00	-	9.10	54.00	-	-	-	-	-	-	-	-

Figure - 6.A.2 (a)

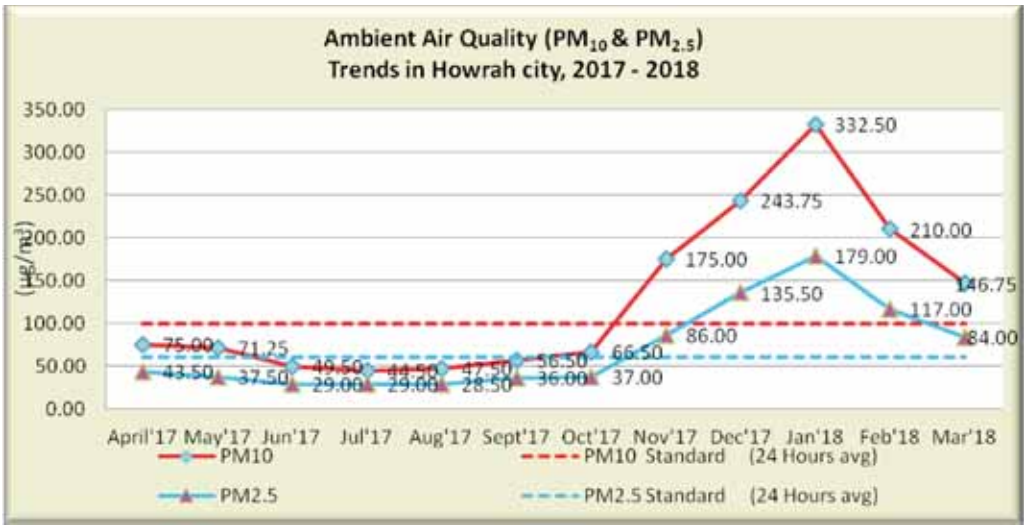
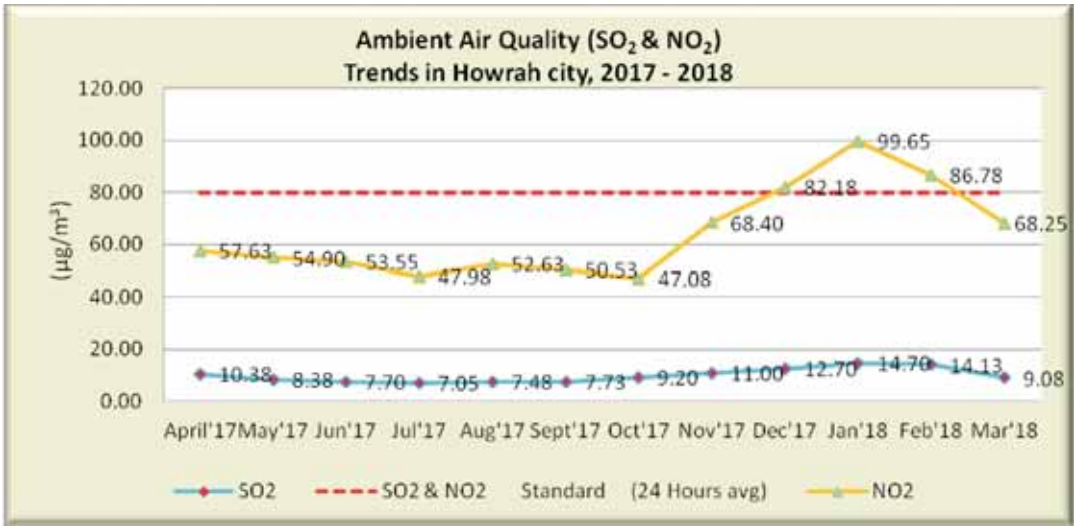


Figure - 6.A.2 (b)



Dhulagarh									(e)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	64.00	-	5.60	35.60	-	-	-	-	-	-	-	-
May'17	50.00	-	4.80	36.10	-	-	-	-	-	-	-	-
Jun'17	46.00	-	4.50	31.90	-	-	-	-	-	-	-	-
July'17	36.00	-	4.40	29.00	-	-	-	-	-	-	-	-
Aug'17	37.00	-	4.30	31.10	-	-	-	-	-	-	-	-
Sep'17	42.00	-	5.20	33.50	-	-	-	-	-	-	-	-
Oct'17	53.00	-	6.10	31.30	-	-	-	-	-	-	-	-
Nov'17	104.00	-	5.60	40.60	-	-	-	-	-	-	-	-
Dec'17	140.00	-	5.70	40.90	-	-	-	-	-	-	-	-
Jan'18	204.00	-	6.00	47.20	-	-	-	-	-	-	-	-
Feb'18	146.00	-	5.80	42.50	-	-	-	-	-	-	-	-
Mar'18	90.00	-	4.30	34.60	-	-	-	-	-	-	-	-

Sankrail									(f)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	62.00	-	5.40	33.10	-	-	-	-	-	-	-	-
May'17	45.00	-	4.30	32.70	-	-	-	-	-	-	-	-
Jun'17	35.00	-	4.00	29.10	-	-	-	-	-	-	-	-
July'17	28.00	-	4.60	26.30	-	-	-	-	-	-	-	-
Aug'17	29.00	-	4.40	26.40	-	-	-	-	-	-	-	-
Sep'17	43.00	-	5.10	26.60	-	-	-	-	-	-	-	-
Oct'17	49.00	-	5.40	27.30	-	-	-	-	-	-	-	-
Nov'17	128.00	-	5.60	32.50	-	-	-	-	-	-	-	-
Dec'17	185.00	-	6.00	43.00	-	-	-	-	-	-	-	-
Jan'18	219.00	-	6.30	43.80	-	-	-	-	-	-	-	-
Feb'18	173.00	-	6.00	39.20	-	-	-	-	-	-	-	-
Mar'18	98.00	-	4.80	31.50	-	-	-	-	-	-	-	-

Bagnan									(g)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	53.00	-	5.10	37.80	-	-	-	-	-	-	-	-
May'17	53.00	-	4.90	37.50	-	-	-	-	-	-	-	-
Jun'17	41.00	-	4.30	30.10	-	-	-	-	-	-	-	-
July'17	28.00	-	4.00	27.00	-	-	-	-	-	-	-	-
Aug'17	32.00	-	5.00	29.20	-	-	-	-	-	-	-	-
Sep'17	40.00	-	5.30	30.30	-	-	-	-	-	-	-	-
Oct'17	51.00	-	5.60	29.20	-	-	-	-	-	-	-	-
Nov'17	109.00	-	5.70	38.10	-	-	-	-	-	-	-	-
Dec'17	155.00	-	6.30	43.40	-	-	-	-	-	-	-	-
Jan'18	217.00	-	6.20	43.40	-	-	-	-	-	-	-	-
Feb'18	151.00	-	5.70	40.60	-	-	-	-	-	-	-	-
Mar'18	106.00	-	4.10	33.20	-	-	-	-	-	-	-	-

Amta									(h)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m^3)	As (ng/m^3)	Pb ($\mu g/m^3$)	Ni (ng/m^3)
Apr'17	45.00	-	3.40	27.80	-	-	-	-	-	-	-	-
May'17	39.00	-	3.50	27.30	-	-	-	-	-	-	-	-
Jun'17	31.00	-	2.70	23.20	-	-	-	-	-	-	-	-
July'17	22.00	-	2.50	20.20	-	-	-	-	-	-	-	-
Aug'17	25.00	-	3.10	20.40	-	-	-	-	-	-	-	-
Sep'17	33.00	-	3.30	26.40	-	-	-	-	-	-	-	-
Oct'17	43.00	-	4.30	24.30	-	-	-	-	-	-	-	-
Nov'17	94.00	-	4.40	29.00	-	-	-	-	-	-	-	-
Dec'17	147.00	-	4.80	35.40	-	-	-	-	-	-	-	-
Jan'18	190.00	-	5.20	37.40	-	-	-	-	-	-	-	-
Feb'18	126.00	-	5.00	34.50	-	-	-	-	-	-	-	-
Mar'18	86.00	-	3.00	27.00	-	-	-	-	-	-	-	-

Uluberia									(i)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m^3)	As (ng/m^3)	Pb ($\mu g/m^3$)	Ni (ng/m^3)
Apr'17	53.00	-	4.60	35.70	-	-	-	-	-	-	-	-
May'17	52.00	-	4.40	34.50	-	-	-	-	-	-	-	-
Jun'17	41.00	-	4.30	30.40	-	-	-	-	-	-	-	-
July'17	29.00	-	4.40	25.20	-	-	-	-	-	-	-	-
Aug'17	33.00	-	4.80	27.10	-	-	-	-	-	-	-	-
Sep'17	40.00	-	4.90	29.60	-	-	-	-	-	-	-	-
Oct'17	51.00	-	5.20	28.00	-	-	-	-	-	-	-	-
Nov'17	112.00	-	5.60	35.70	-	-	-	-	-	-	-	-
Dec'17	155.00	-	5.90	41.80	-	-	-	-	-	-	-	-
Jan'18	206.00	-	6.00	43.30	-	-	-	-	-	-	-	-
Feb'18	146.00	-	5.80	40.20	-	-	-	-	-	-	-	-
Mar'18	97.00	-	3.70	30.40	-	-	-	-	-	-	-	-

(C) Air quality of 24 Parganas (South) district

The Board monitored air quality at two (2) stations in the 24 Parganas (South) district during April, 2017 – March, 2018 for parameters like PM_{10}, SO_2 and NO_2. The monitoring results are shown in in Tables 6.A.6 (a) – 6.A.6 (b).

Table- 6.A.6: Ambient air quality of 24 Paraganas (South) during 2017-2018

Amtala									(a)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	89.29	-	2.75	28.96	-	-	-	-	-	-	-	-
May'17	79.04	-	2.41	27.11	-	-	-	-	-	-	-	-
Jun'17	60.37	-	2.24	24.04	-	-	-	-	-	-	-	-
July'17	63.00	-	2.35	25.39	-	-	-	-	-	-	-	-
Aug'17	58.52	-	2.37	24.50	-	-	-	-	-	-	-	-
Sep'17	77.38	-	3.27	29.46	-	-	-	-	-	-	-	-
Oct'17	74.52	-	2.76	29.22	-	-	-	-	-	-	-	-
Nov'17	113.13	-	3.54	33.17	-	-	-	-	-	-	-	-
Dec'17	149.63	-	4.43	38.27	-	-	-	-	-	-	-	-
Jan'18	204.48	-	5.07	43.09	-	-	-	-	-	-	-	-
Feb'18	148.13	-	3.94	38.77	-	-	-	-	-	-	-	-
Mar'18	103.04	-	2.67	29.17	-	-	-	-	-	-	-	-

Baruipur									(b)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	75.33	-	2.35	27.29	-	-	-	-	-	-	-	-
May'17	64.20	-	2.18	26.02	-	-	-	-	-	-	-	-
Jun'17	51.04	-	2.17	22.35	-	-	-	-	-	-	-	-
July'17	53.08	-	2.27	22.21	-	-	-	-	-	-	-	-
Aug'17	58.67	-	2.11	24.35	-	-	-	-	-	-	-	-
Sep'17	66.41	-	2.80	26.93	-	-	-	-	-	-	-	-
Oct'17	67.67	-	2.70	27.44	-	-	-	-	-	-	-	-
Nov'17	150.41	-	4.09	35.61	-	-	-	-	-	-	-	-
Dec'17	186.33	-	4.88	40.31	-	-	-	-	-	-	-	-
Jan'18	213.70	-	5.46	44.80	-	-	-	-	-	-	-	-
Feb'18	152.88	-	3.83	37.06	-	-	-	-	-	-	-	-
Mar'18	112.59	-	2.89	30.11	-	-	-	-	-	-	-	-

(D) Air quality of 24 Parganas (North) district

During April, 2017 – March, 2018, air quality of 24 Parganas (North) district was monitored through 4 stations. The monitoring results are shown in Table 6.A.7(a) to 6.A.7 (d).

Table- 6.A.7: Ambient air quality of 24 Paraganas (North) during 2017- 2018

Barrackpore									(a)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	127.98	58.53	7.45	47.76	24.82	62.68	0.662	1.83	0.46	3.01	0.17	14.22
May'17	80.66	38.26	7.13	46.29	25.71	64.15	0.636	1.74	0.25	2.52	0.13	11.42
Jun'17	69.28	31.78	6.90	47.48	22.12	62.01	0.633	1.69	0.24	1.94	0.12	10.21
July'17	68.73	35.16	6.42	44.71	21.36	43.51	0.669	1.97	0.22	1.37	0.12	9.41
Aug'17	58.75	31.76	5.94	43.39	25.03	42.40	0.638	1.90	0.16	1.28	0.11	8.82
Sep'17	57.94	28.88	6.22	45.26	27.34	45.93	0.621	1.84	0.19	1.05	0.11	9.05
Oct'17	50.27	25.60	7.33	41.05	25.94	46.39	0.621	1.85	0.20	1.06	0.10	8.83
Nov'17	77.49	38.69	7.22	42.65	29.43	54.32	0.681	2.47	0.46	1.69	0.13	11.63
Dec'17	93.25	47.06	9.17	46.16	30.23	52.86	0.642	1.96	0.28	1.93	0.14	12.64
Jan'18	101.90	50.50	9.11	48.54	30.41	46.88	0.642	1.85	0.20	2.43	0.15	14.53
Feb'18	103.78	52.39	9.33	48.31	30.07	52.11	0.624	1.71	0.20	2.67	0.15	14.71
Mar'18	98.46	47.99	8.96	44.98	31.58	55.76	0.583	1.59	0.25	2.34	0.13	12.21

Dum Dum									(b)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	80.74	-	6.64	43.08	-	-	-	-	-	-	-	-
May'17	69.31	-	6.44	43.02	-	-	-	-	-	-	-	-
Jun'17	46.51	-	6.10	43.31	-	-	-	-	-	-	-	-
July'17	51.04	-	4.96	41.82	-	-	-	-	-	-	-	-
Aug'17	51.12	-	5.57	42.84	-	-	-	-	-	-	-	-
Sep'17	39.80	-	5.48	41.72	-	-	-	-	-	-	-	-
Oct'17	36.42	-	5.77	41.84	-	-	-	-	-	-	-	-
Nov'17	52.98	-	6.29	39.70	-	-	-	-	-	-	-	-
Dec'17	64.51	-	8.48	42.15	-	-	-	-	-	-	-	-
Jan'18	50.73	-	8.77	44.54	-	-	-	-	-	-	-	-
Feb'18	38.42	-	8.29	41.97	-	-	-	-	-	-	-	-
Mar'18	95.85	-	8.53	43.75	-	-	-	-	-	-	-	-

Khardah									(c)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	85.72	-	6.94	45.50	-	-	-	-	-	-	-	-
May'17	80.64	-	7.33	47.59	-	-	-	-	-	-	-	-
Jun'17	57.06	-	6.89	45.64	-	-	-	-	-	-	-	-
July'17	65.82	-	6.17	44.84	-	-	-	-	-	-	-	-
Aug'17	64.54	-	6.08	44.57	-	-	-	-	-	-	-	-
Sep'17	64.45	-	6.61	46.34	-	-	-	-	-	-	-	-
Oct'17	60.52	-	7.73	39.87	-	-	-	-	-	-	-	-
Nov'17	109.28	-	7.46	43.29	-	-	-	-	-	-	-	-
Dec'17	124.97	-	8.90	46.40	-	-	-	-	-	-	-	-
Jan'18	225.69	-	10.32	51.56	-	-	-	-	-	-	-	-
Feb'18	159.19	-	9.88	47.75	-	-	-	-	-	-	-	-
Mar'18	125.39	-	9.20	45.07	-	-	-	-	-	-	-	-

Barasat									(d)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	85.72	-	6.94	45.50	-	-	-	-	-	-	-	-
May'17	78.19	-	7.03	45.65	-	-	-	-	-	-	-	-
Jun'17	65.03	-	6.70	46.57	-	-	-	-	-	-	-	-
July'17	67.96	-	6.28	45.03	-	-	-	-	-	-	-	-
Aug'17	65.62	-	6.18	42.75	-	-	-	-	-	-	-	-
Sep'17	61.39	-	6.22	44.76	-	-	-	-	-	-	-	-
Oct'17	69.98	-	6.90	41.87	-	-	-	-	-	-	-	-
Nov'17	120.97	-	7.43	43.83	-	-	-	-	-	-	-	-
Dec'17	138.96	-	8.58	46.07	-	-	-	-	-	-	-	-
Jan'18	132.77	-	9.08	47.48	-	-	-	-	-	-	-	-
Feb'18	96.48	-	9.07	45.51	-	-	-	-	-	-	-	-
Mar'18	146.06	-	9.37	45.99	-	-	-	-	-	-	-	-

(E) Air quality of Bardhaman district

During April, 2017 – March, 2018, air quality of Bardhaman district was monitored at 10 stations. Parameters monitored in these stations are shown in Tables 6.A.8 (a) – 6.A.8 (j).

Table- 6.A.8: Ambient air quality of Bardhaman during 2017- 2018

Bidhan Nagar, Durgapur									(a)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	140.07	71.40	11.81	32.77	2.09	11.84	0.92	1.25	0.56	0.01	0.01	0.01
May'17	128.49	69.19	11.65	33.08	2.09	14.64	0.95	1.26	0.58	0.01	0.01	0.01
Jun'17	109.72	66.50	9.13	29.14	2.09	5.87	1.17	1.13	0.43	0.01	0.07	0.01
July'17	115.16	60.65	10.97	30.36	2.09	10.43	1.25	0.92	0.52	0.01	0.01	0.01
Aug'17	109.80	62.00	10.53	29.82	2.09	7.11	0.71	0.88	0.42	0.01	0.01	0.01
Sep'17	110.19	62.97	10.53	29.94	2.09	7.20	1.09	0.84	0.44	0.01	0.01	0.01
Oct'17	126.32	73.81	11.37	30.25	2.09	5.00	0.72	0.90	0.50	0.01	0.01	0.01
Nov'17	106.99	62.55	10.92	28.04	2.09	5.00	0.56	0.86	0.43	0.01	0.01	0.01
Dec'17	122.86	75.33	14.42	30.12	2.09	5.00	0.58	1.08	0.60	0.01	0.01	0.01
Jan'18	114.53	77.07	13.20	31.39	2.09	7.20	0.70	1.19	0.51	0.01	0.01	0.01
Feb'18	127.05	75.05	12.85	30.86	2.09	9.53	0.73	0.90	0.56	0.01	0.01	0.01
Mar'18	125.74	70.49	12.69	30.95	2.09	11.24	0.67	0.91	0.57	0.01	0.01	0.01

Jamuria									(b)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	193.80	-	11.85	41.27	-	-	-	-	-	-	-	-
May'17	148.46	-	11.38	33.38	-	-	-	-	-	-	-	-
Jun'17	146.33	-	11.35	34.40	-	-	-	-	-	-	-	-
July'17	133.06	-	11.19	32.72	-	-	-	-	-	-	-	-
Aug'17	129.21	-	11.15	32.76	-	-	-	-	-	-	-	-
Sep'17	131.73	-	11.66	34.32	-	-	-	-	-	-	-	-
Oct'17	137.31	-	11.26	34.12	-	-	-	-	-	-	-	-
Nov'17	137.64	-	12.25	35.41	-	-	-	-	-	-	-	-
Dec'17	142.28	-	12.09	35.15	-	-	-	-	-	-	-	-
Jan'18	158.04	-	12.89	36.88	-	-	-	-	-	-	-	-
Feb'18	164.09	-	12.43	36.15	-	-	-	-	-	-	-	-
Mar'18	152.94	-	12.44	35.09	-	-	-	-	-	-	-	-

Asansol									(c)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	182.50	74.59	12.27	41.53	-	-	-	-	-	-	-	-
May'17	144.44	72.62	20.35	34.40	-	-	-	-	-	-	-	-
Jun'17	144.31	73.24	11.75	35.31	-	-	-	-	-	-	-	-
July'17	134.21	61.18	10.97	32.99	-	-	-	-	-	-	-	-
Aug'17	130.53	56.25	11.06	33.14	-	-	-	-	-	-	-	-
Sep'17	132.99	48.78	11.61	33.99	-	-	-	-	-	-	-	-
Oct'17	134.52	63.58	11.08	33.65	-	-	-	-	-	-	-	-
Nov'17	134.81	54.92	12.01	35.12	-	-	-	-	-	-	-	-
Dec'17	142.44	55.24	12.11	34.82	-	-	-	-	-	-	-	-
Jan'18	155.72	62.90	12.83	36.59	-	-	-	-	-	-	-	-
Feb'18	159.48	62.44	12.43	35.31	-	-	-	-	-	-	-	-
Mar'18	148.08	63.63	25.91	34.74	-	-	-	-	-	-	-	-

Burdwan University									(d)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	114.35	-	7.18	27.01	-	-	-	-	-	-	-	-
May'17	96.76	-	6.41	26.53	-	-	-	-	-	-	-	-
Jun'17	69.00	-	4.52	22.59	-	-	-	-	-	-	-	-
July'17	69.80	-	3.27	22.96	-	-	-	-	-	-	-	-
Aug'17	56.15	-	2.15	23.65	-	-	-	-	-	-	-	-
Sep'17	82.65	-	2.00	19.13	-	-	-	-	-	-	-	-
Oct'17	83.83	-	2.00	19.35	-	-	-	-	-	-	-	-
Nov'17	94.73	-	2.00	20.71	-	-	-	-	-	-	-	-
Dec'17	100.26	-	2.00	20.72	-	-	-	-	-	-	-	-
Jan'18	111.15	-	2.00	21.32	-	-	-	-	-	-	-	-
Feb'18	97.92	-	2.00	21.11	-	-	-	-	-	-	-	-
Mar'18	118.90	-	2.00	23.60	-	-	-	-	-	-	-	-

PCBL More									(e)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	204.16	-	12.15	41.38	-	-	-	-	-	-	-	-
May'17	150.45	-	11.60	34.25	-	-	-	-	-	-	-	-
Jun'17	144.35	-	11.41	34.02	-	-	-	-	-	-	-	-
July'17	131.93	-	11.29	33.39	-	-	-	-	-	-	-	-
Aug'17	127.15	-	11.43	33.58	-	-	-	-	-	-	-	-
Sep'17	131.85	-	11.76	34.46	-	-	-	-	-	-	-	-
Oct'17	137.12	-	11.20	33.92	-	-	-	-	-	-	-	-
Nov'17	136.91	-	12.15	35.22	-	-	-	-	-	-	-	-
Dec'17	144.61	-	12.28	35.41	-	-	-	-	-	-	-	-
Jan'18	154.91	-	12.84	36.65	-	-	-	-	-	-	-	-
Feb'18	156.55	-	12.49	35.93	-	-	-	-	-	-	-	-
Mar'18	147.44	-	12.20	34.39	-	-	-	-	-	-	-	-

Angadpur									(f)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'16	188.03	-	11.88	41.42	-	-	-	-	-	-	-	-
May'16	146.37	-	11.41	33.82	-	-	-	-	-	-	-	-
Jun'16	144.65	-	11.78	34.80	-	-	-	-	-	-	-	-
July'16	129.19	-	10.89	31.81	-	-	-	-	-	-	-	-
Aug'16	131.42	-	10.63	31.15	-	-	-	-	-	-	-	-
Sep'16	129.76	-	11.59	34.57	-	-	-	-	-	-	-	-
Oct'16	132.96	-	10.96	34.12	-	-	-	-	-	-	-	-
Nov'16	139.35	-	12.20	35.57	-	-	-	-	-	-	-	-
Dec'16	145.34	-	12.15	35.41	-	-	-	-	-	-	-	-
Jan'17	161.06	-	12.83	36.94	-	-	-	-	-	-	-	-
Feb'17	164.46	-	12.50	35.78	-	-	-	-	-	-	-	-
Mar'17	155.76	-	12.37	34.58	-	-	-	-	-	-	-	-

Benachity									(g)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	180.77	-	12.20	40.93	-	-	-	-	-	-	-	-
May'17	144.67	-	11.71	35.52	-	-	-	-	-	-	-	-
Jun'17	145.68	-	11.82	35.11	-	-	-	-	-	-	-	-
July'17	133.32	-	11.05	32.90	-	-	-	-	-	-	-	-
Aug'17	128.36	-	11.33	33.34	-	-	-	-	-	-	-	-
Sep'17	133.75	-	11.77	34.98	-	-	-	-	-	-	-	-
Oct'17	137.47	-	11.20	33.83	-	-	-	-	-	-	-	-
Nov'17	138.65	-	12.11	35.82	-	-	-	-	-	-	-	-
Dec'17	144.68	-	12.11	35.56	-	-	-	-	-	-	-	-
Jan'18	155.05	-	12.75	37.01	-	-	-	-	-	-	-	-
Feb'18	162.55	-	12.32	36.00	-	-	-	-	-	-	-	-
Mar'18	151.20	-	12.31	34.45	-	-	-	-	-	-	-	-

Mangalpur									(h)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	198.59	-	12.03	41.42	-	-	-	-	-	-	-	-
May'17	148.75	-	11.34	34.40	-	-	-	-	-	-	-	-
Jun'17	144.16	-	11.64	34.74	-	-	-	-	-	-	-	-
July'17	133.31	-	11.33	33.50	-	-	-	-	-	-	-	-
Aug'17	130.31	-	11.55	33.60	-	-	-	-	-	-	-	-
Sep'17	132.38	-	11.66	34.02	-	-	-	-	-	-	-	-
Oct'17	129.61	-	10.98	33.42	-	-	-	-	-	-	-	-
Nov'17	135.99	-	11.99	35.02	-	-	-	-	-	-	-	-
Dec'17	144.33	-	12.19	35.15	-	-	-	-	-	-	-	-
Jan'18	155.22	-	12.76	36.65	-	-	-	-	-	-	-	-
Feb'18	160.53	-	12.53	36.29	-	-	-	-	-	-	-	-
Mar'18	149.03	-	12.42	35.19	-	-	-	-	-	-	-	-

Ranigunj Municipality									(i)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	189.06	-	12.01	41.30	-	-	-	-	-	-	-	-
May'17	142.88	-	11.60	34.13	-	-	-	-	-	-	-	-
Jun'17	144.93	-	11.78	34.77	-	-	-	-	-	-	-	-
July'17	134.47	-	11.13	33.29	-	-	-	-	-	-	-	-
Aug'17	127.50	-	11.58	33.97	-	-	-	-	-	-	-	-
Sep'17	129.73	-	11.77	34.31	-	-	-	-	-	-	-	-
Oct'17	138.70	-	11.29	34.15	-	-	-	-	-	-	-	-
Nov'17	137.72	-	12.06	35.05	-	-	-	-	-	-	-	-
Dec'17	145.89	-	12.10	35.56	-	-	-	-	-	-	-	-
Jan'18	160.69	-	12.90	36.88	-	-	-	-	-	-	-	-
Feb'18	164.46	-	12.50	35.78	-	-	-	-	-	-	-	-
Mar'18	152.32	-	12.30	34.55	-	-	-	-	-	-	-	-

IISCO, Burnpur									(j)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	193.29	-	12.26	41.42	-	-	-	-	-	-	-	-
May'17	149.27	-	11.84	34.34	-	-	-	-	-	-	-	-
Jun'17	145.08	-	11.82	34.67	-	-	-	-	-	-	-	-
July'17	128.06	-	11.13	32.90	-	-	-	-	-	-	-	-
Aug'17	128.20	-	11.35	33.13	-	-	-	-	-	-	-	-
Sep'17	133.80	-	11.67	34.39	-	-	-	-	-	-	-	-
Oct'17	137.31	-	11.26	34.12	-	-	-	-	-	-	-	-
Nov'17	139.13	-	12.26	35.30	-	-	-	-	-	-	-	-
Dec'17	145.19	-	12.16	35.52	-	-	-	-	-	-	-	-
Jan'18	156.77	-	12.86	37.11	-	-	-	-	-	-	-	-
Feb'18	162.74	-	12.51	35.71	-	-	-	-	-	-	-	-
Mar'18	152.41	-	12.57	35.19	-	-	-	-	-	-	-	-

(F) Air quality of Bankura district

During April, 2017 – March, 2018, air quality of Bankura district was monitored through 2 stations. Parameters measured in these stations are shown in Table 6.A.9 (a) to 6.A.9 (b).

Table- 6.A.9: Ambient air quality of Bankura during 2017-2018

Barjora									(a)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	193.55	-	11.98	41.60	-	-	-	-	-	-	-	-
May'17	147.78	-	11.65	35.49	-	-	-	-	-	-	-	-
Jun'17	145.47	-	11.77	34.91	-	-	-	-	-	-	-	-
July'17	138.11	-	10.90	32.06	-	-	-	-	-	-	-	-
Aug'17	129.93	-	10.76	32.23	-	-	-	-	-	-	-	-
Sep'17	134.14	-	11.69	34.61	-	-	-	-	-	-	-	-
Oct'17	133.20	-	11.37	33.81	-	-	-	-	-	-	-	-
Nov'17	136.44	-	12.16	35.09	-	-	-	-	-	-	-	-
Dec'17	143.86	-	12.06	35.38	-	-	-	-	-	-	-	-
Jan'18	160.92	-	12.94	36.91	-	-	-	-	-	-	-	-
Feb'18	160.47	-	12.51	35.70	-	-	-	-	-	-	-	-
Mar'18	155.80	-	12.48	34.99	-	-	-	-	-	-	-	-

Bankura Town									(b)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	111.60	-	2.00	22.88	-	-	-	-	-	-	-	-
May'17	89.21	-	2.00	17.44	-	-	-	-	-	-	-	-
Jun'17	88.21	-	2.00	16.82	-	-	-	-	-	-	-	-
July'17	67.73	-	2.00	17.49	-	-	-	-	-	-	-	-
Aug'17	62.69	-	2.00	17.37	-	-	-	-	-	-	-	-
Sep'17	64.64	-	2.00	18.59	-	-	-	-	-	-	-	-
Oct'17	74.46	-	2.68	18.58	-	-	-	-	-	-	-	-
Nov'17	79.01	-	2.00	18.54	-	-	-	-	-	-	-	-
Dec'17	83.69	-	2.00	18.47	-	-	-	-	-	-	-	-
Jan'18	95.45	-	2.00	19.32	-	-	-	-	-	-	-	-
Feb'18	86.33	-	2.00	18.25	-	-	-	-	-	-	-	-
Mar'18	82.87	-	2.00	17.58	-	-	-	-	-	-	-	-

(G) Air quality of Birbhum district

During April, 2017 – March, 2018, air quality of Birbhum district was monitored through three (3) semi-automated (manual) stations. Parameters measured in these stations are shown in Table 6.A.10 (a) to 6.A.10 (c).

Table- 6.A.10: Ambient air quality of Birbhum during 2017-2018

Suri Town									(a)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	117.01	-	2.00	22.65		-	-	-	-	-	-	-
May'17	82.51	-	2.00	17.12	-	-	-	-	-	-	-	-
Jun'17	75.77	-	2.00	16.99	-	-	-	-	-	-	-	-
July'17	67.45	-	2.00	16.31	-	-	-	-	-	-	-	-
Aug'17	63.72	-	2.00	16.08	-	-	-	-	-	-	-	-
Sep'17	64.96	-	2.00	18.62	-	-	-	-	-	-	-	-
Oct'17	79.51	-	2.57	18.49	-	-	-	-	-	-	-	-
Nov'17	85.77	-	2.00	18.21	-	-	-	-	-	-	-	-
Dec'17	86.83	-	2.00	18.14	-	-	-	-	-	-	-	-
Jan'18	100.64	-	2.00	19.87	-	-	-	-	-	-	-	-
Feb'18	79.75	-	2.00	17.67	-	-	-	-	-	-	-	-
Mar'18	88.23	-	2.00	18.70	-	-	-	-	-	-	-	-

Rampurhat Town									(b)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	113.26	-	2.00	22.17	-	-	-	-	-	-	-	-
May'17	82.95	-	2.00	16.79	-	-	-	-	-	-	-	-
Jun'17	75.77	-	2.00	15.84	-	-	-	-	-	-	-	-
July'17	66.71	-	2.00	16.01	-	-	-	-	-	-	-	-
Aug'17	62.97	-	2.00	16.36	-	-	-	-	-	-	-	-
Sep'17	64.29	-	2.00	18.07	-	-	-	-	-	-	-	-
Oct'17	84.79	-	2.47	18.52	-	-	-	-	-	-	-	-
Nov'17	81.15	-	2.00	18.37	-	-	-	-	-	-	-	-
Dec'17	85.20	-	2.00	18.62	-	-	-	-	-	-	-	-
Jan'18	100.83	-	2.00	19.60	-	-	-	-	-	-	-	-
Feb'18	94.35	-	2.00	18.51	-	-	-	-	-	-	-	-
Mar'18	90.19	-	2.00	19.02	-	-	-	-	-	-	-	-

Bolpur Town									(c)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	118.85	-	2.00	23.21	-	-	-	-	-	-	-	-
May'17	87.84	-	2.00	17.64	-	-	-	-	-	-	-	-
Jun'17	87.01	-	2.00	16.14	-	-	-	-	-	-	-	-
July'17	63.51	-	2.00	15.23	-	-	-	-	-	-	-	-
Aug'17	63.73	-	2.00	16.08	-	-	-	-	-	-	-	-
Sep'17	60.88	-	2.00	17.63	-	-	-	-	-	-	-	-
Oct'17	74.90	-	2.48	18.93	-	-	-	-	-	-	-	-
Nov'17	80.45	-	2.00	18.44	-	-	-	-	-	-	-	-
Dec'17	86.52	-	2.00	18.69	-	-	-	-	-	-	-	-
Jan'18	96.60	-	2.00	19.31	-	-	-	-	-	-	-	-
Feb'18	82.63	-	2.00	17.41	-	-	-	-	-	-	-	-
Mar'18	80.39	-	2.00	18.86	-	-	-	-	-	-	-	-

(H) Air quality of Purulia district

During April, 2017 – March, 2018, air quality of Purulia district was monitored through one (1) semi-automated (manual) station. Parameters measured in these stations are shown in Table 6.A.11 (a).

Table- 6.A.11: Ambient air quality of Purulia during 2017- 2018

Purulia Town									(a)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	112.20	-	2.00	22.43	-	-	-	-	-	-	-	-
May'17	75.39	-	2.00	16.25	-	-	-	-	-	-	-	-
Jun'17	90.57	-	2.00	16.58	-	-	-	-	-	-	-	-
July'17	64.03	-	2.00	15.80	-	-	-	-	-	-	-	-
Aug'17	58.60	-	2.00	16.22	-	-	-	-	-	-	-	-
Sep'17	58.65	-	2.00	18.58	-	-	-	-	-	-	-	-
Oct'17	67.22	-	2.46	18.08	-	-	-	-	-	-	-	-
Nov'17	67.08	-	2.00	18.53	-	-	-	-	-	-	-	-
Dec'17	72.91	-	2.00	18.25	-	-	-	-	-	-	-	-
Jan'18	87.84	-	2.00	19.83	-	-	-	-	-	-	-	-
Feb'18	79.11	-	2.00	18.15	-	-	-	-	-	-	-	-
Mar'18	76.77	-	2.00	17.87	-	-	-	-	-	-	-	-

(I) Air quality of Purba Medinipur district

During April, 2017 – March, 2018, air quality of Purba Medinipur district was monitored through 5 manual stations. Parameters measured in these stations are shown in Table 6.A.12 (a) to 6.A.12 (e).

Table- 6.A.12: Ambient air quality of Purba Medinipur during 2017- 2018

WBIIDC (Haldia)									(a)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	77.30	-	10.69	34.49	-	-	-	-	-	-	-	-
May'17	87.83	-	12.99	38.08	-	-	-	-	-	-	-	-
Jun'17	81.85	-	13.43	38.42	-	-	-	-	-	-	-	-
July'17	70.45	-	11.93	36.42	-	-	-	-	-	-	-	-
Aug'17	81.72	-	12.60	38.87	-	-	-	-	-	-	-	-
Sep'17	79.71	-	13.53	39.02	-	-	-	-	-	-	-	-
Oct'17	81.00	-	14.12	40.51	-	-	-	-	-	-	-	-
Nov'17	100.27	-	15.68	42.02	-	-	-	-	-	-	-	-
Dec'17	159.44	-	17.91	44.88	-	-	-	-	-	-	-	-
Jan'18	136.7	-	18.75	45.01	-	-	-	-	-	-	-	-
Feb'18	117.66	-	16.13	41.06	-	-	-	-	-	-	-	-
Mar'18	109.63	-	15.58	40.17	-	-	-	-	-	-	-	-

Super Market (Haldia)									(b)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	97.81	34.27	10.90	35.15	-	-	-	-	-	-	-	-
May'17	100.75	36.15	13.1	38.15	-	-	-	-	-	-	-	-
Jun'17	88.03	31.79	12.3	37.87	-	-	-	-	-	-	-	-
July'17	73.53	28.52	11.97	36.21	-	-	-	-	-	-	-	-
Aug'17	81.19	30.88	13.45	14.21	-	-	-	-	-	-	-	-
Sep'17	76.23	29.77	13.48	39.10	-	-	-	-	-	-	-	-
Oct'17	75.87	30.12	13.79	39.83	-	-	-	-	-	-	-	-
Nov'17	92.21	36.18	15.08	41.59	-	-	-	-	-	-	-	-
Dec'17	113.26	42.56	16.71	43.25	-	-	-	-	-	-	-	-
Jan'18	113.24	39.92	17.21	43.06	-	-	-	-	-	-	-	-
Feb'18	98.4	36.55	13.81	38.06	-	-	-	-	-	-	-	-
Mar'18	92.42	32.10	14.65	38.32	-	-	-	-	-	-	-	-

Super Bhabanipur									(c)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	86.32	-	10.90	34.75	-	-	-	-	-	-	-	-
May'17	87.78	-	12.00	36.65	-	-	-	-	-	-	-	-
Jun'17	80.77	-	11.12	36.18	-	-	-	-	-	-	-	-
July'17	69.26	-	11.34	35.01	-	-	-	-	-	-	-	-
Aug'17	76.88	-	12.64	38.67	-	-	-	-	-	-	-	-
Sep'17	69.94	-	11.46	37.71	-	-	-	-	-	-	-	-
Oct'17	70.23	-	12.04	37.88	-	-	-	-	-	-	-	-
Nov'17	86.78	-	13.59	39.88	-	-	-	-	-	-	-	-
Dec'17	100.54	-	14.36	40.56	-	-	-	-	-	-	-	-
Jan'18	104.34	-	14.57	39.76	-	-	-	-	-	-	-	-
Feb'18	103.16	-	12.61	39.60	-	-	-	-	-	-	-	-
Mar'18	94.11	-	11.85	35.8	-	-	-	-	-	-	-	-

Super Bhunia Raichak									(d)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	97.35	-	11.43	35.77	-	-	-	-	-	-	-	-
May'17	96.35	-	13.25	38.62	-	-	-	-	-	-	-	-
Jun'17	102.98	-	14.77	39.6	-	-	-	-	-	-	-	-
July'17	102.46	-	13.36	38.1	-	-	-	-	-	-	-	-
Aug'17	94.02	-	13.45	39.47	-	-	-	-	-	-	-	-
Sep'17	117.27	-	13.86	39.72	-	-	-	-	-	-	-	-
Oct'17	118.42	-	14.45	41.04	-	-	-	-	-	-	-	-
Nov'17	116.27	-	15.72	42.02	-	-	-	-	-	-	-	-
Dec'17	121.90	-	18.31	45.48	-	-	-	-	-	-	-	-
Jan'18	124.26	-	18.88	45.24	-	-	-	-	-	-	-	-
Feb'18	117.83	-	16.64	41.71	-	-	-	-	-	-	-	-
Mar'18	114.26	-	15.92	40.68	-	-	-	-	-	-	-	-

Super Tamluk									(e)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	104.14	-	11.53	36.09	-	-	-	-	-	-	-	-
May'17	100.83	-	13.21	38.49	-	-	-	-	-	-	-	-
Jun'17	97.89	-	13.77	38.96	-	-	-	-	-	-	-	-
July'17	90.76	-	13.17	38.0	-	-	-	-	-	-	-	-
Aug'17	90.82	-	12.93	39.27	-	-	-	-	-	-	-	-
Sep'17	82.87	-	12.79	38.41	-	-	-	-	-	-	-	-
Oct'17	92.64	-	13.65	39.97	-	-	-	-	-	-	-	-
Nov'17	122.37	-	15.63	42.31	-	-	-	-	-	-	-	-
Dec'17	148.73	-	17.28	44.3	-	-	-	-	-	-	-	-
Jan'18	145.80	-	17.50	43.72	-	-	-	-	-	-	-	-
Feb'18	133.14	-	15.80	41.00	-	-	-	-	-	-	-	-
Mar'18	123.43	-	15.58	40.29	-	-	-	-	-	-	-	-

(J) Air quality of Paschim Medinipur district

During April, 2017 – March, 2018, air quality of Paschim Medinipur district was monitored through three (3) semi-automated (manual) station. Parameters measured in these stations are shown in Table 6.A.13 (a) to 6.A.13 (c).

Table- 6.A.13: Ambient air quality of Paschim Medinipur during 2017-2018

Super Ghatal									(a)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	92.92	-	10.08	33.56	-	-	-	-	-	-	-	-
May'17	97.23	-	11.26	36.00	-	-	-	-	-	-	-	-
Jun'17	84.75	-	11.26	36.47	-	-	-	-	-	-	-	-
July'17	69.45	-	10.60	34.22	-	-	-	-	-	-	-	-
Aug'17	73.88	-	11.32	37.29	-	-	-	-	-	-	-	-
Sep'17	74.49	-	11.53	36.48	-	-	-	-	-	-	-	-
Oct'17	78.41	-	12.10	37.88	-	-	-	-	-	-	-	-
Nov'17	104.29	-	13.26	39.55	-	-	-	-	-	-	-	-
Dec'17	123.81	-	14.33	14.31	-	-	-	-	-	-	-	-
Jan'18	116.05	-	14.33	39.16	-	-	-	-	-	-	-	-
Feb'18	115.57	-	12.52	36.47	-	-	-	-	-	-	-	-
Mar'18	99.53	-	11.96	35.51	-	-	-	-	-	-	-	-

Super Kharagpur									(b)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	132.73	-	11.68	39.29	-	-	-	-	-	-	-	-
May'17	125.88	-	13.43	38.52	-	-	-	-	-	-	-	-
Jun'17	114.85	-	14.42	39.69	-	-	-	-	-	-	-	-
July'17	107.33	-	13.82	38.28	-	-	-	-	-	-	-	-
Aug'17	120.49	-	13.59	39.36	-	-	-	-	-	-	-	-
Sep'17	114.71	-	13.78	39.43	-	-	-	-	-	-	-	-
Oct'17	109.55	-	14.41	40.19	-	-	-	-	-	-	-	-
Nov'17	117.42	-	16.28	42.74	-	-	-	-	-	-	-	-
Dec'17	141.74	-	18.94	46.02	-	-	-	-	-	-	-	-
Jan'18	147.78	-	18.48	44.47	-	-	-	-	-	-	-	-
Feb'18	143.25	-	16.77	41.74	-	-	-	-	-	-	-	-
Mar'18	145.75	-	16.73	41.60	-	-	-	-	-	-	-	-

Super Medinipur Town									(c)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	91.08	-	10.49	33.67	-	-	-	-	-	-	-	-
May'17	93.06	-	11.74	36.24	-	-	-	-	-	-	-	-
Jun'17	83.76	-	11.23	36.08	-	-	-	-	-	-	-	-
July'17	79.08	-	10.52	34.30	-	-	-	-	-	-	-	-
Aug'17	78.24	-	11.09	37.03	-	-	-	-	-	-	-	-
Sep'17	69.40	-	11.13	36.10	-	-	-	-	-	-	-	-
Oct'17	69.93	-	11.34	36.61	-	-	-	-	-	-	-	-
Nov'17	84.86	-	12.79	37.95	-	-	-	-	-	-	-	-
Dec'17	93.11	-	13.70	36.26	-	-	-	-	-	-	-	-
Jan'18	98.41	-	13.82	38.31	-	-	-	-	-	-	-	-
Feb'18	100.36	-	12.74	36.65	-	-	-	-	-	-	-	-
Mar'18	87.56	-	11.47	35.01	-	-	-	-	-	-	-	-

(K) Air quality of Hooghly district

During April 2017 – March 2018, air quality of Hooghly district was monitored through 4 stations. The monitoring results are shown in in Table 6.A.14(a) to 6.A.14 (d).

Table- 6.A.14: Ambient air quality of Hooghly during 2017- 2018

Dankuni									Table - 10 (a)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	53.00	-	4.40	33.90	-	-	-	-	-	-	-	-
May'17	46.00	-	4.20	33.20	-	-	-	-	-	-	-	-
Jun'17	42.00	-	4.10	33.90	-	-	-	-	-	-	-	-
July'17	33.00	-	4.20	29.30	-	-	-	-	-	-	-	-
Aug'17	33.00	-	4.50	31.10	-	-	-	-	-	-	-	-
Sep'17	39.00	-	4.60	30.70	-	-	-	-	-	-	-	-
Oct'17	50.00	-	5.30	29.40	-	-	-	-	-	-	-	-
Nov'17	108.00	-	5.30	38.40	-	-	-	-	-	-	-	-
Dec'17	158.00	-	5.60	39.50	-	-	-	-	-	-	-	-
Jan'18	227.00	-	6.20	46.10	-	-	-	-	-	-	-	-
Feb'18	154.00	-	5.70	38.90	-	-	-	-	-	-	-	-
Mar'18	114.00	-	3.80	30.20	-	-	-	-	-	-	-	-

Rishra									(b)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	67.00	-	5.00	39.10	-	-	-	-	-	-	-	-
May'17	55.00	-	4.50	36.60	-	-	-	-	-	-	-	-
Jun'17	40.00	-	4.10	28.30	-	-	-	-	-	-	-	-
July'17	33.00	-	4.50	29.50	-	-	-	-	-	-	-	-
Aug'17	32.00	-	4.70	29.70	-	-	-	-	-	-	-	-
Sep'17	50.00	-	5.30	32.00	-	-	-	-	-	-	-	-
Oct'17	60.00	-	6.40	32.90	-	-	-	-	-	-	-	-
Nov'17	134.00	-	5.80	40.80	-	-	-	-	-	-	-	-
Dec'17	199.00	-	6.70	48.80	-	-	-	-	-	-	-	-
Jan'18	245.00	-	6.70	52.60	-	-	-	-	-	-	-	-
Feb'18	186.00	-	6.00	46.70	-	-	-	-	-	-	-	-
Mar'18	131.00	-	4.60	37.20	-	-	-	-	-	-	-	-

Chinsurah									(c)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	66.00	-	5.10	38.10	-	-	-	-	-	-	-	-
May'17	53.00	-	5.00	37.00	-	-	-	-	-	-	-	-
Jun'17	43.00	-	4.40	32.90	-	-	-	-	-	-	-	-
July'17	34.00	-	4.80	31.10	-	-	-	-	-	-	-	-
Aug'17	34.00	-	4.80	32.00	-	-	-	-	-	-	-	-
Sep'17	44.00	-	5.40	33.80	-	-	-	-	-	-	-	-
Oct'17	53.00	-	6.00	31.20	-	-	-	-	-	-	-	-
Nov'17	120.00	-	5.70	41.10	-	-	-	-	-	-	-	-
Dec'17	161.00	-	6.70	48.90	-	-	-	-	-	-	-	-
Jan'18	229.00	-	6.60	51.10	-	-	-	-	-	-	-	-
Feb'18	172.00	-	6.40	47.70	-	-	-	-	-	-	-	-
Mar'18	119.00	-	4.70	35.70	-	-	-	-	-	-	-	-

Tribeni									(d)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/m³)	As (ng/m³)	Pb ($\mu g/m^3$)	Ni (ng/m³)
Apr'17	57.00	-	4.60	36.90	-	-	-	-	-	-	-	-
May'17	53.00	-	4.60	36.90	-	-	-	-	-	-	-	-
Jun'17	42.00	-	4.00	29.20	-	-	-	-	-	-	-	-
July'17	27.00	-	3.90	25.70	-	-	-	-	-	-	-	-
Aug'17	30.00	-	4.50	28.80	-	-	-	-	-	-	-	-
Sep'17	40.00	-	4.40	29.50	-	-	-	-	-	-	-	-
Oct'17	47.00	-	5.40	29.30	-	-	-	-	-	-	-	-
Nov'17	108.00	-	5.30	37.10	-	-	-	-	-	-	-	-
Dec'17	162.00	-	5.90	42.50	-	-	-	-	-	-	-	-
Jan'18	213.00	-	6.10	44.80	-	-	-	-	-	-	-	-
Feb'18	167.00	-	5.40	42.00	-	-	-	-	-	-	-	-
Mar'18	102.00	-	3.80	31.00	-	-	-	-	-	-	-	-

(L) Air quality of Nadia district

The Board monitored air quality at three (3) stations in the Nadia district during April, 2017 – March, 2018 for parameters like PM_{10}, SO_2 and NO_2. The monitoring results are shown in Table 6.A.15(a) to 6.A.15 (c).

Table- 6.A.15 : Ambient air quality of Nadia during 2017- 2018

Kalyani									(a)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	71.33	41.89	6.64	43.43	-	-	-	-	-	-	-	-
May'17	55.61	28.83	6.56	43.87	-	-	-	-	-	-	-	-
Jun'17	56.66	30.74	6.52	45.88	-	-	-	-	-	-	-	-
July'17	55.39	31.24	5.75	42.51	-	-	-	-	-	-	-	-
Aug'17	55.01	29.44	5.93	42.67	-	-	-	-	-	-	-	-
Sep'17	56.00	28.94	5.97	44.50	-	-	-	-	-	-	-	-
Oct'17	54.78	28.58	6.64	40.68	-	-	-	-	-	-	-	-
Nov'17	98.34	48.24	7.22	42.46	-	-	-	-	-	-	-	-
Dec'17	89.85	54.68	8.27	45.55	-	-	-	-	-	-	-	-
Jan'18	148.98	71.93	9.39	47.95	-	-	-	-	-	-	-	-
Feb'18	150.71	72.90	9.83	47.06	-	-	-	-	-	-	-	-
Mar'18	128.85	60.16	9.14	44.72	-	-	-	-	-	-	-	-

Ranaghat									(b)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	76.44	-	6.71	42.94	-	-	-	-	-	-	-	-
May'17	60.67	-	6.65	45.12	-	-	-	-	-	-	-	-
Jun'17	47.87	-	6.21	43.06	-	-	-	-	-	-	-	-
July'17	51.29	-	5.51	42.09	-	-	-	-	-	-	-	-
Aug'17	54.18	-	5.64	42.39	-	-	-	-	-	-	-	-
Sep'17	62.76	-	6.10	45.76	-	-	-	-	-	-	-	-
Oct'17	62.19	-	6.17	41.69	-	-	-	-	-	-	-	-
Nov'17	149.52	-	7.56	43.82	-	-	-	-	-	-	-	-
Dec'17	180.17	-	9.57	46.90	-	-	-	-	-	-	-	-
Jan'18	229.35	-	10.53	53.53	-	-	-	-	-	-	-	-
Feb'18	215.87	-	10.43	52.99	-	-	-	-	-	-	-	-
Mar'18	180.90	-	10.20	48.68	-	-	-	-	-	-	-	-

Krishnanagar									(c)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	96.74	-	7.02	44.94	-	-	-	-	-	-	-	-
May'17	98.63	-	7.04	44.86	-	-	-	-	-	-	-	-
Jun'17	61.42	-	6.56	43.56	-	-	-	-	-	-	-	-
July'17	53.57	-	5.43	42.15	-	-	-	-	-	-	-	-
Aug'17	53.63	-	5.67	42.94	-	-	-	-	-	-	-	-
Sep'17	60.34	-	9.88	43.72	-	-	-	-	-	-	-	-
Oct'17	72.45	-	6.25	42.30	-	-	-	-	-	-	-	-
Nov'17	82.38	-	6.92	41.67	-	-	-	-	-	-	-	-
Dec'17	98.82	-	8.81	44.86	-	-	-	-	-	-	-	-
Jan'18	169.61	-	9.80	48.48	-	-	-	-	-	-	-	-
Feb'18	152.35	-	9.99	47.86	-	-	-	-	-	-	-	-
Mar'18	139.90	-	9.22	44.77	-	-	-	-	-	-	-	-

(M) Air quality of Murshidabad district

The Board initiated air quality monitoring at one (1) station at Baharampur under the Murshidibad district during April, 2017 to March, 2018 for parameters like PM_{10}, SO_2 and NO_2. The monitoring results are shown in Table 6.A.16 (a).

Table- 6.A.16: Ambient air quality of Murshidabad during 2017-2018

Month	Baharampur								(a)			
	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	122.88	-	7.47	48.27	-	-	-	-	-	-	-	-
May'17	83.95	-	6.99	46.75	-	-	-	-	-	-	-	-
Jun'17	70.04	-	6.59	46.11	-	-	-	-	-	-	-	-
July'17	71.95	-	6.17	43.98	-	-	-	-	-	-	-	-
Aug'17	72.89	-	6.40	46.11	-	-	-	-	-	-	-	-
Sep'17	76.47	-	6.75	46.65	-	-	-	-	-	-	-	-
Oct'17	71.81	-	6.85	45.67	-	-	-	-	-	-	-	-
Nov'17	111.35	-	7.25	43.61	-	-	-	-	-	-	-	-
Dec'17	174.44	-	9.35	47.78	-	-	-	-	-	-	-	-
Jan'18	158.92	-	9.84	51.99	-	-	-	-	-	-	-	-
Feb'18	162.37	-	9.89	49.54	-	-	-	-	-	-	-	-
Mar'18	182.82	-	10.42	48.97	-	-	-	-	-	-	-	-

(N) Air quality of Maldah district

The Board monitored air quality at one (1) station in the Malda district during April, 2017 – March, 2018 for parameters like PM_{10}, SO_2 and NO_2. The monitoring results are shown in Table 6.A.17 (a).

Table- 6.A.17: Ambient air quality of Malda during 2017- 2018

Month	Malda city (Paribesh Bhawan, WBPCB)								(a)			
	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	63.10	-	2.00	18.87	-	-	-	-	-	-	-	-
May'17	59.34	-	2.00	18.03	-	-	-	-	-	-	-	-
Jun'17	73.60	-	2.00	19.18	-	-	-	-	-	-	-	-
July'17	49.13	-	2.00	15.42	-	-	-	-	-	-	-	-
Aug'17	63.35	-	2.00	16.75	-	-	-	-	-	-	-	-
Sep'17	57.52	-	2.00	17.79	-	-	-	-	-	-	-	-
Oct'17	45.94	-	2.00	16.54	-	-	-	-	-	-	-	-
Nov'17	46.70	-	2.00	15.62	-	-	-	-	-	-	-	-
Dec'17	57.58	-	2.00	17.11	-	-	-	-	-	-	-	-
Jan'18	56.42	-	2.00	16.53	-	-	-	-	-	-	-	-
Feb'18	64.99	-	2.00	18.78	-	-	-	-	-	-	-	-
Mar'18	71.61	-	2.00	17.29	-	-	-	-	-	-	-	-

(O) Air quality of Dakshin Dinajpur district

The Board initiated air quality monitoring at one (1) station in the Dakshin Dinajpur district for parameters like PM_{10}, SO_2 and NO_2. The monitoring results are shown in Table 6.A.18 (a).

Table- 6.A.18: Ambient air quality of Dakshin Dinajpur during 2017- 2018

Balurghat College									(a)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	50.12	-	2.00	17.50	-	-	-	-	-	-	-	-
May'17	47.74	-	2.00	18.52	-	-	-	-	-	-	-	-
Jun'17	36.85	-	2.00	17.02	-	-	-	-	-	-	-	-
July'17	42.19	-	2.00	97.91	-	-	-	-	-	-	-	-
Aug'17	55.08	-	2.00	16.04	-	-	-	-	-	-	-	-
Sep'17	51.66	-	2.00	15.97	-	-	-	-	-	-	-	-
Oct'17	43.70	-	2.00	17.57	-	-	-	-	-	-	-	-
Nov'17	35.34	-	2.00	16.70	-	-	-	-	-	-	-	-
Dec'17	45.33	-	2.00	14.71	-	-	-	-	-	-	-	-
Jan'18	45.65	-	2.00	15.30	-	-	-	-	-	-	-	-
Feb'18	54.63	-	2.00	15.34	-	-	-	-	-	-	-	-
Mar'18	66.98	-	2.00	16.06	-	-	-	-	-	-	-	-

(P) Air quality of Uttar Dinajpur district

The Board initiated air quality monitoring at one (1) station in the Uttar Dinajpur district for parameters like PM_{10}, SO_2 and NO_2. The monitoring results are shown in Table 6.A.19 (a).

Table- 6.A.19: Ambient air quality of Uttar Dinajpur during 2017- 2018

Raiganj College									(a)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	45.94	-	2.00	17.57	-	-	-	-	-	-	-	-
May'17	47.21	-	2.00	17.46	-	-	-	-	-	-	-	-
Jun'17	43.85	-	2.00	16.55	-	-	-	-	-	-	-	-
July'17	40.29	-	2.00	14.83	-	-	-	-	-	-	-	-
Aug'17	68.09	-	2.00	17.37	-	-	-	-	-	-	-	-
Sep'17	53.06	-	2.00	18.62	-	-	-	-	-	-	-	-
Oct'17	41.00	-	2.00	14.81	-	-	-	-	-	-	-	-
Nov'17	36.63	-	2.00	14.92	-	-	-	-	-	-	-	-
Dec'17	40.01	-	2.00	15.46	-	-	-	-	-	-	-	-
Jan'18	39.88	-	2.00	14.85	-	-	-	-	-	-	-	-
Feb'18	48.67	-	2.00	14.87	-	-	-	-	-	-	-	-
Mar'18	57.89	-	2.00	15.38	-	-	-	-	-	-	-	-

(Q) Air quality of Coochbihar district

The Board monitored air quality monitoring at two (2) locations in the Coochbihar district for parameters like PM_{10}, SO_2 and NO_2. The monitoring results are shown in Table 6.A.20(a) to 6.A.20 (b).

Table- 6.A.20: Ambient air quality of Coochbihar during 2017- 2018

A.B.N Seal College									(a)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	60.10	-	2.00	18.21	-	-	-	-	-	-	-	-
May'17	64.53	-	2.00	17.71	-	-	-	-	-	-	-	-
Jun'17	48.88	-	2.00	16.71	-	-	-	-	-	-	-	-
July'17	51.40	-	2.00	16.41	-	-	-	-	-	-	-	-
Aug'17	45.68	-	2.00	14.75	-	-	-	-	-	-	-	-
Sep'17	48.20	-	2.00	17.57	-	-	-	-	-	-	-	-
Oct'17	40.68	-	2.00	15.57	-	-	-	-	-	-	-	-
Nov'17	41.82	-	2.00	15.20	-	-	-	-	-	-	-	-
Dec'17	37.09	-	2.00	14.38	-	-	-	-	-	-	-	-
Jan'18	33.66	-	2.00	13.67	-	-	-	-	-	-	-	-
Feb'18	45.15	-	2.00	14.94	-	-	-	-	-	-	-	-
Mar'18	56.36	-	2.00	14.87	-	-	-	-	-	-	-	-

Uttarbanga Krishi Vishvavidyalaya									(b)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	62.61	-	2.00	17.80	-	-	-	-	-	-	-	-
May'17	66.11	-	2.00	18.71	-	-	-	-	-	-	-	-
Jun'17	46.32	-	2.00	16.32	-	-	-	-	-	-	-	-
July'17	57.72	-	2.00	16.95	-	-	-	-	-	-	-	-
Aug'17	49.40	-	2.00	15.59	-	-	-	-	-	-	-	-
Sep'17	46.66	-	2.00	16.93	-	-	-	-	-	-	-	-
Oct'17	40.40	-	2.00	15.75	-	-	-	-	-	-	-	-
Nov'17	45.27	-	2.00	15.06	-	-	-	-	-	-	-	-
Dec'17	39.79	-	2.00	15.14	-	-	-	-	-	-	-	-
Jan'18	31.62	-	2.00	13.11	-	-	-	-	-	-	-	-
Feb'18	44.34	-	2.00	14.12	-	-	-	-	-	-	-	-
Mar'18	52.40	-	2.00	14.30	-	-	-	-	-	-	-	-

(R) Air quality of Jalpaiguri district

The Board monitored air quality at one (1) station in the Jalpaiguri district for parameters like PM_{10}, SO_2 and NO_2. The monitoring results are shown in in Table 6.A.21 (a).

Table- 6.A.21: Ambient air quality of Jalpaiguri during 2017- 2018

Ramnagar Industrial Estate, Jalpaiguri									(a)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	56.13	-	2.00	17.50	-	-	-	-	-	-	-	-
May'17	44.77	-	2.00	16.95	-	-	-	-	-	-	-	-
Jun'17	46.22	-	2.00	17.13	-	-	-	-	-	-	-	-
July'17	44.98	-	2.00	14.91	-	-	-	-	-	-	-	-
Aug'17	60.03	-	2.00	17.26	-	-	-	-	-	-	-	-
Sep'17	61.45	-	2.00	17.72	-	-	-	-	-	-	-	-
Oct'17	47.49	-	2.00	15.38	-	-	-	-	-	-	-	-
Nov'17	47.70	-	2.00	15.13	-	-	-	-	-	-	-	-
Dec'17	45.47	-	2.00	15.22	-	-	-	-	-	-	-	-
Jan'18	35.96	-	2.00	14.50	-	-	-	-	-	-	-	-
Feb'18	48.14	-	2.00	15.53	-	-	-	-	-	-	-	-
Mar'18	59.20	-	2.00	15.81	-	-	-	-	-	-	-	-

(S) Air quality of Darjeeling district

The Board monitored air quality at two (2) stations at Siliguri in the Darjeeling district for parameters like PM_{10}, SO_2 and NO_2. The monitoring results are shown in Table 6.A.22(a) to 6.A.22 (b).

Table- 6.A.22: Ambient air quality of Darjeeling during 2017- 2018

Siliguri									(a)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	51.65	21.77	2.00	18.63	-	-	-	-	-	-	-	-
May'17	56.49	23.47	2.00	19.60	-	-	-	-	-	-	-	-
Jun'17	57.68	17.60	2.00	17.22	-	-	-	-	-	-	-	-
July'17	57.15	21.49	2.00	16.04	-	-	-	-	-	-	-	-
Aug'17	55.48	23.63	2.00	16.21	-	-	-	-	-	-	-	-
Sep'17	68.30	26.50	2.00	18.93	-	-	-	-	-	-	-	-
Oct'17	53.56	28.18	2.00	17.33	-	-	-	-	-	-	-	-
Nov'17	48.95	21.66	2.00	15.62	-	-	-	-	-	-	-	-
Dec'17	54.68	29.96	2.00	18.11	-	-	-	-	-	-	-	-
Jan'18	41.57	26.81	2.00	14.78	-	-	-	-	-	-	-	-
Feb'18	88.86	43.76	2.00	18.02	-	-	-	-	-	-	-	-
Mar'18	75.85	37.87	2.00	18.71	-	-	-	-	-	-	-	-

Bose Institute (Darjeeling)									(b)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	55.84	20.46	2.00	15.06	-	-	-	-	-	-	-	-
May'17	57.23	22.36	2.00	16.42	-	-	-	-	-	-	-	-
Jun'17	59.14	18.96	2.00	14.44	-	-	-	-	-	-	-	-
July'17	0.00	0.00	0.00	0.00	-	-	-	-	-	-	-	-
Aug'17	0.00	0.00	0.00	0.00	-	-	-	-	-	-	-	-
Sep'17	0.00	0.00	0.00	0.00	-	-	-	-	-	-	-	-
Oct'17	34.72	19.59	2.00	14.05	-	-	-	-	-	-	-	-
Nov'17	24.53	15.22	2.00	12.86	-	-	-	-	-	-	-	-
Dec'17	27.34	15.38	2.00	13.43	-	-	-	-	-	-	-	-
Jan'18	24.76	16.77	2.00	12.76	-	-	-	-	-	-	-	-
Feb'18	29.86	19.88	2.00	13.54	-	-	-	-	-	-	-	-
Mar'18	40.35	21.08	2.00	13.44	-	-	-	-	-	-	-	-

(T) Air quality of Alipurduar district

The Board monitored air quality at one (1) station in the Alipurduar district for parameters like PM_{10}, SO_2 and NO_2. The monitoring results are shown in Table 6.A.23(a).

Table- 6.A.23: Ambient air quality of Darjeeling during 2017- 2018

Month	Rabikanta High School										(a)	
	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	60.91	-	2.00	19.38	-	-	-	-	-	-	-	-
May'17	67.21	-	2.00	18.52	-	-	-	-	-	-	-	-
Jun'17	48.64	-	2.00	18.38	-	-	-	-	-	-	-	-
July'17	72.14	-	2.00	16.22	-	-	-	-	-	-	-	-
Aug'17	41.80	-	2.00	14.15	-	-	-	-	-	-	-	-
Sep'17	47.94	-	2.00	13.88	-	-	-	-	-	-	-	-
Oct'17	42.76	-	2.00	14.94	-	-	-	-	-	-	-	-
Nov'17	37.54	-	2.00	14.36	-	-	-	-	-	-	-	-
Dec'17	34.08	-	2.00	14.57	-	-	-	-	-	-	-	-
Jan'18	31.75	-	2.00	13.74	-	-	-	-	-	-	-	-
Feb'18	47.99	-	2.00	15.00	-	-	-	-	-	-	-	-
Mar'18	61.55	-	2.00	14.81	-	-	-	-	-	-	-	-

(U) Air quality of Kalimgpong district

The Board monitored air quality at one (1) station in the Kalimgpong district for parameters like PM_{10}, SO_2 and NO_2. The monitoring results are shown in Table 6.A.24(a).

Table- 6.A.24: Ambient air quality of Kalimpong during 2017- 2018

Month	Kalimgpong Municipality										(a)	
	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	CO (mg/m)	C_6H_6 ($\mu g/m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	64.36	-	2.00	18.91	-	-	-	-	-	-	-	-
May'17	70.22	-	2.00	16.57	-	-	-	-	-	-	-	-
Jun'17	69.25	-	2.00	17.50	-	-	-	-	-	-	-	-
July'17	0.00	-	0.00	0.00	-	-	-	-	-	-	-	-
Aug'17	0.00	-	0.00	0.00	-	-	-	-	-	-	-	-
Sep'17	0.00	-	0.00	0.00	-	-	-	-	-	-	-	-
Oct'17	30.59	-	2.00	13.43	-	-	-	-	-	-	-	-
Nov'17	29.40	-	2.00	13.43	-	-	-	-	-	-	-	-
Dec'17	25.73	-	2.00	13.05	-	-	-	-	-	-	-	-
Jan'18	24.18	-	2.00	12.27	-	-	-	-	-	-	-	-
Feb'18	32.34	-	2.00	13.34	-	-	-	-	-	-	-	-
Mar'18	42.31	-	2.00	13.50	-	-	-	-	-	-	-	-

(V) Air quality of Jhargram district

The Board monitored air quality at one (1) station at Jhargram Raj College in the Jhargram district for parameters like PM_{10}, SO_2 and NO_2. The monitoring results are shown in Table 6.A.25(a).

Table- 6.A.25: Ambient air quality of Jhargram during 2017- 2018

Jhargram Raj College									(a)			
Month	Concentration								Concentration in PM_{10}			
	PM_{10} ($\mu g/ m^3$)	$PM_{2.5}$ ($\mu g/ m^3$)	SO_2 ($\mu g/ m^3$)	NO_2 ($\mu g/ m^3$)	NH_3 ($\mu g/ m^3$)	O_3 ($\mu g/ m^3$)	CO (mg/m)	C_6H_6 ($\mu g/ m^3$)	B(a)P (ng/ m^3)	As (ng/ m^3)	Pb ($\mu g/m^3$)	Ni (ng/ m^3)
Apr'17	-	-	-	-	-	-	-	-	-	-	-	-
May'17	92.08	-	11.82	36.54	-	-	-	-	-	-	-	-
Jun'17	81.07	-	10.8	35.47	-	-	-	-	-	-	-	-
July'17	68.90	-	10.88	33.36	-	-	-	-	-	-	-	-
Aug'17	67.12	-	10.67	36.38	-	-	-	-	-	-	-	-
Sep'17	69.39	-	10.70	35.05	-	-	-	-	-	-	-	-
Oct'17	68.34	-	11.84	35.58	-	-	-	-	-	-	-	-
Nov'17	80.47	-	11.93	36.29	-	-	-	-	-	-	-	-
Dec'17	94.15	-	12.99	37.95	-	-	-	-	-	-	-	-
Jan'18	98.62	-	12.97	36.64	-	-	-	-	-	-	-	-
Feb'18	92.40	-	11.58	35.12	-	-	-	-	-	-	-	-
Mar'18	86.14	-	10.53	32.23	-	-	-	-	-	-	-	-

Conclusion:

- Only PM_{10} $PM_{2.5}$ & NO_2 during winter months were found to cross the National Daily Standard (NAAQS). However, over a period of 8 months in a year the air quality parameters remain within the national Standard. Other parameters remain within permissible limit.
- WBPCB measures all the twelve air quality parameters in number of stations in the State.
- Air quality data is available in WBPCB website for citizen.

Water Quality Monitoring

6.B.1 Introduction

Major river systems were historically selected for settlement and establishing communities as rivers were important for bringing energy and trade to the community. With gradual development of towns and cities, rivers were often channelized and impounded providing the power and means to drive industry and commerce in such areas. Due to abrupt growth of population beside the river banks resulting the open defecation, public nuisances caused health hazards. Excepting this, the sewer construction began in major cities to eliminate these problems, conveying domestic waste directly into river water bodies.

Downstream of the rivers may also receive discharges from industries and also storm water and agricultural runoff during the monsoon season. Also, many drains carry domestic and industrial wastes from industries, city, and towns on the banks contribute significantly to river water pollution.

Details of location and character of station are hereunder:

Sl. no.	River Name	Stretch	Towns
1.	BARAKAR	KULTI TO ASANSOL	CHITTARANJAN, KULTI, BURNPUR, ASANSOL
2.	CHURNI	SANTIPUR TOWN TO MAJHADIA	RANAGHAT
3.	DAMODAR	DURGACHAKM TO DISHERGARH VILL	UDAYANARAYANPUR, BAGNAN, DURGAPUR, ASANSOL
4.	DWARAKESHWAR	BANKURA TO KUSHTIA	BANKURA
5.	DWARKA	TARAPITH TO SADHAK BAMDEB GHAT	CHANDIPUR, TARAPITH, BISHNUPUR, MARGRAM
6.	GANGA	TRIBENI TO DIAMOND HARBOUR	KANCHRAPARA, HOOGHLY, NAIHATI, CHANDANNAGAR, BHATPARA, BARRACKPORE, BARANAGAR, KOLKATA, HOWRAH,BERHAMPORE, PALTA, DAKSHINESWAR, ULUBERIA
7.	JALANGI	LAAL DIGHI TO KRISHNA NAGAR	KRISHNANAGAR, CHAPRA
8.	KALJANI	BITALA TO ALIPURDWAR	HAMILTONGANJ, ALIPURDUAR
9.	KANSI	MIDNAPORE TO RAMNAGAR	MEDINIPUR
10.	KAROLA	JALPAIGURI TO THAKURER KAMAT	JALPAIGURI
11.	MAHANANDA	SILIGURI TO BINAGURI	SILIGURI
12.	MATHABHANGA	MADHUPUR TO GOBINDAPUR	MAJHDIA, KRISHNAGANJ, DURGAPUR, SWARNAKALI
13.	MAYURKASHI	SURI TO DURGAPUR	SURI, SAINTHIA
14.	RUPNARAYAN	KOLAGHAT TO BENAPUR	BAGNAN, KOLAGHAT, TAMLUK
15.	SILABATI	GHATAL TO NISCHINDIPUR	GHATAL, NISCHINDIPUR
16.	TEESTA	SILIGURI TO PAHARPUR	JALPAIGURI, SILIGURI
17.	BIDHYADHARI	HAROA BRIDGE TO MALANCHA BURNING GHAT	HAROA, MINAKHAN, MALANCHA

The WBPCB regularly monitors water quality of rivers, such as Hooghly river or Ganga in Murshidabad, Nadia, Hooghly, North and South 24 Parganas, Howrah and Kolkata, Damodar, Barakar in Burdwan, Rupnarayan, Shlabati, Kansai in Medinipore, and at river Mahanada,Teesta, Karola, Kaljani in Siliguri and Darjiling, River Dwarka in Birbhum, Dwarakeshwar in Bankura, Churni, MathaBhanga, Jalangi, in Nadia and Vidyadhari in North 24 Parganas, by analysing the physico-chemical, bacteriological and biological parameters. Under the National Water Monitoring Programme (NWMP). The Board monitors the water quality from 105 nos monitoring stations throughout the West Bengal, of which the monitoring stationsof riverare 44, lakes -10, canals-02 and ground water- 49. The river water samples are collected every month from the stations under NWMP and the ground water samples are being collected twice in a year. All samples are analysed at six numbers well equipped Board laboratories situated at Kolkata, Kankinada, Durgapur, Haldia,Dankuni and Siliguri.

Details of location and character of station are hereunder:

SL No.	Station code	Type	Name of monitoring station (NWQMP)	River/ Lake/ Tank/ Pond/ Well/ Canal	State	Monitoring frequency
1	1052	R	Ganga at Uluberia, West Bengal	Ganga	West Bengal	M
2	1053	R	Ganga at Dakshineshwar, West Bengal	Ganga	West Bengal	M
3	1054	R	Ganga at Palta, West Bengal	Ganga	West Bengal	M
4	1080	R	Ganga at Baharampur, West Bengal	Ganga	West Bengal	M
5	1331	R	Damodar at Dishergarh Vill (NR. Bihar West Bengal, Border) West Bengal	Damodar	West Bengal	M
6	1332	R	Damodar at D/S of IISCO after 3Rd outfall at Dhenna Village, West Bengal	Damodar	West Bengal	M
7	1333	R	Damodar at Narainpur after conf of Nunia Nallah, West Bengal	Damodar	West Bengal	M
8	1334	R	Damodar Near Majher ManaVill after con. Of Tamla Nullah, West Bengal	Damodar	West Bengal	M
9	1335	R	Hooghly, Durgachak, Near Pathikali, West Bengal	DAmodar	West Bengal	M
10	1336	R	Barakar at Asansol (Water intake point) West Bengal	Barakar	West Bengal	M
11	1337	R	Rupnarayan Before Confl to river Ganga near Geonkhali, West Bengal	Rupnarayan	West Bengal	M
12	1469	R	Ganga at Diamond Harbour, West Bengal	Ganga	West Bengal	M
13	1470	R	Ganga at Garden Reach, West Bengal	Ganga	West Bengal	M
14	1471	R	Ganga at Howrah Shivpur, West Bengal	Ganga	West Bengal	M
15	1472	R	Ganga at Sreerampore, West Bengal	Ganga	West Bengal	M

SL No.	Station code	Type	Name of monitoring station (NWQMP)	River/ Lake/ Tank/ Pond/ Well/ Canal	State	Monitoring frequency
16	1764	R	Churni D/S Of Shantipur Town, West Bengal	Churni	West Bengal	M
17	1765	L	Rabindrasarovar National Lake, Calcutta, West Bengal	Rabindra-sarovar	West Bengal	M
18	1766	W	Mine pit water Assansol, West Bengal	Well	West Bengal	M
19	1767	W	Durgapur town, Near IISCO, Burdwan, West Bengal	Well	West Bengal	M
20	1768	W	Durgapur town, Paschim Bardhman, West Bengal	Well	West Bengal	M
21	1769	W	Inside Hindustan Liver Factory, Haldia, West Bengal	Well	West Bengal	M
22	1770	W	Near IOC Refinery Haldia, West Bengal	Well	West Bengal	M
23	1771	W	Kalyani Industrial area, Nadia, West Bengal	Well	West Bengal	M
24	1772	W	Barasat Municipality North 24-Pgs, West Bengal	Well	West Bengal	M
25	1773	W	Tangra, Kolkata, West Bengal	Well	West Bengal	M
26	1774	W	Topsia, Kolkata, West Bengal	Well	West Bengal	M
27	1775	W	Dhapa Kolkata, west Bengal	Well	West Bengal	M
28	1776	W	Garia Kolkata, West Bengal	Well	West Bengal	M
29	1777	W	Behala Kolkata, West Bengal	Well	West Bengal	M
30	1778	W	Domjur Howrah, West Bengal	Well	West Bengal	M
31	1779	W	Dankuni (Near coal complex) West Bengal	Well	West Bengal	M
32	1813	W	Rishra, West Bengal	Well	West Bengal	M
33	1931	W	Cossipore- North Kolkata	Well	West Bengal	M
34	1932	W	Central Kolkata	Well	West Bengal	M
35	1933	W	Near galvanization unit, Howrah	Well	West Bengal	M
36	1934	W	Central Howrah Residential Area	Well	West Bengal	M
37	1935	W	Inside Kolkata Leather Complex	Well	West Bengal	M
38	1936	W	Residential Area – Sonarpur	Well	West Bengal	M
39	1937	W	Rajarhat – New Township	Well	West Bengal	M
40	1938	W	Basirhat Municipality	Well	West Bengal	M
41	1939	W	Barrackpore Municipality	Well	West Bengal	M
42	1940	W	Near The Phosphate Company – Rishra	Well	West Bengal	M
43	1941	W	Near Fly ash Dumping site– Kuntighat, Bandel	Well	West Bengal	M
44	1942	W	Near Exide Industries – Haldia	Well	West Bengal	M

SL No.	Station code	Type	Name of monitoring station (NWQMP)	River/ Lake/ Tank/ Pond/ Well/ Canal	State	Monitoring frequency
45	1943	W	Inside Tata Metaliks, Kharagpur	Well	West Bengal	M
46	1944	W	Kharagpur Industrial area	Well	West Bengal	M
47	1945	W	English Bazar – Maldah	Well	West Bengal	M
48	1946	R	Mahananda at Siliguri	Mahananda	West Bengal	M
49	1947	R	Teesta at Siliguri	Teesta	West Bengal	M
50	2503	L	Hatishala Ghat on Dudhpukar at Tarakeswar	Tarakeshwar	West Bengal	M
51	2504	L	Main ghat on Dudhpukarat Tarakeswar	Tarakeshwar	West Bengal	M
52	2505	L	Hanuman Ghat on Dudhpukar at Tarakeswar	Tarakeshwar	West Bengal	M
53	2506	R	Tribeni on Ganga , Near Burning Ghat	Ganga	West Bengal	M
54	2507	R	D/S of Kansai at Medinipore, Near new Hanuman Midnapur, Gandhi Ghat	Kansi	West Bengal	M
55	2508	R	D/S of Shlabati at Ghatal	Shilabati	West Bengal	M
56	2509	R	D/S Rupnarayan at kolkaghat, Near Kolaghat rail bridge No 3	Rupnarayan	West Bengal	M
57	2510	W	Geokhali Bunglow, Purba Medinipore	Well	West Bengal	M
58	2511	R	Nabadwip on Ganga, Ghoshpara, Near monipurghat	Ganga	West Bengal	M
59	2512	C	Noai Canal North 24 praganas, near Ganga nagarMotibaradge	Noai Canal	West Bengal	M
60	2513	C	Kharda Canal North 24 Parganas, Near Jayshree Chemical Industry	Kharda Canal	West Bengal	M
61	2514	R	Jalangi,D/S of Krishna nagar	Jalangi	West Bengal	M
62	2515	W	SDO Office, Ranaghat	Well	West Bengal	M
63	2516	W	SDO Office, Krishnanagar	Well	West Bengal	M
64	2517	R	MathaBhanga, Gobindapur	Mathabhanga	West Bengal	M
65	2518	R	Churni, Majhadia	Churni	West Bengal	M
66	2519	L	Kochbihar Lake (SagarDighi)	Kochbihar Lake	West Bengal	M
67	2520	L	Mirik Lake	Mirik Lake	West Bengal	M
68	2521	L	Water Reservior at Delo	Lake	West Bengal	M
69	2522	L	Senchal Lake for Darjeeling	Sinchal Lake	West Bengal	M
70	2523	R	Karola, D/S of Jalpaiguri, Near min bhawan	Karola	West Bengal	M
71	2524	R	Kaljani D/S of Alipurdwar, Municipality Discharge Point	Kaljani	West Bengal	M
72	2525	R	Mahananda D/S Ramghat	Mahananda	West Bengal	M
73	2526	W	Fulbari Barrage	Well	West Bengal	M
74	2527	R	Water intake point for Bardhaman town	Damodar	West Bengal	M

SL No.	Station code	Type	Name of monitoring station (NWQMP)	River/ Lake/ Tank/ Pond/ Well/ Canal	State	Monitoring frequency
75	2528	W	Ground water point inside Burdwan University	Well	West Bengal	M
76	2529	W	Ground water point near Bardhaman station	Well	West Bengal	M
77	2530	W	Hot spring at Bakreshwar	Well	West Bengal	M
78	2531	R	U/S of Tarapith on river Dwarka at sadhak Bamdeb Ghat	Dwarka	West Bengal	M
79	2532	R	D/S of Tarapith of river Dwarka, Satighat	Dwarka	West Bengal	M
80	2533	W	Suri Town near bus stand	Well	West Bengal	M
81	2534	R	Water intake point for Suri town on river Mayurakshi	Mayurakshi	West Bengal	M
82	2535	W	Visva Bharati	Well	West Bengal	M
83	2536	W	Nalhati Railway Station of Birbhum	Well	West Bengal	M
84	2537	W	Bolpur near Railway Station	Well	West Bengal	M
85	2538	W	Moregram Crossing	Well	West Bengal	M
86	2539	L	Belboni Lake near Barjora	Belbonilake	West Bengal	M
87	2540	W	Sati ghat at Bankura town	Well	West Bengal	M
88	2541	R	Water intake point for Bankura town on river Dwarakeshwar	Dwarake-shwar	West Bengal	M
89	2542	W	Dwarika at Bishnupur Town	Well	West Bengal	M
90	2543	W	SDO office at Bishnupur Town	Well	West Bengal	M
91	2544	L	Saheb Bandh at Purulia		West Bengal	M
92	2545	W	Ground water point at Purulia RK Mission	Well	West Bengal	M
93	2546	W	Uluberia college at Howrah	Well	West Bengal	M
94	2547	W	Amtola on Diamond Harbour Road, 24 Parganas (s)	Well	West Bengal	M
95	2548	W	Hidco Office, Rajarhat	Well	West Bengal	M
96	2549	R	U/S of Vidyadhari river at Haroa Bridge	Vidyadhari	West Bengal	M
97	2550	R	D/S of Bidyadhari River at Malancha buring ghat	Vidyadhari	West Bengal	M
98	10108	R	River Damodar at Andal D/s	Damodar	West Bengal	M
99	10107	R	River Damodar at Andal U/s	Damodar	West Bengal	M
100	10109	R	River Damodar at Asansol U/s	Damodar	West Bengal	M
101	10109	R	River Damodar at Durgapur U/s	Damodar	West Bengal	M
102	10109	R	River Damodar at Raniganj D/s	Damodar	West Bengal	M
103	10159	R	Khagra	Ganga	West Bengal	M
104	10160	R	Gorabazar	Ganga	West Bengal	M
105	10161	R	River-Palta Shitalatala, 24 Parganas (N)	Ganga	West Bengal	M

The Board monitors the river water quality on monthly basis for physico-chemical like pH, Total Suspended solids, Dissolved Oxygen, Biochemical Oxygen Demand, Chemical Oxygen Demand, Ammonia, nitrate, Total Kjeldahal Nitrogen, and bacteriological parameters Total Coliform Bacteria, Fecal Coliform Bacteria etc. Heavy metal concentration and pesticides are also monitored once in a year (Month of April) by State Board as per monitoring protocol of Centarl Pollution Control Board.

6.B.2 WATER QUALITY MONITORING IN RIVER GANGA

The river Ganga enters West Bengal negotiating the Rajmahal hills and is bifurcated into two branches near Jangipur in Murshidabad district. The Western branch (Bhagirathi- Hooghly) which refer to as Ganga form principal river system in the Gangetic delta lying southern part of West Bengal. The Bhagirathi – Hooghly a major tributary of the Ganga, traverses a distance of 500 Km through West Bengal to meet Bay of Bengal at Ganga Sagar.

The Board is presently monitoring the water quality of river Ganga and its tributaries at thirteen locations from upstream to downstream of the river under the National river water monitoring programme (NWMP) of Central Pollution Control Board. Monitoring of the river water pollution is mainly done to assess the water quality of river which is being continuously polluted from discharge of untreated industrial waste water, discharge of untreated municipal wastewater and pollution from nonpoint sources, however the municipal waste water contributing maximum pollution and caused the ill health of the entire river.

WBPCB, as its principal mandate, monitors the water quality of the river Ganga and all other major rivers of the state. The activity has been performed since 1980s with addition of new water quality monitoring stations in between. In the period 2017-2018 the monitoring of the river water quality of river Ganga at 14 no'slocations from Murshidabad to Diamond harbour shown in table below.

Table 6.B.1 - Water quality monitoring stations on river Hooghly

Sl no.	Stations	District
1.	Ganga at Baharampur, West Bengal	Murshidabad
2.	Gorabazar	Murshidabad
3.	Khagra	Murshidabad
4.	Nabadip on Ganga, Ghoshpara, Near Monipurghat	Nadia
5.	Tribeni on Ganga, Near Burning Ghat	Hooghly
6.	Ganga at Palta, West Bengal	24 Parganas -N
7.	Palta Shitalatala	24Parganas - N
8.	Ganga at Serampore, West Bengal	Hooghly
9.	Ganga at Dakshineshwar, West Bengal	24 Parganas -N
10.	Ganga at Howrah Shibpur, West Bengal	Howrah
11.	Ganga at Garden Reach, West Bengal	Kolkata
12.	Ganga at Uluberia, West Bengal	24 Parganas-S
13.	Ganga at Diamond Harbour, West Bengal	24 Parganas-S
14.	Ganga at Durgachak near Patikhali, West Bengal	Haldia

Result & Observation:

Table 6.B.2 : Variation of pH at station river Ganga [Standard – 6.5 to 8.5]

Stations	Apr -17	May -17	Jun -17	Jul -17	Aug -17	Sep -17	Oct -17	Nov -17	Dec -17	Jan -18	Feb -18	Mar -18
GANGA AT BAHARAMPORE, WEST BENGAL	7.54	7.58	8.04	8.08	8.04	7.78	8.04	7.98	7.66	8.07	8.41	7.28
GORABAZAR (MURSHIDABAD)	7.75	7.66	8.09	8.11	8.09	7.74	8.17	7.97	7.88	8.11	8.36	7.35
KHAGRA (MURSHIDABAD)	7.66	7.62	8.08	8.06	8.08	7.68	8.16	7.96	7.83	8.1	8.36	7.31
NABADWIP ON GANGA, GHOSHPARA NEAR MONIPURGHAT	7.74	7.29	8.16	8.18	7.65	7.84	7.74	7.98	7.82	8.14	8.54	7.62
TRIBENI ON GANGA, NEAR BURNING GHAT	7.76	7.68	8.04	8.09	7.78	7.76	7.47	7.95	7.54	8.09	8.49	7.66
GANGA AT PALTA, WEST BENGAL	8.31	7.54	7.46	8.26	7.35	7.62	7.74	7.38	7.93	8.04	8.38	7.53
PALTA SHITALATALA	8.08	7.73	7.5	8.12	7.44	7.64	7.42	7.42	7.87	8.01	8.29	7.56
GANGA AT SERAMPORE, WEST BENGAL	7.78	7.75	8.09	8.27	7.55	7.82	7.54	8.14	7.72	8.12	8.38	7.83
GANGA AT DAKSHMINESWAR, WEST BENGAL	8.07	8.04	7.73	7.83	7.38	7.84	7.85	7.3	7.65	8.01	6.58	7.75
GANGA AT GARDEN REACH, WEST BENGAL	8.08	8.07	7.83	7.91	7.45	7.84	7.91	7.97	7.87	8.22	7.14	7.65
GANGA AT HOWRAH-SHIVPUR, WEST BENGAL	8.17	8.08	7.9	7.68	7.52	7.89	7.82	7.22	7.8	8.1	7.29	7.73
GANGA AT ULUBERIA, WEST BENGAL	8.02	8.04	8.02	7.91	7.82	6.87	7.9	7.37	7.95	8.2	7.2	7.25
GANGA AT DIAMOND HARBOUR, WEST BENGAL	8.06	8.09	7.92	7.68	6.84	6.32	7.92	7.37	7.52	7.3	6.95	7.36
GANGA AT PATIKHALI	8.26	8.04	7.85	7.70	6.49	7.65	7.59	7.25	7.58	8.05	7.38	7.81

Table 6.B.3 Variation of Biochemical Oxygen Demand (BOD) at stations of river Ganga [Standard – 3mg/l or less]

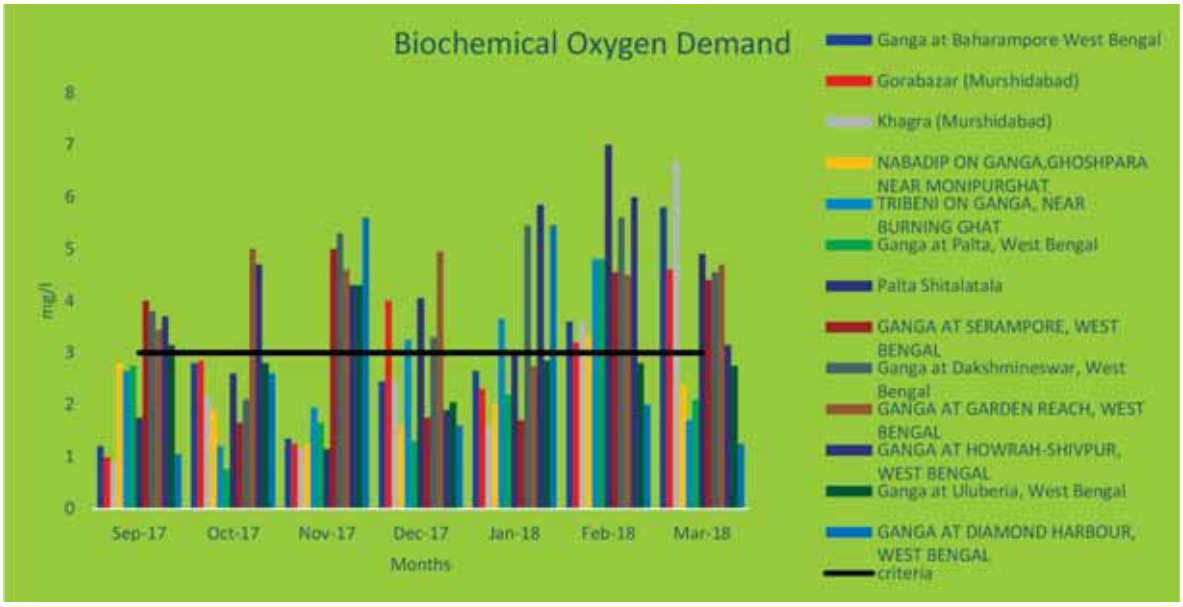
Stations	Apr -17	May -17	Jun -17	Jul -17	Aug -17	Sep -17	Oct -17	Nov -17	Dec -17	Jan -18	Feb -18	Mar -18
GANGA AT BAHARAMPORE, WEST BENGAL	2.4	3.45	2.85	5.55	2.65	1.2	2.8	1.35	2.45	2.65	3.6	5.8
GORABAZAR (MURSHIDABAD)	2.05	1.65	3.8	4.3	0.75	1	2.85	1.25	4	2.3	3.2	4.6
KHAGRA (MURSHIDABAD)	1.55	3.7	2.95	5.45	1.85	0.9	2.15	1.15	2.45	1.6	3.6	6.7
NABADIP ON GANGA, GHOSHPARA NEAR MONIPURGHAT	1.4	2.55	2.85	1.5	4	2.8	1.9	1.25	1.6	2	3.35	2.4
TRIBENI ON GANGA, NEAR BURNING GHAT	3.25	3.7	2.45	2.3	3.05	2.65	1.2	1.95	3.25	3.65	4.8	1.7
GANGA AT PALTA, WEST BENGAL	2.5	0.9	1.55	1.75	1.5	2.75	0.75	1.65	1.3	2.2	4.8	2.1
PALTA SHITALATALA	2.7	2.2	4	2.1	3.7	1.75	2.6	1.15	4.05	2.95	7	4.9
GANGA AT SERAMPORE, WEST BENGAL	5.8	5.1	6.1	3.8	3.5	4	1.65	5	1.75	1.7	4.55	4.4
GANGA AT DAKSHMINESWAR, WEST BENGAL	4.5	1.6	2	2.6	2.8	3.8	2.1	5.3	3.3	5.45	5.6	4.55
GANGA AT GARDEN REACH, WEST BENGAL	2.4	1.9	3.35	1.15	3.8	3.45	5	4.6	4.95	2.75	4.5	4.7
GANGA AT HOWRAH-SHIVPUR, WEST BENGAL	1.05	1.55	3.1	2.7	3.15	3.7	4.7	4.3	1.9	5.85	6	3.15
GANGA AT ULUBERIA, WEST BENGAL	2.15	1.4	1.85	2.6	2.5	3.15	2.8	4.3	2.05	2.85	2.8	2.75
GANGA AT DIAMOND HARBOUR, WEST BENGAL	1.9	4.1	2.2	2.1	3.8	1.05	2.6	5.6	1.6	5.45	2	1.25
GANGA AT PATIKHALI	2.40	2.05	1.30	1.60	2.30	1.75	4.40	1.95	3.30	2.10	1.95	3.40

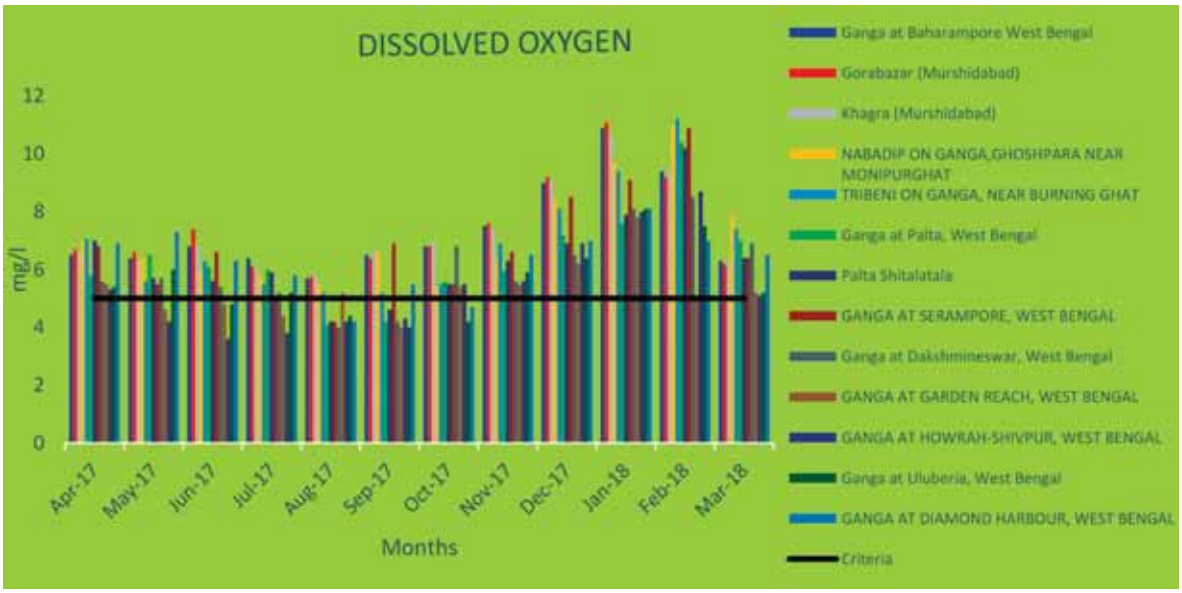
Table-6.B.4 : Variation of Dissolved Oxygen (DO) at stations of river Ganga [Standard – 5mg/l or more]

Stations	Apr -17	May -17	Jun -17	Jul -17	Aug -17	Sep -17	Oct -17	Nov -17	Dec -17	Jan -18	Feb -18	Mar -18
GANGA AT BAHARAMPORE, WEST BENGAL	6.5	6.4	6.8	6.4	5.7	6.5	6.8	7.5	9	10.9	9.4	6.3
GORABAZAR (MURSHIDABAD)	6.7	6.6	7.4	6.1	5.75	6.4	6.8	7.6	9.2	11.1	9.2	6.2
KHAGRA (MURSHIDABAD)	6.6	6.3	6.8	6.1	5.8	6.6	7	7.4	9.1	10.7	9.5	6.3
NABADIP ON GANGA, GHOSHPARA NEAR MONIPURGHAT	6.95	6.4	6	5.8	5.5	6.6	5.4	6.4	8.4	9.7	11	7.9
TRIBENI ON GANGA, NEAR BURNING GHAT	7.05	5.6	6.3	5.5	5.2	5.2	5.5	6.9	8.1	9.4	11.2	7.4
GANGA AT PALTA, WEST BENGAL	5.8	6.5	6.1	6	4.1	4.2	5.6	5.95	7.2	7.6	10.4	7
PALTA SHITALATALA	7	5.7	5.6	5.9	4.2	4.6	5.5	6.3	6.9	7.9	10.2	6.4
GANGA AT SERAMPORE, WEST BENGAL	6.8	5.5	6.6	5	4.2	6.9	5.5	6.6	8.5	9.1	10.9	6.4
GANGA AT DAKSHMINESWAR, WEST BENGAL	5.6	5.7	5.4	5.2	4	4.2	6.8	5.6	6.5	8.1	8.5	6.9
GANGA AT GARDEN REACH, WEST BENGAL	5.5	4.6	4.8	4.4	5.2	4	5.4	5.5	6.2	7.8	5	5.2
GANGA AT HOWRAH-SHIVPUR, WEST BENGAL	5.3	4.2	3.6	3.8	4.2	4.3	5.5	5.6	6.9	8	8.7	5.1
GANGA AT ULUBERIA, WEST BENGAL	5.4	6	4.8	5.2	4.4	4	4.2	5.9	6.4	8.1	7.5	5.2
GANGA AT DIAMOND HARBOUR, WEST BENGAL	6.9	7.3	6.3	5.8	4.2	5.5	4.7	6.5	7	8.1	7	6.5
GANGA AT PATIKHALI	6.50	6.00	6.50	6.80	4.70	6.10	5.50	6.40	5.90	7.50	7.10	7.10

Table - 6.B.5 : Variation of Total Coliform at stations of river ganga [Standard –500 MPN/100ml or less]

Stations	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
GANGA AT BAHA-RAMPORE W.B.	170000	280000	220000	280000	280000	220000	220000	130000	170000	140000	110000	280000
GORABAZAR (MURSHIDABAD)	90000	170000	170000	350000	170000	140000	170000	70000	110000	70000	90000	170000
KHAGRA (MURSHIDABAD)	140000	220000	170000	300000	220000	170000	170000	140000	170000	170000	170000	220000
NABADIP ON GANGA, GHOSH-PARA NEAR MONIPURGHAT	170000	170000	170000	170000	220000	170000	170000	110000	170000	170000	140000	140000
TRIBENI ON GANGA, NEAR BURNING GHAT	140000	280000	170000	300000	350000	220000	170000	170000	170000	140000	170000	220000
GANGA AT PALTA, WEST BENGAL	170000	280000	220000	280000	280000	280000	280000	280000	170000	140000	220000	170000
PALTA SHITALATALA	140000	170000	170000	170000	220000	220000	170000	220000	140000	110000	170000	170000
GANGA AT SERAMPORE, W.B.	170000	350000	220000	350000	300000	170000	280000	220000	170000	170000	170000	280000
GANGA AT DAKSHINESWAR, WEST BENGAL	130000	110000	110000	220000	900000	240000	300000	500000	300000	500000	240000	240000
GANGA AT GARDEN REACH, WEST BENGAL	30000	50000	130000	50000	500000	130000	280000	80000	500000	240000	300000	240000
GANGA AT HOWRAH-SHIVPUR, WEST BENGAL	80000	21000	50000	50000	70000	170000	130000	140000	220000	70000	220000	30000
GANGA AT ULUBERIA, W.B.	23000	13000	11000	22000	50000	33000	80000	90000	170000	140000	220000	30000
GANGA AT DIAMOND HARBOUR, WEST BENGAL	17000	22000	8000	22000	17000	30000	13000	34000	23000	27000	50000	30000
GANGA AT PATIKHALI	9000	35000	22000	22000	14000	17000	35000	50000	22000	11000	160000	11000





At present study it is to be noted that the level of Dissolved Oxygen of the river water was foundalmost satisfactory and well above the water quality criteria B outdoor bathing (organised) (5.0 mg/l) inmost of the months which indicates that the quality of the river water is suitable for aquatic life but occasionally at downstream of the river near Palta, Serampore, Dakshineswar,Gardenreach, Shibpur, Uluberia and at Diamond Harbour the DO was noticed below the standard during pre-monsoon and monsoon months.The BOD was fluctuating greatly in most of the months of the study period (2017-2018). Occasionally the value was higher than the criteria (3.0 mg/l) and some time it just crossed the criteria. Such variation of BOD may be due to sewage discharges in the river water. The coliform was found to be higher than criteria B (TC 500 MPN/100ml) in almost entire stretch of the river Ganga in West Bengal which is a good indicator for sewage water contamination in river water.

6.B.3 Water Quality Monitoring of the rivers in Rarh Bengal

In Rarh Bengal the two rivers Damodar and Barakar, are monitored by State Board on monthly basis & the status of the water quality is discussed below.

WATER QUALITY MONITORING IN RIVER DAMODAR

River Damodar originates from Chotonagpur Plateau and is a rain fed river. Damodar river was earlier known as "River of sorrow" due to flooding of many areas of Bardhaman, Hooghly, Howrah, &Medinipore districts. The river runs 541 Km from it's origin in the eastern part of India, to meet the river Hooghly. The basin is 17,500 Sq.Km which provides the country in valuable minerals, such as Coal, & Iron in Bihar, Jharkhand & West Bengal. The presence of vast coal mining operations and availability of iron ore prompted up power and steel plants in the basin area. The river water gets polluted from coal washeries, Coke ovens discharges, Ash pond overflow from power plants etc. In West Bengal river Damodar gets polluted through several nullah which carry industrial discharges, viz. Singharan Nullah, Nunia Nullah, Tamla Nullah. State Board monitors the water quality of river Damodar on monthly basis at Ten locations mentioned in table below.

Except the industrial discharges in the river, the sewage water discharges also take place due to increasing population in the basin area. The major industrial activity and agricultural operation throughout the basin may have caused the river water pollution by canal or nullah discharges or by runoff from agricultural field, which could be a serious threat to the health of the flora and fauna as well as human beings.

Sl no.	Stations	District
1.	Damodar at Dishergarh Vill (Near Bihar West Bengal, Border) West Bengal	Bardhaman
2.	Damodar at D/S of IISCO after 3rd outfall at Dhenna Village, West Bengal	Bardhaman
3.	River Damodar at Asansol U/s	Bardhaman
4.	Damodar at Narainpur after conf. of Nunia Nallah, West Bengal	Bardhaman
5.	River Damodar at Raniganj D/s	Bardhaman
6.	River Damodar at Andal D/s	Bardhaman
7.	River Damodar at Andal U/s	Bardhaman
8.	River Damodar at Durgapur U/s	Bardhaman
9.	Damodar Near Majher Mana Vill after conf. of Tamla Nullah, West Bengal	Bardhaman
10.	Water intake point for Bardhaman town	Bardhaman

Result & Observation:

Table-6.B.6: DAMODAR AT DISHERGARH VILL. (Near BIHAR-WEST BENGAL BORDER), WEST BENGAL(Standard-BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Parameters	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	2.35	6.35	4.3	1.25	5.1	1.75	2.35	5.2	4.9	3.8	3.6	*3.15*
Dissolved O_2(DO)(mg/l)	9.8	8.8	8.9	6.8	6.9	6.6	7.4	8.7	8.5	8.2	8.1	*8.8*
pH(Unit)	8.04	8.08	8.12	7.72	7.59	7.46	7.45	7.34	7.32	7.98	7.24	*7.16*
Total Coliform(MPN/100ml)	7000	5000	9000	5000	3400	6000	7000	3300	4000	4000	5000	*5000*

Table-6.B.7: DAMODAR AT D/S OF IISCO AFTER 3RD OUTFALL AT DHENNA VILLAGE, WEST BENGAL (Standard - BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Parameters	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	2.7	3.05	2.95	2.1	3.2	2.6	4.45	2.95	5.7	3.9	3.6	*3.35*
Dissolved O_2(DO)(mg/l)	7.8	9.5	8.4	8.2	9.2	6.9	6	7.8	8.5	8	7.9	*6.3*
pH(Unit)	7.64	7.97	8.01	7.02	7.61	7.28	7.97	7.35	7.23	7.93	7.84	*7.19*
Total Coliform(MPN/100ml)	9000	6000	7000	5000	6000	3300	2600	2600	3300	2200	3400	*3400*

Table-6.B.8 : DAMODAR AT NARAINPUR AFTER CONFL. OF NUNIA NALLAH, WEST BENGAL
(Standard-BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Parameters	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	3.3	5.8	2.3	3.3	5	5.2	4.65	7.55	6.05	3.5	3.4	*3.1*
Dissolved O_2(DO)(mg/l)	9.3	6.7	9.5	5	6.1	5.7	5.9	9.4	8.9	9.4	8.1	*8.3*
pH(Unit)	8.27	7.46	8.1	7.11	7.02	7.88	8.31	7.6	7.28	7.76	7.56	*6.97*
Total Coliform(MPN/100ml)	3300	5000	35000	22000	17000	14000	11000	7000	6000	5000	7000	*6000*

Table-6.B.9 : DAMODAR NEAR MUJHER MANA VILLAGE AFTER CONF. OF TAMLA NALLAH, WEST BENGAL
(Standard-BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Parameters	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	4.35	4.2	2.95	4.05	3.4	5.15	5.85	6.05	6.6	6.95	5.55	*5.6*
Dissolved O_2(DO)(mg/l)	5.5	7.4	5	5.3	6.7	5.7	6.1	6.3	7	7.8	8	*6.8*
pH(Unit)	7.24	7.68	7.62	6.76	7.49	7.93	7.95	7.57	7.08	7.49	7.84	*7.2*
Total Coliform(MPN/100ml)	3000	6000	5000	5000	5000	5000	3400	4000	3300	2700	5000	*3400*

Table-6.B.10 : WATER INTAKE POINT FOR BARDHAMAN TOWN
(Standard-BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Parameters	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	2.15	3.45	3.2	5.15	3.4	4.7	5.65	4.45	2.35	2.1	2.8	*2.85*
Dissolved O_2(DO)(mg/l)	8.9	9.9	8.5	8.8	8.4	8.8	9.4	9.2	8.9	9.2	8.1	*8.2*
pH(Unit)	8.15	8.05	8.29	7.79	7.05	7.76	7.15	7.29	7.25	7.78	7.85	*7.11*
Total Coliform(MPN/100ml)	6000	11000	7000	7000	6000	3300	3400	3300	2700	3400	4000	*3300*

Table-6.B.11 : RIVER DAMODAR AT ANDAL D/S
(Standard- BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Parameters	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	2.8	4.05	2.9	4.05	2	2.15	3.1	4.25	3.3	2.3	2.45	2.6
Dissolved O_2(DO)(mg/l)	8.3	8.7	8.1	6.9	5.2	6.5	6	8.5	7.1	8.8	7.1	8
pH(Unit)	7.89	7.85	8	7.29	7.05	7.05	8.15	7.35	7.19	8.03	8.21	6.92
Total Coliform(MPN/100ml)	6000	9000	30000	6000	5000	5000	6000	5000	3400	3300	3300	3400

Table-6.B.12 : RIVER DAMODAR AT ANDAL U/S
(Standard - BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Parameters	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	2.65	3.7	2.15	4	5.6	1.8	4.45	3.7	3.95	3	2.85	2.7
Dissolved O_2(DO)(mg/l)	8.4	7.8	8.2	5.3	6.1	6.5	5.6	8.8	7	8.9	8.2	7.9
pH(Unit)	8.11	7.65	7.96	7.39	7.12	7.88	8.07	7.45	7.15	7.91	7.89	7.23
Total Coliform(MPN/100ml)	5000	3400	28000	3300	3400	3400	2700	2100	2600	2100	2100	2600

Table - 6.B.13 : RIVER DAMODAR AT ASANSOL U/S
(Standard - BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml)

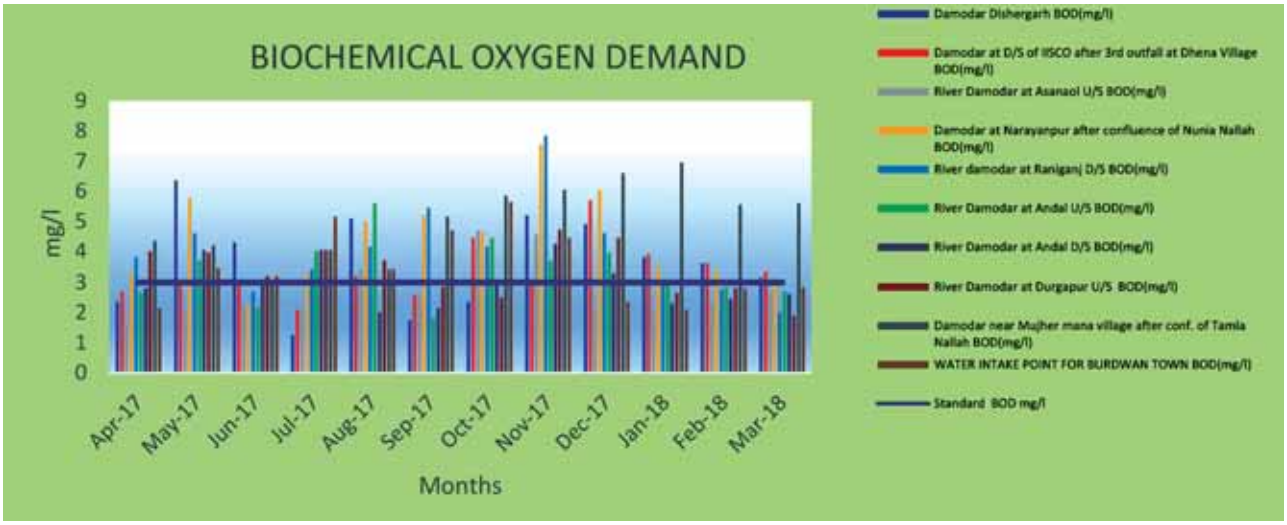
Parameters	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	1.65	2	2.15	2.1	3.4	2.55	4.7	4.55	2	1.95	2.3	2.6
Dissolved O_2(DO)(mg/l)	8.1	7.9	8.1	8.7	8.9	6.7	6.4	7.7	8.2	8.8	8.1	9.2
pH(Unit)	7.6	7.69	7.49	7.53	7	7.92	7.89	7.32	7.02	7.69	8.15	7.03
Total Coliform(MPN/100ml)	17000	8000	6000	7000	7000	11000	4000	3300	4000	2700	3000	3300

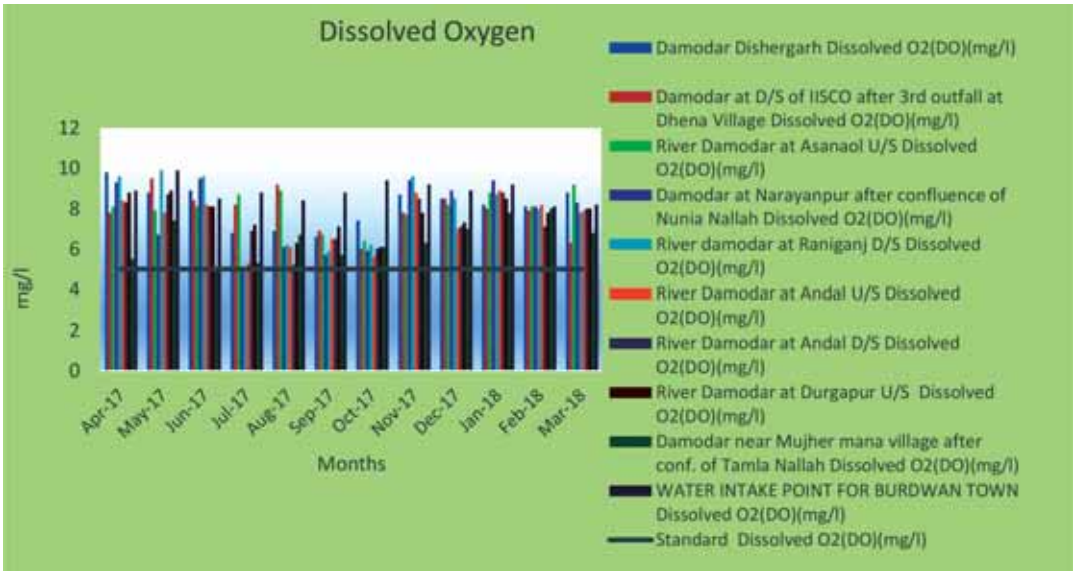
Table - 6.B.14 : RIVER DAMODAR AT DURGAPUR U/S
(Standard - BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Parameters	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	4	3.95	3.2	4.05	3.7	2.85	2.5	4.72	4.45	2.65	2.8	1.9
Dissolved O_2(DO)(mg/l)	8.8	8.9	8.1	7.2	6.3	7.1	6.1	7.8	7.3	8.5	7.8	8
pH(Unit)	7.92	7.4	7.92	7.28	6.96	7.86	8.12	7.46	6.96	7.91	7.31	7.15
Total Coliform(MPN/100ml)	9000	11000	17000	9000	9000	6000	3300	3400	2600	3300	3000	4000

Table - 6.B.15 : RIVER DAMODAR AT RANIGANJ D/S
(Standard - BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Parameters	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	3.8	4.6	2.7	3.4	4.15	5.45	4.15	7.85	4.6	2.9	2.75	2
Dissolved O_2(DO)(mg/l)	9.6	9.9	9.6	5	6.2	5.9	6.2	9.6	8.5	8.7	8	7.8
pH(Unit)	8.02	7.7	7.95	7.13	7.63	7.86	8.03	7.58	6.63	7.94	8.05	7.37
Total Coliform(MPN/100ml)	11000	9000	35000	6000	5000	11000	9000	5000	7000	4000	8000	7000





The level of DO were monitored at ten locations of river Damodar& found that the DO was well above the water quality criteria-B (outdoor bathing, organised) (5.0 mg/l) which indicated the aquatic condition was satisfactory for aquatic flora and fauna. BOD was measured at all stations and it was observed that the level of BOD at all locations varies greatly and above the water quality criteria-B (3.0mg/l) in most of the months. Total Coliform counts were found to be much higher than the water quality criteria-B (TC 500 MPN/100ml)in almost in all the months at all stations.

WATER QUALITY MONITORING IN RIVER BARAKAR

The Barakar is the major tributary of the river Damodar. It originates near Padma in Hazaribagh district and flows through Jharkhand before meeting the Damodar near Dishergarh in West Bengal.

The water quality of river Barakar is being monitored at Asansol water intake point where local people use the river water for cleaning the cloths and bathing purposes.

Result &Observation:

Water quality of river Barakar at Asansol water intake point is being monitored by board in every month. Levels of pH, DO, BOD, and TC of the river is presented in Table below.

Table - 6.B.16 : BARAKAR AT ASANSOL (WATER INTAKE POINT), WEST BENGAL
(Standard - BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Parameters	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	2.15	1.75	2.5	1.35	2.5	3.4	4.95	2.1	4.25	2.25	2.9	*2.95*
Dissolved O_2(DO)(mg/l)	8.7	7.7	8	7.2	6.9	6.6	6.1	7.2	10	8.2	8	*9.5*
pH(Unit)	7.62	7.61	7.72	7.57	7.68	7.89	8.19	7.43	7.45	7.86	8.09	*7.1*
Total Coliform(MPN/100ml)	7000	6000	8000	9000	5000	7000	5000	4000	5000	4000	5000	*6000*

In the study period (2017-2018) it was noticed that the concentration of BOD in the river Barakar was found to be mostly within the water quality criteria-B (outdoor bathing, organised) (3.0 mg/l). However, the BOD slightly crossed the criteria level occasionally. Dissolved Oxygen level was found to be well above the water quality criteria-B (5.0 mg/l) which indicates that the water quality was healthy for aquatic life. The Total Coliform or TC was found to be higher than the water quality criteria-B (500MPN/100ml) in most of the months throughout the study period.

6.B.4 Water Quality Monitoring of the rivers of South Bengal :

The southern part of Bengal has number of small streams, all are very important especially due to the explosion of population in this part of the State. Almost all the river sources are stressed and the water is

high on demand for both industrial and domestic purposes. Most Important rivers running through the western sides of the state are in the monitoring network and the observation of the water quality for the period (2017 -2018)are narrated below.

River Shilabati:

Result & Observation

Table - 6.B.17 : D/S OF SILABATI AT GHATAL,

(Standard - BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	3.05	1.9	2.4	2.85	3	1.55	1.4	3.2	3	3.9	2.4	2.5
Dissolved O_2(DO)(mg/l)	5.6	5.5	5.6	6	6.4	5.4	6.9	7.1	7.9	9.1	6.2	6
pH(Unit)	8.3	8.23	7.4	7.2	7.42	7.97	7.39	7.55	7.33	7.18	7.37	7.45
Total Coliform(MPN/100ml)	17000	50000	14000	90000	11000	22000	22000	17000	11000	17000	11000	7000

The values of BOD monitored in the river was found below the water quality criteria-B (outdoor bathing, organised) (3.0 mg/l) throughout the study period except in April, November 2017 & January, 2018.The DO value was found to be well above the water quality criteria-B (5.0 mg/l). pH was well within the criteria-B (6.5 to 8.5) Total coliform count was always higher than the water quality criteria-B (500 MPN/ 100ml). So, water body is may be polluted from contamination of the sewage.

Rupnarayan :

Result & Observation

Table - 6.B.18 : D/S OF RUPNARAYAN AT KOLAGHAT, NEAR KOLAGHAT RAIL BRIDGE NO.3

(Standard - BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	3.75	2.9	1.6	3.3	2.35	2.2	2.45	4.55	4.25	1.9	2.6	5.25
Dissolved O_2(DO)(mg/l)	6.4	7	6.8	6.1	6.6	5.7	5.8	5.8	7.8	8.5	7.7	6.9
pH(Unit)	7.97	7.87	7.44	7.65	7.39	7.42	7.4	7.9	7.35	7.89	7.78	7.66
Total Coliform(MPN/100ml)	50000	90000	14000	90000	14000	22000	22000	28000	17000	50000	14000	11000

The value of BOD was found to be below the water quality criteria-B (outdoor bathing, organised) (3.0 mg/l) in almost all months throughout the study period except in April, July, November, Dec 2017and March 2018. But the value of DO was found to be always well above the water quality criteria-B (5.0mg/ l) all along the study period and indicated that the water quality is suitable for aquatic life in river Rupnarayan. The Total coliform bacterial count was observed very high than the water quality criteria-B (500MPN/100ml) throughout the study period.

Table - 6.B.19 : Rupnarayan before confluence to river Ganga near Geonkhali, West Bengal

(Standard - BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Parameters	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	1.35	0.90	1.25	0.75	1.15	1.30	3.10	1.50	2.05	1.50	1.70	2.10
Dissolved O_2(DO)(mg/l)	7.2	6.3	6.6	6.0	-	5.2	5.5	5.9	7.2	7.6	7.0	6.1
pH(Unit)	8.47	8.09	7.79	7.85	7.76	7.71	7.44	8.02	7.54	7.85	7.96	7.75
Total Coliform (MPN/100Ml)	50000	160000	14000	50000	8000	14000	50000	90000	7000	22000	3300	14000

Kansai:

Result & Observation

Table - 6.B.20 : D/S OF KANSAI AT MIDNAPORE, NEAR NEW HANUMAN MANDIR, GANDHIGHAT

(Standard - BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	7.9	9.9	2.9	3.4	1.2	3.45	4.9	5.9	1.55	5.4	5.3	4
Dissolved O_2(DO)(mg/l)	10.5	12.4	9.7	4.2	6.2	8.6	8	8.8	8.2	9.1	10.8	10.5
pH(Unit)	9.29	7.18	7.28	7.1	8.05	7.7	7.37	7.52	7.1	7.6	7.63	8.31
Total Coliform(MPN/100ml)	50000	50000	11000	90000	14000	14000	90000	28000	11000	28000	28000	11000

The BOD in river water was noticed mostly well above the water quality criteria-B (outdoor bathing, organised) (3.0mg/l) throughout the study period (2017-2018) and occasionally was below the criteria. The DO was found to be well above the water quality criteria-B (5.0 mg/l) throughout the study period, which indicates that water quality of the river Kansai was suitable for aquatic life. Total Coliform count in the river water was remarkably higher than the water quality criteria-B (500 MPN/100 ml). pH in the river water except in month April2017, was well with in the criteria value (6.5 & 8.5).

River Dwarkeswar :

Result & Observation

Table - 6.B.21 : WATER INTAKE POINT FOR BANKURA TOWN ON RIVER DWARAKESHWAR

(Standard - BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	1.35	1.85	1.85	1.75	1.7	1.55	2.25	2.75	1.05	1.9	1.95	2.5
Dissolved O_2(DO)(mg/l)	9.6	8.6	7.1	8.3	6.2	6.5	7.5	8.9	8.2	8.6	7.6	7.8
pH(Unit)	7.24	7.51	7.75	8.01	7.38	8.04	7.38	7.71	7.54	8.12	7.7	7.1
Total Coliform(MPN/100ml)	3300	3300	4000	5000	4000	11000	5000	2700	3400	2600	2600	2100

The value of the BOD as monitored in the river was found to be below the water quality criteria-B (outdoor bathing, organised) 3.0 mg/l all along the study period. The value of DO was found to be well above the water quality criteria5.0 mg/l and indicating the water quality is suitable for aquatic life. The total Coliform count in (MPN/100ml) was found to be well above the criteria-B (500MPN/100ml) throughout the study period.

River Bidyadhari:

Result & Observation

Table - 6.B.22 : U/S OF VIDYADHARI RIVER AT HAROA BRIDGE

(Standard - BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	20.46	19.12	13.39	15.54	12.88	14.43	8.8	10.38	6.5	5	17.5	18.44
Dissolved O_2(DO)(mg/l)	0.5	2.7	0.9	1.2	0.6	0.5	NIL	4.7	NIL	1.6	NIL	0.4
pH(Unit)	7.73	8.06	7.68	7.78	7.65	7.69	7.7	7.32	7.74	7.6	6.99	7.62
Total Coliform(MPN/100ml)	23000	50000	170000	130000	1700000	240000	3000000	300000	500000	300000	500000	240000

Table - 6.B.23 : D/S OF VIDYADHARI RIVER AT MALANCHA BURNING GHAT

(Standard - BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	6.66	17.14	7.35	11.19	13.25	8.13	6.15	8.83	12.68	18.13	12.78	1.9
Dissolved O_2(DO)(mg/l)	4.2	1.9	1.3	1.5	0.5	2.5	1	1.6	0.6	1.4	1.7	3.3
pH(Unit)	7.76	7.84	7.51	7.68	7.36	7.53	7.55	7.42	7.64	7.27	6.52	7.35
Total Coliform(MPN/100ml)	14000	23000	30000	30000	1300000	220000	280000	350000	300000	280000	280000	30000

The river Bidyadhari is an important river of South 24 Pargans and North 24 Parganas for route of treading. The river water is highly polluted from sewage discharges of North 24 parganas. As a result, the water quality was very poor through the study period (2017 -2018) at both upstream and downstream of the river. The State Board collected the river water samples from upstream at Harowa and Downstream at Malancha. At Both stations DO in most of the months were lower than the criteria-B (outdoor bathing, organised) (5.0 mg/l) and occasionally found to be "NIL" at Station Haroa of the river. The BOD in most of the months were higher than the criteria-B (3.0 mg/l) in both stations Haroa and Malancha. The Total Coliform contamination in the river water was so high that indicate the intrusion of unlimited sewage water in the river body.

River Dwarka :

Result & Observation

Table - 6.B.24 : U/S OF TARAPITH ON RIVER DWARKA AT SADHAK BAMDEB GHAT

(Standard - BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	10.5	8	4.1	2.85	5	5.65	2.35	2.4	1.3	5.1	4.5	*4.5*
Dissolved O_2(DO)(mg/l)	11	10.4	7	6.8	5.9	6.8	6.7	7	8.2	8	7	*11*
pH(Unit)	8.02	7.88	7.81	8.12	7.03	7.78	7.25	7.3	7.31	7.84	8.21	*6.91*
Total Coliform(MPN/100ml)	35000	35000	50000	50000	28000	14000	28000	28000	22000	17000	22000	*28000*

Table - 6.B.25 : D/S OF TARAPITH ON RIVER DWARKA, SATIGHAT

(Standard - BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	10.8	6.6	2.95	4	3.9	4.25	2.2	1.1	1.05	3.35	3.9	*4.9*
Dissolved O_2(DO)(mg/l)	11.2	10.2	5.7	6.3	6	6.2	6.8	7.2	8.3	8.1	7.3	*11.3*
pH(Unit)	8.03	7.79	7.95	7.89	7.71	7.92	7.69	7.43	7.44	7.72	8.19	*6.42*
Total Coliform(MPN/100ml)	90000	90000	90000	50000	35000	17000	35000	30000	28000	22000	17000	*35000*

In the Study period 2017-2018 the BOD was fluctuated greatly; the BOD was well above the water quality criteria-B (outdoor bathing, organised) (3.0mg/l) all most all in the months in both upstream & Downstream of river Dwarka.However occasionally at both the stations the BOD value was obtained lower than the water quality criteria (3.0mg/l) during monsoon and post monsoon period. It was observed that due to less flow of water and extensive usage by the pilgrims for bathing and washing of clothes etc., falling of remnant of the puja debris which may cause the water to get more polluted from the pre-monsoon and monsoon period. This was well reflected by fluctuation of the BOD value throughout the study period. However, the DO was well above the water quality criteria-B (5.0mg/l). Total Coliform contamination was always higher than the water quality criteria-B (TC 500MPN/100ml) which may cause due to domestic discharges and local discharges from drain etc.

River Mayurakshi

River Mayurakshi originates from the plateau in the district Dumka, Jharkhand. It enters into West Bengal after confluence with River Sidheswari and river Nunbill near Mahammadbazar of Birbhum district. The State Board monitors the river water quality of this river at water intake point for Suri town at the Downstream of the Tilpara barrage.

Result & Observation

Table - 6.B.26 : WATER INTAKE POINT FOR SURI TOWN ON RIVER MAYURAKSHI

(Standard - BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	1.3	3.8	3.25	3.55	3.35	4.4	1	1.45	1.25	2.75	2.6	1.75
Dissolved O_2(DO)(mg/l)	7.8	7.9	7.3	7	7.3	8.6	7.2	7.5	8.4	7.8	7.1	7.4
pH(Unit)	8.05	7.5	8.14	7.91	7.07	8.37	7.77	7.36	7.3	7.7	8.2	7
Total Coliform(MPN/100ml)	2600	3400	6000	4000	2600	2600	2100	3000	2600	2100	2600	2600

The DO of the river water was always well above the water quality criteria-B (outdoor bathing, organised) (5.0 mg/l) in all months throughout the study period and river water was suitable for aquatic life.However, fluctuation of BOD was found to be noticed, in the post monsoon it was below the water quality criteria-B (3.0 mg/l) where as in the monsoon period it was above the water quality criteria-B (3.0mg/l). The water quality in terms of bacteriological parameter TC, was always higher than the water quality criteria-B (500 MPN/100ml).

River Churni:

The river **Churni** is the largest river of Nadia district, West Bengal. It is the branch of Mathabhanga river. The river Mathabhanga enters in this state at Majhdia under Krishnaganj block of Nadia District and bifurcates into Churni and Ichhamati. Churni flows through four important blocks viz. Krishnaganj, Hanskhali, Ranaghat No.1, and finally joins to river Bhagirathi near Chakda.

In most of the time the river bed is dumped with sediment, and full of small, submerged river islands. The river water is mainly used by rural people for agriculture, fishery, irrigation, and for pisciculture etc. Few small scales industries directly discharge their effluents into river. The municipal waste and sewage is released directly into the river which create the major pollution of the river water quality.

Result & Observation

Table - 6.B.27 : CHURNI D/S OF SANTIPUR TOWN, WEST BENGAL

(Standard - BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	5.88	3.1	4.7	3.8	2.92	3.18	2.45	2.56	1.35	4.05	8.33	4.6
Dissolved O_2(DO)(mg/l)	1.4	4.7	1	1	1.7	1.7	2.75	3.3	4.9	5.6	0.8	4.7
pH(Unit)	7.78	7.18	7.22	7.76	7.51	7.61	7.88	7.94	7.46	7.86	7.52	7.51
Total Coliform(MPN/100ml)	170000	220000	220000	300000	280000	280000	350000	280000	170000	170000	280000	220000

Table - 6.B.28 : CHURNI, MAJHADIA

(Standard - BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	3	5.33	4.8	4.43	4	4.25	1.4	2.19	1	1.44	2.81	1.9
Dissolved O_2(DO)(mg/l)	2.6	2	10.4	1.2	1.9	1.7	3.9	2.1	2.5	2.9	2	2.1
pH(Unit)	7.75	7.6	7.46	7.75	7.92	7.46	7.82	7.79	7.72	7.69	7.62	7.41
Total Coliform(MPN/100ml)	350000	140000	170000	220000	220000	280000	170000	170000	140000	170000	220000	220000

The water quality was found to be not up to the mark, because the BOD at both stations in most of the months of the study period were higher than the water quality criteria-B (outdoor bathing, organised) (3.0 mg/l) and DO was almost below the water quality criteria-B (5.0mg/l) in almostall of the months in the study period 2017-2018. Such unsafe water quality was due to the discharge of waste product of the sugar mill from Bangladesh. This is a long standing trans- boundary river water quality problem. However, in monsoon, poor DO was observed at downstream due to discharge of sewage water from the municipality. The Total coliform contamination in the river water was very high at both locations due to the discharge of sewage water from the urban conglomerates and the big town Ranaghatalso discharging raw sewer into river Churni through a number of discharge points.

River Matha Bhanga :

Result & Observation

Table - 6.B.29 : MATHA BHANGA, GOBINDAPUR

(Standard- BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	3.8	4.17	2.9	1.4	2	3.67	1.5	3.63	1.44	2.44	3.5	3.3
Dissolved O_2(DO)(mg/l)	0.4	2.6	7.2	3.3	1.6	2	4.2	2.4	4	2.9	2.4	3.9
pH(Unit)	7.66	7.48	7.2	7.78	7.78	7.48	7.56	7.76	7.56	7.87	7.46	7.61
Total Coliform(MPN/100ml)	280000	220000	220000	500000	280000	220000	140000	280000	170000	220000	170000	280000

The water quality of the river MathaBhanga was very poor, because the DO or Dissolved Oxygen was lower than the water quality criteria-B (outdoor bathing, organised) (5.0 mg/l) almost in all months. The BOD was almost higher side in most of the months in the study period (2017-2018). The Bacteriological contamination specially TC was very high than the criteria-B (500MPN/100ml).

River Jalangi:

Result & Observation

Table - 6.B.30 : JALANGI, D/S OF KRISHNA NAGAR

(Standard- BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	2.7	3.1	1.05	2.3	1.2	5.6	4.05	4.65	3.9	5.1	2.45	5.7
Dissolved O_2(DO)(mg/l)	7.1	8	4.9	4.3	1.5	2	6	5.1	9.2	11.2	10.8	6.6
pH(Unit)	7.56	7.24	7.38	7.89	7.75	7.54	8.06	8.02	7.78	7.84	8.04	7.14
Total Coliform(MPN/100ml)	220000	140000	170000	500000	220000	170000	280000	110000	170000	220000	170000	140000

The DO of the river water was almost in most of the month, (especially in monsoon period) belowthe water quality criteria-B (outdoor bathing, organised) (5.0 mg/l) and in post monsoon was well above the criteria value.However, fluctuation of BOD was found to be noticed, in the pre-&post monsoon. The water quality in terms of bacteriological parameter TC, was always higher than the water quality criteria-B (500 MPN/100ml).

6.B.5 Water Quality Monitoring of the rivers of North Bengal :

The State West Bengal is divided in to South and North by the river Ganga and Padma through the district boundary between Malda and Murshidabad. Most of the rivers of North Bengal, with the marked exception in river Mahananda, are streams coming down from the great Himalayas fed with the water pool from melting snows in mountain and glaciers of the greatest mountain range on earth. The entire range of mountain and the "terai" region immediately beneath the high mountains is a region attracting high rain every year. Thus, both in consideration of the catchment area and the source of water in the form of fresh rain or molten ice, North Bengal rivers and streams are fed with good amount of water and do carry a huge amount of silt which is of enormous importance in respect of the formation and existence of civilisation on the Gangetic Delta. Monitoring of the water quality of the North Bengal rivers thus have extreme importance.

River Mahanada :

River Mahananda is mostly rain fed and has low water levels during summer and winter but due to deforestation in the upper catchment area resulting in landslides and subsequent heavy sedimentation, the river floods in the low-lying areas. The Board currently monitors the water quality of river Mahananda at 02 (Two) locations, Mahananda at Siliguri and Mahananda downstream at Ramghat. every month and the observation are given below.

Result & Observation

Table - 6.B.31 : MAHANANDA AT SILIGURI

(Standard- BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	3.4	2.8	2.4	1.9	2.5	3.6	3.2	2.8	3.4	2.9	3.4	2.8
Dissolved O_2(DO)(mg/l)	7.2	7.6	6.9	6.8	7	7	8.6	6.8	7.5	8.2	5.6	6.2
pH(Unit)	7.35	6.9	7.27	7.51	6.74	6.98	7.17	7.12	6.76	7.54	7.05	8.16
Total Coliform(MPN/100ml)	70000	90000	60000	11000	14000	22000	14000	90000	35000	26000	35000	34000

Table - 6.B.32 : MAHANANDA D/S, RAMGHAT

(Standard- BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	6	8	6	8	4.6	23	3.2	23	13	14	18	12
Dissolved O_2(DO)(mg/l)	3	4	5.8	6.2	6.3	5.7	8.6	4.4	5.9	6.6	5	5.6
pH(Unit)	8.64	7.19	7.3	6.97	7.1	6.99	7.17	6.71	6.3	8.26	6.78	6.1
Total Coliform(MPN/100ml)	330000	500000	330000	170000	220000	330000	14000	330000	260000	220000	330000	340000

It was observed that the value of BOD at upstream of the river was occasionally above the water quality criteria-B (outdoor bathing, organised) (3.0 mg/l).However, in downstream of the river the value of BOD all of the months was above the water quality criteria-B (3.0 mg/l). The value of DO was fluctuated with in the study period. Occasionally the DO was below the water quality criteria-B (5.0 mg/l) in both up & down streamthe river water was found always to be highly turbid and dark brown to dark green in colour. Total coli form count was well above the water quality criteria-B (TC-500MPN/100ml).

River Teesta :

The Teesta is one of the most important River of North Bengal, and originated from a glacial lake, Khangcheung Chho at an elevation of 8550 m above sea level in the North Eastern Corner of Sikkim Himalayas. The extreme source of Teesta is the ChhoLhamu Lake in the Tibetan plateau. After perambulating a distance of about 40 Km from Melli in the hilly terrain, the river enters into the plain of West Bengal at sevoke road near Siliguri, further ahead it fans out and attains width of 4-5 Km. at certain places. In it's way, traverse by several named and unnamed tributaries and Jhora. After traversing a length of 414 Km in India and Bangladesh, the river meets the Brahmaputra at Rangpur in Bangladesh. Board studied the water quality of river Teesta as described below.

Result & Observation

Table - 6.B.33 : RIVER TEESTA

(Standard- BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	1.6	1.8	2.3	1	2.8	1.8	2.9	3.3	1.5	2.5	2.8	1.9
Dissolved O_2(DO)(mg/l)	6.8	6.4	6.2	6.5	8.5	7.1	8.5	7.7	6.6	8.6	7.2	7.4
pH(Unit)	7.6	6.34	7.5	7.27	7.29	7.33	7.28	8.46	6.8	7.56	7.33	8.73
Total Coliform(MPN/100ml)	11000	17000	11000	9000	13000	17000	17000	28000	11000	13000	17000	13000

The water quality of river Teesta was observed that the BOD was almost below the water quality criteria-B (outdoor bathing, organised) (3.0 mg/l) almost in all the months except in November 2017.The DO was well above the criteria-B (5.0 mg/l) throughout the study period, which indicated that the river water is very much suitable for aquatic life. The bacteriological study of the water quality was represented by contamination of coliform bacteria and was always higher the water quality criteria-B (500 MPN/100ml) throughout the study period.

River Karola :

The river Karola is a rain fed river and a tributary of river Teesta. It is originatedat the terrain slopes of the Teesta catchments in the Baikunthapur Forests. Some other tributaries meet the river Karola from the North Eastern side of the river course. State Board monitors the water quality of the river Karola at Jalpaiguri.

Result & Observation

Table - 6.B.34 : KAROLA, D/S OF JALPAIGURI, NEAR MIN BHAWAN

(Standard- BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	3.2	2.6	2.8	2.6	1.2	2.3	2.4	3.9	1.4	2.7	2.6	2.8
Dissolved O_2(DO)(mg/l)	6	6.8	6.9	6	4.9	5.5	5.4	7.7	6.9	6.4	6.5	6.8
pH(Unit)	7.68	6.78	7.14	7.14	7.24	6.73	6.74	7.01	7.6	7.54	7.78	7.65
Total Coliform(MPN/100ml)	14000	17000	14000	9000	11000	13000	14000	28000	9000	11000	14000	17000

Observation:

The value of BOD was occasionally cross the water quality criteria-B (outdoor bathing, organised) (3.0 mg/l) throughout the study period. The DO was always higher than the water quality criteria-B (5.0 mg/l) except in August 2017.The bacteriological contamination of the river, in term of TC was well above the water quality criteria-B (TC = 500 MPN/100 ml), which might be ascribed to untreated sewer discharge from the urban areas on the banks of the river.

River Kaljani :

The Kaljani is a tributary of the RaidakTorsa river and it is formed by the combined water of the Alaikuri and Dima streams. The Kaljani is the rain fed river and during monsoon. It is responsible for erosion and heavy deposition of silt, but during the summer the river shrinks to almost 1/10th of width at worst stretches.

Result & Observation

Table - 6.B.35 : KALJANI D/S OF ALIPURDWAR, MUNICIPALITY DISCHARGE POINT

(Standard- BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	1	1.8	2.8	2	1.7	1.6	6	2.7	1.3	1.9	2.4	2.6
Dissolved O_2(DO)(mg/l)	5.3	7.2	6.9	6.3	6.7	6.5	4.8	8	8	6.8	6.8	7.6
pH(Unit)	7.76	7.5	7.14	7.41	7.85	7.25	6.76	7.2	7.8	7.88	7.45	8.68
Total Coliform(MPN/100ml)	17000	14000	14000	17000	14000	14000	220000	17000	14000	11000	17000	14000

The river Water quality of Kalani, was noticed healthy for aquatic life because the BOD value or Bio Chemical Oxygen Demand in the period (2017-2018) was almost within the water quality criteria-B (outdoor bathing, organised) (3.0 mg/l) and Dissolved Oxygen level was well above the criteria-B (5.0 mg/l). The bacteriological contamination of the river water was showing very high population of the Coliform bacteria and was always above the water quality criteria-B (TC 500MPN/100ml).

6.B.6 Water Quality Monitoring of Lakes / water bodies of West Bengal

Result & Observation

Table - 6.B.36 : RABINDRASAROVAR

(Standard- BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	3.4	5.8	6	2.95	3.4	5.15	2.9	2.4	4.2	3.55	5.3	5.7
Dissolved O_2(DO)(mg/l)	9.6	12.5	11.5	9.3	7.2	9.5	8.7	5	12.2	9.8	10.8	12
pH(Unit)	9.11	8.72	7.79	8.07	7.84	5.8	8.49	7.86	8.22	8.12	7.62	8.35
Total Coliform(MPN/100ml)	13000	2300	1700	8000	17000	800	5000	3000	7000	5000	8000	7000

The water quality of the lake is represented by well saturated dissolved oxygen throughout the study period. The pH was always with in the water quality criteria-B (outdoor bathing, organised) (6.5 & 8.5) except in the month of April 2017.The BOD in most of the month of study period was always higher than the water quality criteria-B (3.0 mg/l), which may be due to falling of leaves degradation of aquatic herbs and algae, falling of foods and vegetables etc. The lake water is highly contaminated with coliform bacteria, which may be due to domestic discharge, surface runoff, and discharges of excreta from birds, animals etc.

Result & Observation

Table - 6.B.37 : HATISHALA GHAT ON DUDHPUKUR AT TARAKESHWAR

(Standard- BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	14.25	9.2	7.05	5.25	5.38	9.75	10.25	22.2	9.45	8.25	7.5	7.1
Dissolved O_2(DO)(mg/l)	7.1	11.6	9.2	5.3	12.5	12.2	22.7	25.5	11.5	13.6	18.6	13.1
pH(Unit)	7.82	7.92	8.15	8.45	8.19	8.46	9.2	8.85	7.86	8.06	8.84	8.32
Total Coliform(MPN/100ml)	500000	170000	170000	170000	220000	170000	140000	140000	140000	170000	170000	130000

Result & Observation

Table - 6.B.38 : HUNUMAN GHAT ON DUDHPUKUR AT TARAKESHWAR

(Standard- BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	23.25	10.3	6.95	1.94	3	11.1	11.15	9.6	7.6	12.8	6.95	11
Dissolved O_2(DO)(mg/l)	18.1	12.9	8.2	5.3	14.8	15.9	22	17.5	10.6	14.9	13.8	12.5
pH(Unit)	7.84	7.75	8.06	8.37	8.36	8.55	8.76	8.78	7.86	8.11	8.85	8.4
Total Coliform (MPN/100ml)	350000	130000	110000	170000	300000	170000	170000	170000	170000	110000	170000	170000

Result & Observation

Table - 6.B.39: MAINH GHAT ON DUDHPUKUR AT TARAKESHWAR

(Standard- BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	18	16	6.25	4.56	4	8.16	10.85	13.95	6.3	8.33	7.9	4.9
Dissolved O_2(DO)(mg/l)	3.9	15.2	9.3	5.5	7	9.8	11.6	17	7.2	12.8	17.6	10.2
pH(Unit)	7.72	7.81	8.08	8.34	7.91	8.41	8.89	8.68	7.81	8.08	8.87	8.37
Total Coliform(MPN/100ml)	280000	110000	170000	170000	300000	140000	170000	170000	170000	140000	170000	170000

The Dissolved Oxygen of the water body was always well above the water quality criteria-B (outdoor bathing, organised) (5.0 mg/l) and the water quality was good for the aquatic life. Occasionally the value of the DO was found to be very high at three location which may be due to contamination of some oxidizing substances in the pond water. The water pollution may take place due to organic pollution of the pond water which is generally created by pilgrims and by washing activities. Hence high value BOD was noticed at all stations in different seasons. Another cause of contamination of the water body may be due to falling of rotten flowers, sweets, milk etc. The bacteriological contamination of the water body was very high throughout the study period which was being indicated by Coliform contamination and may have connection with discharges of the sewage water through municipal drains.

Belboni Lake

Belboni Lake is situated near Beliatore in the district of Bankura. The villagers in the vicinity of the lake believe in the religious aspiration of the water of this lake and they use this water for drinking purpose only. The State Board monitors water quality of this lake.

Result & Observation

Table - 6.B.40 : BELBONI LAKE NEAR BARJORA

(Standard- BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	4.15	5.35	1.6	3.93	2.95	1.8	1.1	3.9	1.2	1.45	2	*2.6*
Dissolved O_2(DO)(mg/l)	9.8	9.1	8.1	8.2	6.4	7	7.2	7.3	7	8.4	7.9	*6.7*
pH(Unit)	7.72	7.98	8.12	8.01	7.49	7.97	7.7	7.53	7.36	7.66	7.98	*6.96*
Total Coliform(MPN/100ml)	2600	2600	3300	3400	3300	2700	2100	1700	1700	1400	1700	*1700*

Dissolved Oxygen concentration of the lake water was noticed well above the water quality criteria-B (outdoor bathing, organised) (5.0mg/l) which indicates that the water quality is fit for aquatic life. The BOD was always fluctuating throughout the study period. It was noticed that the BOD was within the criteria-B (3.0 mg/l) in the month of June, August, September, October, December 2017 and in January to March 2018.The bacteriological study in the lake water was indicated that the TC was remarkably higher than the criteria-B (500MPN/100ml)throughout the study period.

Lake Senchal

Result & Observation

Table - 6.B.41 : SENCHAL LAKE FOR DARJEELING

(Standard- BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	1.7	1	*	*	*	*	2.2	2.4	0.5	1.6	1.4	*0.8*
Dissolved O_2(DO)(mg/l)	7.6	8.2	*	*	*	*	8.8	8	8.4	8	8.6	*8.8*
pH(Unit)	7.7	6.57	*	*	*	*	7.73	7.7	7.1	7.4	7.3	*8.25*
Total Coliform(MPN/100ml)	340	170	*	*	*	*	1400	900	500	330	300	*330*

*sampling was not done

During the study period (except from month June to September 2017) the water quality of the Senchal Lake was observed that the DO was found to be well above the water quality criteria-B (outdoor bathing, organised) 5.0 mg/l indicating that the water quality is suitable for aquatic life. The values of BOD monitored in the lake was always well within the criteria-B (3.0 mg/l) and the quality of water was found to be healthy. The Total Coliform Count was almost within the water quality criteria-B (500 MPN/ 100ml.) in allmonitoring months, except October and November 2017. The water body has been observed to be clean, clear green and devoid of any type of unacceptable odour.

Lake Mirik

Result & Observation

Table - 6.B.42 : LAKE MIRIK

(Standard- BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	3.4	3.6	*	*	*	*	3.2	3.3	2.3	2.4	2.8	*2.4*
Dissolved O_2(DO)(mg/l)	6.8	6.4	*	*	*	*	6.8	6.9	7.3	6.9	6.8	*6.2*
pH(Unit)	7.05	6.7	*	*	*	*	7.36	7.3	7.1	7.45	6.98	*7.42*
Total Coliform(MPN/100ml)	11000	11000	*	*	*	*	13000	17000	11000	6000	9000	*26000*

*sampling was not done

The dissolved oxygen was always well above the water quality criteria (5.0mg/l) within the study period except June to September 2017, when sampling was not done. The BOD was found above the criteria (3.0mg/l) in most the month and occasionally was found within the criteria (December, January, February, March 2018). The bacteriological contamination, especially Total coliform, was found to be above the criteria (500MPN/100ml). This type of contamination was due to water pollution especially form the garbage disposal, as well as the contamination by detergents and soaps by locals. It is a common view in the areas like the Shiv Mandir, the DhuppiDhara side where people wash clothes, take bath, and contaminate soap and other harmful chemicals in Mirik Lake.

Deolo Lake:

Delo Lake is located in Kalimpong in West Bengal. The town is situated between the ridge, which connectes the hills of Durpin and Deolo. The hill is situated at an elevation of 1,704 meters (5590 feet) above mean sea level and is the highest peak in Kalimpong.

There were two water reservoirs at the Deolo hill and the Deolo reservoir supplies drinking water to the town of Kalimpong. It is situated in the upper reaches of the hills near the Deolo guesthouse and there is also a science center and a garden of exotic plants close by. Both the reservoirs are barricaded. One can see the entire kalimpongtown,the surrounding village and Relli valley on one side and the entire Teesta River, TeestaVally, surrounding villages of South Sikkim and the massive mountains of West Sikkim on other side.

Result & Observation

Table - 6.B.43 : WATER RESERVIOR AT DELO

(Standard- BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	1.8	1.4	*	*	*	*	2.5	0.9	1.6	0.6	1.2	*1.2*
Dissolved O_2(DO)(mg/l)	8.2	8.4	*	*	*	*	8.6	7.8	7.8	7.3	8.4	*8.6*
pH(Unit)	7.2	7.24	*	*	*	*	7	7.98	7.9	7.41	7.08	*7.55*
Total Coliform(MPN/100ml)	500	600	*	*	*	*	1100	1400	600	500	500	*500*

The DO was well above the water quality criteria-B (outdoor bathing, organised) (5.0 mg/l.) throughout the study periodexcept June to September 2017, when sampling was not done. The BOD of the river water was always within the criteria-B (3.0 mg/l). The bacteriological contamination mainly Total coliform in the month of April 2017 and from January to March 2018 was not higher than the criteria-B (500MPN/100ml).

Kochbihar Lake (Sagar Dighi)

Result & Observation

Table - 6.B.44 : KOCHBIHAR LAKE (SAGAR DIGHI)

(Standard- BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	3.8	2.4	4.5	4.3	3.4	4.4	2.7	2.8	3.8	1.4	2.4	*2.4*
Dissolved O_2(DO)(mg/l)	7.5	78	7.3	8.9	8.4	6.4	5.5	8	8.9	8.1	8.2	*6.2*
pH(Unit)	8.84	7.61	7.1	7.43	8.36	7.08	7.5	7.55	6.8	7.7	7.1	*7.42*
Total Coliform(MPN/100ml)	5000	5000	14000	3300	5000	11000	13000	22000	14000	17000	28000	*26000*

It was noticed that the value of the DO was found to be well above the water quality criteria-B (outdoor bathing, organised) (5.0 mg/l.) indicating that the water quality is suitable for aquatic life. The BOD in most of the months was well within the criteria-B (3.0mg/l) except in the month of April, June, July, August, September and December 2017.where BOD slightly crossed the criteria-B (3.0mg/l). Very high coliform counts were indicated that discharge of domestic sewage in the lake water.

Saheb bandh at Purulia

Saheb bandh is a lake & is situated in Purulia town of Purulia district. This is a very important water body of this town. Wild life sanctuary and tourism have grown based on this lake. Huge migratory birds make their habitat in this lake especially during winter season. One water intake point for Purulia town is also there. The State Board monitors water quality of this lake.

Result & Observation

Table - 6.B.45 : SAHEB BANDH AT PURULIA

(Standard- BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	3.9	4.65	4.4	2.05	2.35	5.3	3.85	2.95	3.45	3.3	3.1	3.25
Dissolved O_2(DO)(mg/l)	6.4	6.8	5.3	2.4	3.6	8.1	4.1	3.5	4	7.1	8.2	9
pH(Unit)	7.89	8.19	8.29	7.68	7.23	8.01	7.79	7.25	7.06	8.11	8.14	7.13
Total Coliform(MPN/100ml)	6000	11000	9000	9000	8000	28000	22000	9000	17000	14000	17000	14000

The water quality of the lake was studied and the DO was noticed well above the water quality criteria-B (outdoor bathing, organised) of (5.0 mg/l) in most of the months except July, August, October and November 2017 when the DO was below the Criteria. The Total contamination was always higher than the criteria-B (TC = 500 MPN/100 ml), in all the months. The concentration of BOD was found to be below the water quality criteria-B (3.0mg/l) in the months of July, august and November 2017. However, the rest of the months within the study period it was found higher than the water quality criteria-B (3.0 mg/l).

Khardah Canal

A good number of chemical, metallurgical, fertilizer, dying and bleaching industries were established around the vicinity of the canal. Some of these industries are discharging effluents to the canal, while some are through municipal surface drains. The Municipality waste water generated from Khardah and adjoining municipal towns namely, Titagarh and Panihati has been discharged through number of surface drains at various points along its length. Both Municipal and industrial effluents/waste water are, however, reaching the river Hooghly through Khardah Canal. Slum dwellers in the vicinity of the canal are using this canal water for bathing and household purposes.

Result & Observation

Table - 6.B.46 : KHARDA CANAL NORTH 24 PARGANAS, NEAR JAYSHREE CHEMICAL INDUSTRY

(Standard- BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	25.25	56	10	18	19.2	18.75	14	23.2	18	54	63	39
Dissolved O_2(DO)(mg/l)	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
pH(Unit)	7.37	7.15	7.05	7.58	7.22	7.32	7.13	7.07	7.36	7.56	7.49	7.08
Total Coliform(MPN/100ml)	2800000	5000000	5000000	5000000	5000000	5000000	5000000	1700000	2200000	5000000	9000000	5000000

Detailed analysis of biological parameters revealed that the water quality of this canal was very poor. The Dissolved oxygen was NIL throughout the study period (2017-2018) which is not suitable for aquatic plant and animal life. The high BOD concentration of this canal water was an indication of increasing organic pollution mainly from municipal discharges. Decreased DO levels were also the indication of decomposition of organic matter which is a result of such increased BOD. The Total coliform count reflects the unhygienic condition of the canal which is mainly due to municipal discharges.

NOAI Canal North 24 Parganas, near Ganga Nagar Motibridge

Result & Observation

Table - 6.B.47 : NOAI CANAL NORTH 24 PARGANAS, NEAR GANGA NAGAR MOTIBRIDGE

(Standard- BOD 3.0 mg/l or less, DO 5mg/l or more, pH between 6.5 & 8.5, TC 500 MPN/100ml or less)

Date Of sampling	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
BOD(mg/l)	12	23.67	10.33	8.25	8.33	7.88	9.5	5	7.6	19.2	17.2	9
Dissolved O_2(DO)(mg/l)	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
pH(Unit)	7.69	7.44	7.25	7.63	7.24	7.33	7.22	7.04	7.48	7.84	8.02	7.37
Total Coliform(MPN/100ml)	2200000	9000000	9000000	3000000	9000000	5000000	3000000	1100000	1700000	3000000	5000000	9000000

The poor water quality of the canal was noticed during the study period (2017-2018). The DO level of the water body was NIL throughout the study period. The BOD level was high throughout the year indicating the high organic pollutant of the water body. Very high concentrationof Total Coliform was the indication of the high volume of sewagewater discharges through the canal.

District wise study of physico-chemical parameters of Groundwater quality monitoring stations:

District South 24 Parganas:

The ground water in this district was monitored at two locations viz. Amtola on Diamond Harbour Road and Residential area at Sonarpur. The ground water was free from the inorganic and heavy metal pollutants. No pesticide contamination was found. High TDS value was observed at Amtola (1092mg/L). No faecal contamination was found at any of the locations.

District North 24 Parganas:

The district North 24 Parganas was monitored by State Board at Five locations viz. Barasat Municipality, Barrackpore Municipality, Basirhat Municipality, Hidco Office (Rajarhat) and Rajarhat at Rajarhat New Town. No pesticide contamination was found except Barasat Municipality (Methyl Parathion, 1.08μg/L). High level of copper contamination was found at Basirhat (0.25 mg/L) (permissible limit for drinking water is 0.05 mg/L). The concentration of total dissolved solids (TDS) was high at Basirhat Municipality (982 mg/L) and Rajarhat at Rajarhat New Town (1248 mg/L). Faecal contamination was observed at Hidco Office (Rajarhat).

District Bankura:

Three locations were selected for ground water monitoring at Bankura district viz. Dwarika at Bishnupur Town, Satighat at Bankura Town and SDO office at Bishnupur Town. All locations were free from heavy metal contamination except iron. Iron concentration in Dwarika and Satighat were found to be 0.5 and 1.0 mg/L respectively, both were above the permissible limit for drinking water (0.3 mg/L). No pesticide contamination was found. No faecal contamination was found at any of the locations. Very high TDS was observed in Dwarika and Satighat but were below the maximum permissible limit (652 and 1038 mg/L respectively).

District Birbhum:

Five locations were selected at Birbhum District viz. Bolpur near railway station, Hot spring near Bakreshwar, Nalhati railway station of Birbhum, Suri Town near bus stand and VisvaBharati. Copper contamination were observed at Nalhati, 2.81 μg/L. Concentrations of lead were found to be 26.92 μg/L at Hot spring near Bakreshwar (permissible limit is 10 μg/L). Fluoride contamination was observed at Hot spring near Bakreshwar (10.20 mg/L). Iron concentrations were well within limit a Hot spring near Bakreshwar. No pesticide contamination was found to occur. Faecal contamination was observed at Nalhati and Suri town.

District Burdwan:

The ground water monitoring was done at five locations at Burdwan district viz. Durgapur Town, Durgapur Town near IISCO, Ground water point inside Burdwan University, Ground water point near Burdwan Station and Mine pit water, Asansol. No pesticide contamination was observed in any of the locations.

Moderately high amount of iron was found at Durgapur Town near IISCO and Ground water point near Burdwan Station (0.78 and 1.83 mg/L respectively). Faecal contamination was found at Durgapur Town and Ground water point inside Burdwan University. TDS was found to be high at Durgapur Town and Durgapur IISCO (598 and 646 mg/L respectively).

District Darjeeling:

There was only one location selected for the monitoring of ground water at Darjeeling district namely Fulbari Barrage. No pesticide and heavy metal contamination was found to occur. Coliform contamination was found at the location (FC and TC was found to be 60 MPN/100ml and 140 MPN/100ml respectively).

District Hooghly:

The monitoring of ground water at Hooghly district was done via four locations viz. Dankuni near Coal complex, Near fly ash dumping site-Kuntighat, Bandel, Near the phosphate company, Rishra and Rishra. Methyl Parathion contamination was observed at Dankuni (near coal complex). No faecal contamination was observed at all the locations. Iron concentrations at Near fly ash dumping site-Kuntighat, Bandel were found to be 1.0 mg/L which. TDS level was found to be high at Dankuni (586 mg/L).

District Howrah:

Four locations were selected for the ground water monitoring purpose viz. Central Howrah residential area, Domjur, Howrah, Near Galvanisation Unit and Uluberia College. Total Dissolved Solids was very high at Central Howrah, Domjur, near galvanisation unit and Uluberia college (1474, 496, 994 and 616 mg/L respectively), but below permissible limit (2000 mg/L). Heavy metal contamination was not observed at any of the locations. All the locations were free from pesticide contamination. Faecal contamination was observed at the sampling location near Galvanisation unit and uluberia College (4 MPN/100ml and 2 MPN/100ml respectively).

District Kolkata:

The monitoring of ground water at Kolkata district was done via eight locations namely Behala, Central Kolkata, Cossipore- North Kolkata, Dhapa, Garia, Inside Kolkata leather complex, Tangra and Topsia. No pesticide contamination was found. High level of zinc was found in Behala, Central Kolkata, Cossipore and Garia (1.96, 1.98, 2.9, 1.35 mg/L respectively). High TDS was observed at Behala, Central Kolkata, Cossipore, Dhapa, Garia, inside leather complex, Tangra and Topsia (518, 416, 1472, 1432, 752, 1012, 1170, 1269 mg/L respectively). Iron was observed to be within the range in all locations. Hardness was found to be very high at Cossipore (640 mg/L). Traces of faecal contamination were observed at Central Kolkata and Cossipore.

District Malda:

There was only one location at Malda district viz. English Bazar. No pesticide contamination was observed). Iron concentration was found to be 1.58 mg/L greater than the permissible limit for drinking water (1.0mg/L). Lead concentration was 0.04 mg/L just below the permissible limit. No faecal contamination was observed.

District Murshidabad:

One location was selected at Murshidabad district namely Moregram crossing. Among the heavy metals, only iron contamination was observed (1.41 mg/L) which is greater than the permissible limit for drinking water (1.0mg/L). Trace of faecal contamination was observed.

District Purulia:

Sampling was done from one location, namely, inside R. K Mission. No pesticide contamination was observed. No heavy metal contamination was observed. TDS was found to be high (982 mg/L).

District Midnapore (East):

There are four stations in the district of Midnapore (East), namely Geonkhali Bungalow, Hindustan Lever Factory, Exide Industries and IOC Refinery, Haldia. No heavy metal contamination was observed. TDS was observed to be quite high at Hindustan Lever Factory and IOC Refinery (1074 & 1192mg/L respectively). Trace faecal contamination was found at Hindustan Lever factory.

District Midnapore (West):

There are two stations in the district of Midnapore (West), namely Tata Metaliks, Kharagpore and Kharagpore Industrial Area. High iron concentration was observed at Tata Metaliks 1.53 mg/L which is greater than the permissible limit for drinking water (1.0mg/L). No heavy metal and pesticide contamination was observed in either of the locations.

District Nadia:

There are three stations located in the district of Nadia, namely Kalyani Industrial Area, SDO Office Krishnanagar and SDO office Ranaghat. Iron concentration was also found to exceed the permissible limit (1.0mg/L) at SDO offices Ranaghat (1.08 mg/L respectively). Arsenic levels were found to be high in all the three stations (0.04, 0.03 and 0.04 mg/L respectively). Zinc concentration of the three locations found to be a bit high though within the permissible limit.

Trend analysis of physico-chemical parameters of Groundwater quality monitoring stations.

The pH values of ground water was measured and found to be almost within desirable range of 6.5 and 8.5. High pH (9.36, alkaline) was observed at Bakreshwar in Birbhum District which may be due to increased solubility of salts in hot water.

The water temperature was found in the range of 22^{0}C to 34^{0}C in accordance with the weather conditions in moths of April and October with an exception of hot spring at Bakreswar in Birbhum district (68 and 65 deg C at April and October, 2016 respectively).

Higher concentrations of total coliform was found at Central Kolkata, Cossipore, Durgapur Town, Hidco office, Rajarhat (240MPN/100ml, 500MPN/100ml, 33MPN/100ml, 80 MPN/100ml respectively), Traces of faecal contamination were observed at Central Kolkata, Cossipore, Durgapur Town, Hidco office, inside Burwan University, Rajarhat, Suri Town (80MPN/100ml, 130MPN/100ml, 17MPN/100ml, 7MPN/100ml, 22MPN.100ml., 21MPN/100ml respectively).

Total hardness (as $CaCO_3$, in mg/L) atBarasat in North 24 Prgs was found to be high (564 mg/L) but below the permissible limit (600 mg/L) for drinking water). Hardness was found to be very high at Cossipore (640 mg/L).

The concentration of total dissolved solids (TDS) was within the permissible limits (2000 mg/L) in all locations. Comparatively higher TDS was found at Central Howrah, Cossipore, Dhapa, Topsia, Rajarhat, Amtola, Inside Hindustan liver, Kolkata leather Complex (1474, 1472, 1432, 1269, 1248, 1092, 1074, 1012 mg/L respectively).

Boron was found below permissible limit in all the locations.

Turbidity was found to be very high at Amtola (85.1 NTU), English Bazar Malda (54.3 NTU), Gorundwater point near Burdwan Station (15 NTU), Hindustan Liver (26.3 NTU), inside TATA metaliks (28.3 NTU), Topsia (130 NTU) (beyond permissible limit for drinking water, 10 NTU).

Values of Nitrate were found well within the desirable limit in all stations.

BOD values were found within range in all stations.

Iron concentrations were observed beyond permissible limit 1.0 mg/L, for drinking purpose at Amtola, English Bazar Malda, Gorundwater point near Burdwan Station, inside TATA metaliks, Moregram crossing (1.41, 1.58, 1.83, 1.53, 1.41 mg/L). Iron contamination at Central Kolkata, Dhapa, Garia, Tangra and Topsia was found below detection limit.

Concentrations of lead were found comparatively higher at English Bazar, Malda, R.K.Mission, Purulia, Kalyani Industrial area and Moregram crossing (0.04, 0.05, 0.3, 0.04 mg/L respectively) but within the permissible range.

Zinc concentration was found within their permissible limits in all locations (permissible limit is 15 mg/L for drinking purpose).

Arsenic concentration was within permissible limit in all locations. In the district of Nadia, Arsenic levels were found to be high in all the three stations i.e. Kalyani Industrial Area, SDO Office Krishnanagar and SDO office Ranaghat. (0.04, 0.03 and 0.04 mg/L respectively) which were just below the permissible limit.

Fluoride concentration was within permissible limit (1.5 mg/L, for drinking purposes) in all the locations.

Ammonia concentration was found to be below permissible limit in all locations.

Traces of pesticides were found in the some of the groundwater samples like a-BHC at Moregram Crossing and methyl parathion at Barasat Municipality and Dunkuni.

6.C. Noise Monitoring Programme

6.C.1 Introduction

Noise pollution is a vital environmental problem that is created by human being and adversely affects wildlife, human activity, capable of damaging physical structures on a regular, repeating basis as well as it disturbs any natural process or causes human harm, even if the sound does not occur on a regular basis. In rural areas, train and airplane noise can disturb wildlife habitats while in urban areas, vehicles, and rail transport, air-conditioners, factories, microphones or public address system, construction work and even entertainment noise due to playing loud music can cause sleep disruption in humans and animals, hearing loss, heart disease (as a result of stress), and in severe cases even mental instability. Thus noise pollution has become a great menace to our society at present.

Besides proper monitoring and control of the noise at its source there is need to create general awareness regarding the hazardous effects of noise pollution to reduce its ill effects on human and its natural environment. On the basis of this notable fact, West Bengal Pollution Control Board has taken up several effective initiatives like previous years. Such initiatives include conducting noise pollution monitoring during Kali Puja-Diwali, installation of ten continuous real time noise monitoring stations at various locations in Kolkata and other places.

6.C.2 Noise Pollution monitoring in Kolkata during Kali Puja and Diwali, 2017

Manufacture, sale, storage and use of noise generating fireworks that generates noise level more than 90 dB(AI) measured at a distance of 5 m from the point of bursting is prohibited by law in the State of West Bengal. Accordingly, chocolate bomb, chain crackers, loose crackers, Kali Patka, dodoma, seven shot, rocket bomb and similar any other noise making fireworks by any name are prohibited in this State. The Police are empowered to enforce these rules and the orders in controlling of noise pollution against indiscriminate use of loudspeakers and banned crackers. Like previous years, this year also the State Board arranged some awareness campaigns regarding use of banned fire crackers before Kali Puja and Diwali.

Awareness Campaign :

- Meeting was arranged with the Management of the high rise buildings situated in Kolkata and adjoining areas and with the Police personnel for observance of Noise Rules during Kali Puja & Diwali days.
- Banners Posters, leaflets etc. carrying various environmental campaign messages were distributed to Housing Complexes & major Puja organisers to generate awareness on noise pollution.
- Scroll messages on restriction of prohibited fireworks were advertised in various TV channels.
- Ad-spots and jingles on restriction of prohibited fireworks were advertised during the prime time in various TV channels and also in FM Radio channels.
- Advertisement on restriction of prohibited fireworks was released in various Newspapers for public awareness.
- State Board arranged to send awareness message on noise pollution to the general people through SMS.
- Special control room was set up at Head Quarter at ParibeshBhawan and other Regional Offices of the State Board during Durga Puja and Kali Puja and Diwali days.

Real Time Ambient Noise Monitoring & Results :

There are ten Real Time Ambient Noise Monitoring stations at Kolkata. Location of the stations are at Kasba, Kolkata, which is an industrial area, Kolkata Municipal Corporation, which is a commercial area,

Chapter - 7

LEGAL MATTERS

7.1 Introduction

The West Bengal Pollution Control Board (WBPCB) is implementing the Water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act, 1981 and Environment (Protection) Act, 1986 and Rules made thereunder through Police and other enforcing authorities.

The Legal Cell of the State Board has to handle all cases filed against the State Board before the Hon'ble Supreme Court of India, Hon'ble High Court, Calcutta, Hon'ble Subordinate Courts, Hon'ble Pollution Control Appellate Authority (W.B) and Hon'ble National Green Tribunal. Almost in every case affidavits of the State Board are duly filed in time and orders of the Hon'ble Courts are being complied within the stipulated period of time. Barring a few almost every order of the Hon'ble Court goes in favour of the State Board. On many occasions, Chief Justice of Hon'ble High Court openly acknowledged and praised the prompt actions on the part of the State Board in filing affidavits before the Hon'ble Court. On many cases officers of the Legal Cell, without waiting for directions from the Hon'ble Court, are initiating necessary action from the State Board.

Thus Legal Cell of the State Board is rendering Yeoman's Service to the general public, particularly the persons who are suffering due to pollution, for removal of their long-standing ordeal relating to environmental problems and hazards. There can be no denying the fact that the general public has been immensely benefited due to the untiring efforts of the Legal Cell in this regard, within its ambit.

Legal Cell of the State Board will go on continuing its earnest endeavour in the matter of removal of legal hurdles for the benefit of the people in the days to come.

Table 7.1: Status of court cases during 2017 - 2018

1)	**No. of Supreme Court Cases received.**	**04 Nos.**
2)	No. of Supreme Court Cases Disposed of.	04 Nos.
3)	No. of National Green Tribunal matters received.	59 Nos.
4)	No. of hearings held at National Green Tribunal.	728 Nos.
5)	No. of National Green Tribunal matters Disposed of.	45 Nos.
6)	No. of High Court cases received.	74 Nos.
7)	No. of hearings held at High Court.	62 Nos.
8)	No. of High Court cases Disposed off.	09 Nos.
9)	No. of Appeals before the Pollution Control Appellate Authority (W.B.) received.	06 Nos.
10)	No. of hearings held at Pollution Control Appellate Authority (W.B.).	21 Nos.
11)	No. of Appeals Disposed off.	04 Nos.

7.2 Before the Hon'ble National Green Tribunal

Original Application No. 134/2015/EZ
In the matter of
Bishnu Pada Pakhira
Versus
State of West Bengal & Ors.
09-08-2017

We adjourn the matter sine die but subject to the following conditions:-

i) No new hotel shall be permitted to be constructed or started in the Mandarmani Beach other than those which are presently operating.

ii) The present hotels being run shall apply for consent to establish and consent to operate from the State PCB, if they have not applied thus far, within a period of four weeks from hence.

iii) Upon receipt of such applications, the PCB shall consider and dispose of the applications by either granting or refusing such consents on the merits of each case. The applications which are pending before the PCB shall also be disposed of by them.

iv) All applications shall be disposed of within a period of eight weeks from the dates of submission.

v) While considering the applications for consents submitted by the hoteliers, the WBPCB shall dispense with the requirement of clearance from the West Bengal Coastal Management Authority for the time being.

vi) If the hoteliers fail to file their applications within the time specified above or such further time as may be granted by the PCB, they shall forfeit their rights to do so.

vii) The WBPCB shall ensure that all the hotels comply with the pollution norms having regard to the mandatory requirements of the Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974.

viii) They shall also ensure that all other requirements prescribed by the MOEF in various notifications issued by them shall be complied with.

ix) In addition to above, the PCB shall also ensure that the hoteliers do not use generators that do not conform to the regulatory norms, which in the colloquial parlance is called "Black Generator ".

x) The concerned District Magistrate and Superintendent of Police shall coordinate with the PCB in enforcing such requirement.

The above directions are issued in view of the prevailing nebulous situation caused by the want of coastal zone management map in the absence of which it has become well neigh impossible to decide as to whether the hotels can be permitted to run in the area.

We have deemed it essential to issue the directions also keeping in view the precautionary principle and the concept of sustainable development. We are of the considered opinion that with such conditions being imposed, the possibility of further damage being caused to the environment would be arrested or minimized.

It is made abundantly clear that this order shall be subject to what will transpire after the coastal zone management map is finally prepared and subject to other rules and regulations governing such matter.

With the above directions, we adjourn the matter sine die as already observed.

Original Application No. 79/2015/EZ
In the matter of
Subhas Datta
Versus
State of West Bengal & Ors.
09-08-2017

The Committee shall survey the area falling within Teghoria and Gaighata blocks in North 24 Parganas District and collect date on the following issues with which we are seriously concerned with and is under our consideration.

1. Fluoride level in surface water and ground water including the tube well water in areas covering the two blocks is Teghoria and Gaighata.
2. Survey of the extent of Arsenic free water supply by the Government agencies to the two blocks.
3. Household survey on the effect of Arsenic contaminated water intake on heath of the people.
4. Medical facilities provided to the people of the two blocks, particularly to address the Arsenic induced diseases.

The nominated member of the Deptt. of PHE shall be the member Convener and shall be responsible for coordination of the Committee in carrying out the task.

The Deptt. of PHE, Govt. of West Bengal shall provide all logistics to the Committee to undertake the work and submit the report on affidavit within two months.

Original Application No. 158/2016/EZ
In the matter of
Subhas Datta
Versus
State of West Bengal & Ors.

03-10-2017

We direct the licensing authorities, viz., the Municipal Corporation, the municipality, Municipal Boards, different panchayats to ensure that one of the terms of the licenses granted for letting out the audio systems shall include an additional condition that no audio system shall be let out without being fitted with sound limiter. The police authorities shall also include similar condition in the licenses granted by them.

Apart from this, as maintenance of the limit of sound is a mandatory requirement under the law, no shop dealing with the sale of public audio systems anywhere in the state shall be permitted to sell such instruments without sound limiters as a compulsory accessory and, this condition shall be strictly enforced by the licensing authorities with the assistance of the police. We make it clear that the condition for use of sound limiter shall be applicable also for all the government and political functions.

Original Application No. 136/2016/EZ &
M.A. No. 1258/2016/EZ & M.A. No. 346/2017/EZ
In the matter of
Subhas Datta
Versus
State of West Bengal & Ors.

15-11-2017

We deem it appropriate to issue the following directions:-

(i) The KMDA, which is the custodian of the Rabindra Sarobar Lake shall prepare a DPR for implementation of the recommendations under "Flora and Fauna, water quality of the Sarovar (Lake) and Lake sediments & sub surface soil "in consultation with experts from Botanical Survey of India, Zoological Survey of India, the State Biodiversity Board and Water Resource Department, Govt. of West Bengal. The DPR that would include the cost estimates of the project and a time line for implementation of the Recommendation shall be filed in the Registry within six months from hence but not later than the first week of May 2018.

(ii) While night time matches/tournaments shall be strictly prohibited in the Rabindra Sarobar Stadium, day time activities may be permitted but without bursting of fire crackers and with regulated sound intensity and regulated traffic.

(iii) Performance of any Puja, community picnic or organisation of other social events in and around the Rabindra Sarobar Lake shall be strictly prohibited.

(iv) There shall be no new construction or extension of existing building without the leave of the Tribunal. However, repair and renovation under the supervision of KMDA shall be permissible, including reconstruction of existing boundary walls of the Lake Club Ltd. that have collapsed but without creating opening on the Lake side.

(v) The KMDA shall introduce nominal fee for entry to the Lake with provision of free entry pass to the morning and evening walkers. This entry pass shall carry the photograph, age and address of the person. This shall be decided within two months, i.e., 4th January, 2018.

(vi) The KMDA shall frame guidelines for operation of the clubs located in the area in question, considering the recommendations of the Expert Committee and periodically monitor the activities of the clubs to ensure compliance. The KMDA shall ensure that the clubs do not have direct access to the lake area from its premises and are separated by walls, if not already existing, with entries away from the Lake side.

(vii) For implementation of the other recommendations, a detailed phase-wise Action Plan with time line shall be prepared by KMDA. The Action Plan shall be filed in the Registry within two months, i.e., 4th January, 2018.

(viii) We also direct the West Bengal State Pollution Control Board, to constitute an Editorial Committee consisting of at least three experts, for editing the EIA report submitted by the Expert Committee. Dr. Kalyan Rudra, Chairman, West Bengal Pollution Control Board, who shall be an additional member, as the Chief Editor. After it is edited, the EIA Report shall be published in a book form by the State Pollution Control Board and incorporate therein acknowledgement of the contribution of the expert members who have prepared the report. A reasonable price may be fixed for the book to recover the cost of the publication and also to make it affordable for the students, research workers and other interested persons and for libraries of educational and research institutions.

Chapter - 8

PUBLIC GRIEVANCE REDRESSAL

8.1 Introduction

The West Bengal Pollution Control Board receives public complaints regularly from the different sectors of the society of the state regarding various environmental issues. People prefer to lodge the complaints before the West Bengal Pollution Control Board to get rid of the situation (problem), they face due to activity of the neighbouring unit/ establishment/ people causing degradation of environment in terms of air/ water/ noise pollution and/or any other environmental hazard.

In order to address and to take appropriate steps against these complaints, the Public Grievance Cell of the State Board is actively functioning at the head office of the WBPCB at Paribesh Bhawan, Bidhannagar. It is an unique entity of the West Bengal Pollution Control Board where the complainants/ aggrieved persons can lodge their complaint(s) by sending a simple letter, with a brief description of his/her specific grievance, even without disclosing his/her identity. That apart, it can also be accessed online by clicking http://emis.wbpcb.gov.in. One can also now lodge a complaint by clicking www.wbpcb.gov.in and submit the necessary information relating to the complaint.

Complaints received by the Public Grievance Cell are acknowledged, duly scrutinized, enquired into, inspected and redressed through a hearing, arranged by involving both the aggrieved complaint(s) and the unit/establishment against whom the complaint is lodged, in presence of techno-legal officers of the Board.

Public hearing procedure adopted by the WBPCB is a quasi-judicial method for resolving the environmental problem of the State. The public hearing authority is composed of a Retd. Judicial Magistrate and other legal and technical officers of the Board. During hearing, both the parties are heard from environmental point of view in considering techno-legal statute. And after careful consideration of the submission of both sides, necessary directions are issued towards redressal of the grievances of the complainant(s) and for maintenance of statutory obligation.

Durgapur Regional Office, Asansol Regional Office, Siliguri Regional Office and Malda Regional Office of the State Board also conduct technical hearing of their respective jurisdiction towards redressal of the grievances of the complainants and issue directions accordingly.

If the directions are complied with within a specific time frame (as directed), the case is disposed of. Otherwise, actions are taken against the recalcitrant unit in accordance with law including closure and disconnection of electricity of the unit.

Some complaints are found beyond the scope/legal jurisdiction of the State Board. In such cases, necessary suggestion letter/letter of direction/request letters are sent to the concerned authority for appropriate course of action as deemed fit.

Fact remains, that people prefer to lodge complaint before the West Bengal Pollution Control Board for intervention on environmental issues, which may be considered as an indicator of people's awareness (index), in-terms of environment aspect.

During April, 2017 – March, 2018, the State Board received 753 nos. of complaints and 376 nos. of hearings have been conducted. Consequently, 17 nos. of Closure Notices were issued to the violators and the details are shown in Table 8.1.

Table 8.1: Status of dealing Complaint cases during 2017-18

Month	No. of Complainant cases received and registered in EMIS (New Cases)	Letter of Suggestion issued/ letter forwarded	Hearing conducted (New cases)	Hearing conducted in a month Old Cases	Total Hearing conducted in a month (New & Old/ Court Cases)	Closure Order issued
April	63	40	31	08	39	00
May	95	50	26	23	49	01
June	105	59	73	16	89	02
July	50	33	35	06	41	02
August	67	36	26	21	47	00
September	27	09	17	08	25	01
October	17	00	27	01	28	02
November	70	34	32	11	43	00
December	80	33	27	07	34	03
January	64	39	29	11	40	03
February	58	46	27	04	31	01
March	57	24	26	12	38	02
Total	**753**	**403**	**376**	**128**	**504**	**17**

Chapter - 9

MAJOR POLICY DECISION OF THE STATE BOARD

9.1 Introduction

The West Bengal Pollution Control Board conducts meetings with Board Members at a regular interval to discuss on various important issues related to the different activities of the Board and takes decision on important policies. During each Board meeting, the decisions of the previous meeting gets confirmed and the follow up actions taken on the resolutions of the past gets examined. Besides, the Board Members review the performance of the State Board including Board's statutory activities.

One Board meeting was held during the financial year 2017-18:

Table 9.1: Schedule of Board meetings during 2016-17

Board Meeting No.	Date	Venue
166th	15/11/17	Paribesh Bhawan, Bidhannagar.

9.2 Major Decisions taken during 166th Meeting

The Members of the Board were apprised that the following employees of the Board were promoted on recommendation of the Selection Committee :-

Sl. No.	Name of the employee	Post to which promoted
1.	Smt. Susama Das	Deputy Secretary
2.	Shri Kaushik Paul	Head Assistant

- The Board took note of the sanctioning of Rs.12,71,916.00 (Rupees Twelve Lakhs Seventy One Thousand Nine Hundred Sixteen) only to the District Magistrate & Executive Officer, South 24-Parganas Zilla Parishad for the scheme titled "Protection of Pond & Development of premises adjacent to pond of Canning II Development Block, South 24-Parganas" and ratified it.
- The Board Members approved a sum of Rs.5.06 crore (plus taxes) for installation of 110 units of 5kWp roof top Solar Photo Volatic facility in different schools, in the 3rd phase under the Board's on-going project, which is being implemented through WBREDA.
- The Board Members approved a sum of Rs.1,05,02,816.00 (Rupees One crore five lakh two thousand eight hundred sixteen) only as financial assistance to the P & RD Deptt., Govt. of West Bengal, for setting up of 32 (Thirty two) Rain Water Harvesting structures in drought prone districts like Purulia, Bankura, Birbhum and Jhargram.
- The Board Members approved the estimated cost of Rs.11,90,72,520.00 (Rupees eleven crore ninety lakhs seventy two thousand five hundred twenty) only for the construction of the proposed administrative building for Environment Department, Govt. of West Bengal at Plot No.180, Block-IB, Sector-III, Salt Lake, Kolkata-700106.
- The Board Members approved the estimated cost of Rs.8,73,33,231.00 (Rupees eight crore seventy three lakhs thirty three thousand two hundred thirty one) only for the construction of a new Office-cum-Laboratory Building, with Employees' residential complex, in Haldia, Purba Medinipur.
- The Board Members approved the estimated cost of Rs.4,33,61,513.00 (Rupees four crore thirty three lakhs sixty one thousand five hundred thirteen) only for the Construction of new Office-cum-Laboratory building, with employees residential complex, in Asansol, Paschim Bardhaman.
- The Board Members considered and approved the total project cost of Rs.3,89,11,553.00 (Rupees three crore eighty nine lakh eleven thousand five hundred fifty three) only for augmentation of HT/LT Sub-station, Modernization of Lift, VRF Central Air-conditioning System, Lighting Arrestor, Compound Lighting, Diesel Generator set, EI work, Room AC, Earthing, Garden Lighting and other works at Head Office of the West Bengal Pollution Control Board.

Chapter- 10

IMPLEMENTATION OF THE RIGHT TO INFORMATION ACT, 2005

The "right to information" means, an access to the information which is held by or under the control of any public authority and includes the right to inspect the works, documents, records, notes, extracts or certified copies of document/record and certified samples of the material and obtaining information which is also stored in electronic form.

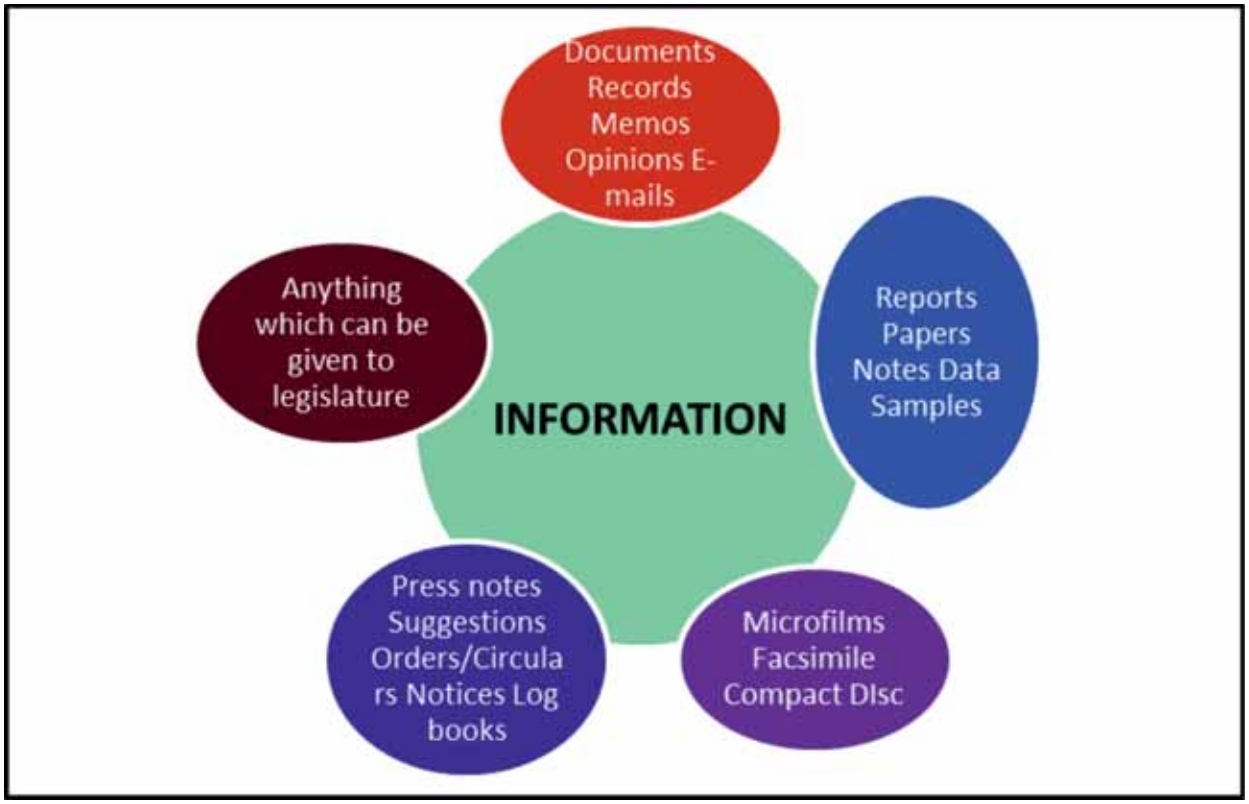
10.1 Introduction of Right to Information (RTI) Act, 2005

The Right To Information Bill was introduced in the Lok Sabha in December, 2004. It was passed by both Houses of Parliament in May, 2005. The assent of the President was received on 15th June and the Act was notified in the Gazette of India on 21st June, 2005. The Right To Information Act has become operational by the 12th October, 2005 after the completion of 120 days from the date of the Presidential assent. The Freedom of Information Act passed by Parliament in 2002 has been repealed.

The citizens right to information is not explicitly in the fundamental rights chapter of the Constitution. But in more than ten cases the Supreme Court of India has declared that the fundamental right to life and liberty (Article 21) and the fundamental right to freedom of speech and expression {Article 19(1)} include every citizen's fundamental right to access information. The Parliament passed the Right To Information Act (RTI Act) to enable all citizens to use their fundamental right to access information (Fig 1) from public bodies.

Fig. 10.1: What is Information?

(Section 2(f)(I)(j), 4)



10.2 Main objectives

- To promote transparency and accountability in the working of every public authority **(Fig.10.2)**; and
- To set up a practical regime for giving citizens access to information that is under the control of public authorities.

Fig. 10.2: Public Authority

The State Board took the effective initiative to promote transparency and accountability and to set up a practical regime for giving citizens access to information. The State Board has also disseminated the relevant information in connection with the Board electronically through its website.

Application Procedure

- According to Section 3 of this Act, all citizens have the right to information. As per section 6 of this Act, any person who desires to obtain any information under this Act can apply specifying the particulars of the information sought by him or her in writing or electronically in English or local official language.

Application may be sent to

- As per the Right To Information Act 2005, the West Bengal Pollution Control Board is providing available information as and when sought through proper application. The State Board has designated Shri Arup Guchait, Public Relation Officer as Nodal Officer for implementing the "Right to Information Act, 2005". For obtaining information application may be sent to :-

Shri Arup Guchait,

Public Relation Officer & State Public Information Officer,

(Under The Right To Information Act 2005)

West Bengal Pollution Control Board,

10A, LA- Block, Sector – III, Bidhannagar, Kolkata 700 098

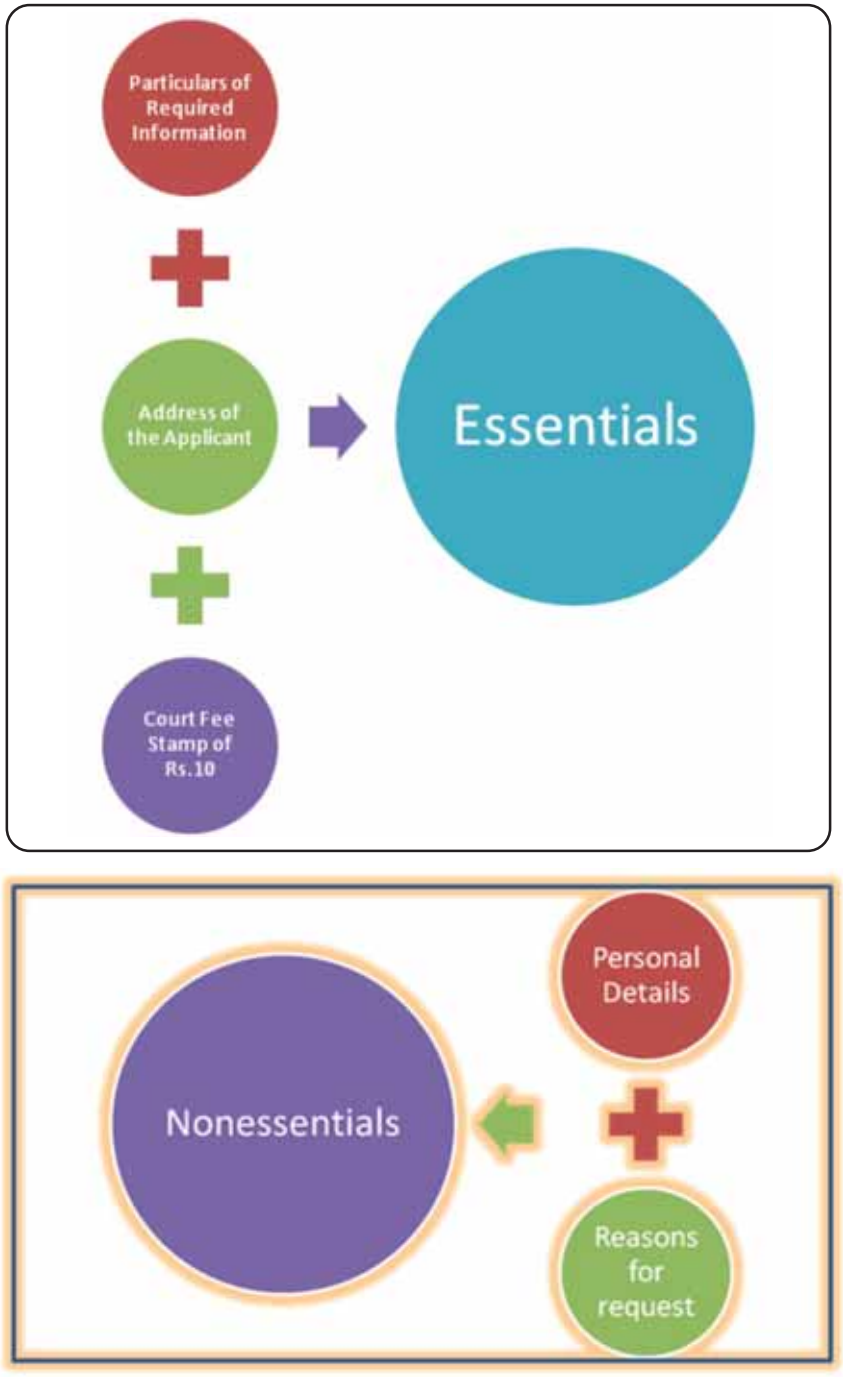
Email: garup@wbpcb.gov.in

Ph: (033) 2335 9088/0261/8211 (Extn-261), 23353913 (D)

*** Please furnish application with contact details (Full address, telephone & fax no. if any) of the applicant.*

- An applicant making request for information shall not be required to give any reason for requesting information. However, the applicant is required to provide necessary information required for contacting the applicant (Fig. 10.3).

Fig. 10.3: For obtaining information under The RTI Act, 2005 (Essentials and Nonessentials matters)



10.5 Application Fee

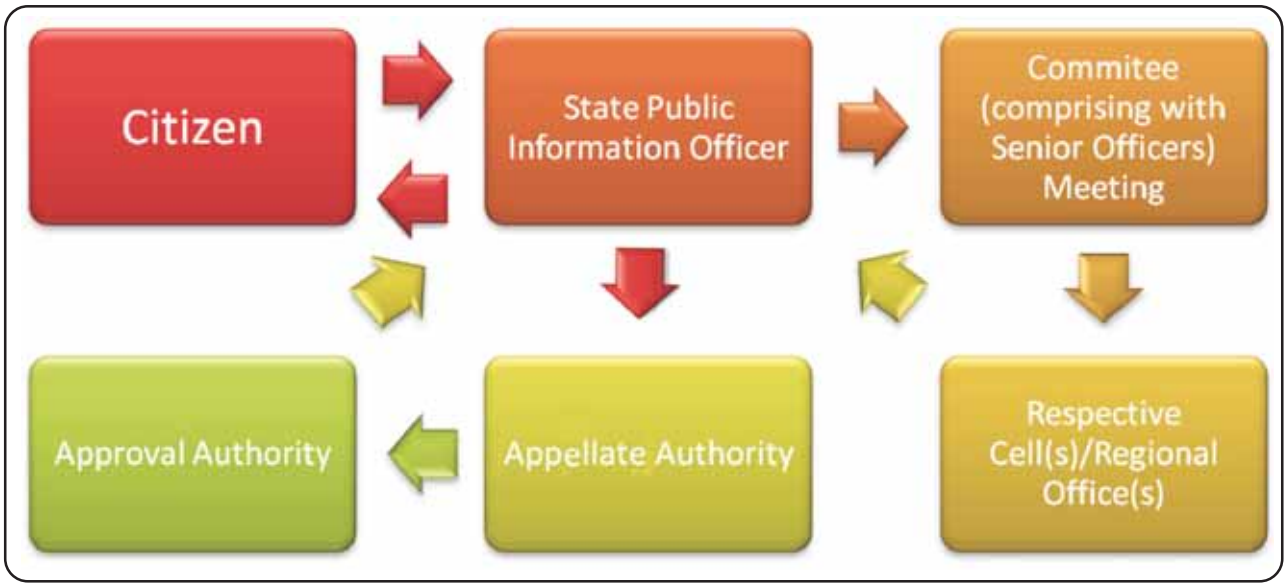
An application containing a request in writing to the State Public Information Officer made under rule 3 of West Bengal Right to Information Rules, 2006 of sub-section (1) of Section 6 of the Right to Information Act 2005 for obtaining information, shall be accompanied with a **court-fee of rupees ten** or a non-Judicial Stamp Paper of rupees ten, or by Demand Draft or Bankers Cheque or Indian Postal Order, payable in favour of "West Bengal Pollution Control Board" (if the applicant is not belonging to below the poverty line category).

10.6 Processing of an application

The State Board constituted a Committee comprising with senior officers to help the State Public Information Officer (SPIO) for implementing the Right to Information Act-2005. The said committee particularly helps the SPIO to prepare technical answer, so that the relevant information as sought for be provided as soon as possible.

After receiving any application, the SPIO invites a Meeting of the committee for discussion on the queries as asked for to decide about which cell or Regional Office will prepare the relevant information as sought for. Accordingly, the in charge of concerned cell(s)/ Regional Office(s) is/are requested to provide the relevant information within a few days. The SPIO prepare the reply based on information received from the concerned cell(s)/ Regional Office(s) and sends the same to the Competent Authority through Appellate Authority for necessary approval. After getting approval, the SPIO sends final reply in favour of the applicant (Fig - 10.4).

Fig. 10.4: Processing of an application under the RTI Act, 2005



10.7 Fee for providing information

Save as otherwise provided in the provision of rule 4 of West Bengal Right to Information Rules, 2006 of sub-section (5) of section- 7, the State Public Information Officer shall provide information under sub-section (1), and sub-section (5) of Section- 7 upon receipt of a request under Section 6, on payment of a fee of -

(a) Rupees two, for each page (in A-4 or A-3 size paper) created or copied; or

(b) Actual charge or cost price, for a copy in large size paper; or

(c) Actual cost price, for sample or model; or

(d) Rupees five for each fifteen minutes or fraction thereof, for inspection of records; or

(e) Rupees fifty per diskette or floppy, for information provided in the diskette or floppy; or

(f) Actual charge fixed for publication or rupees two per page of photocopy for extracts therefrom, for information provided in printed form.

10.8 Appeal

- As per provision under section 19(1) of the Right to Information Act, **Shri Abhijit Bose, Senior Personnel Manager,** (e-mail: spm@wbpcb.gov.in, Ph: (033) 2335 9088/0261/8211 (Extn. - 423), 23358161 (D) of the Board is appointed as Appellate Authority. Any citizen can lodge appeal before the Appellate Authority as specified therein.

10.9 Interesting Facts of RTI Cases during 2017-18

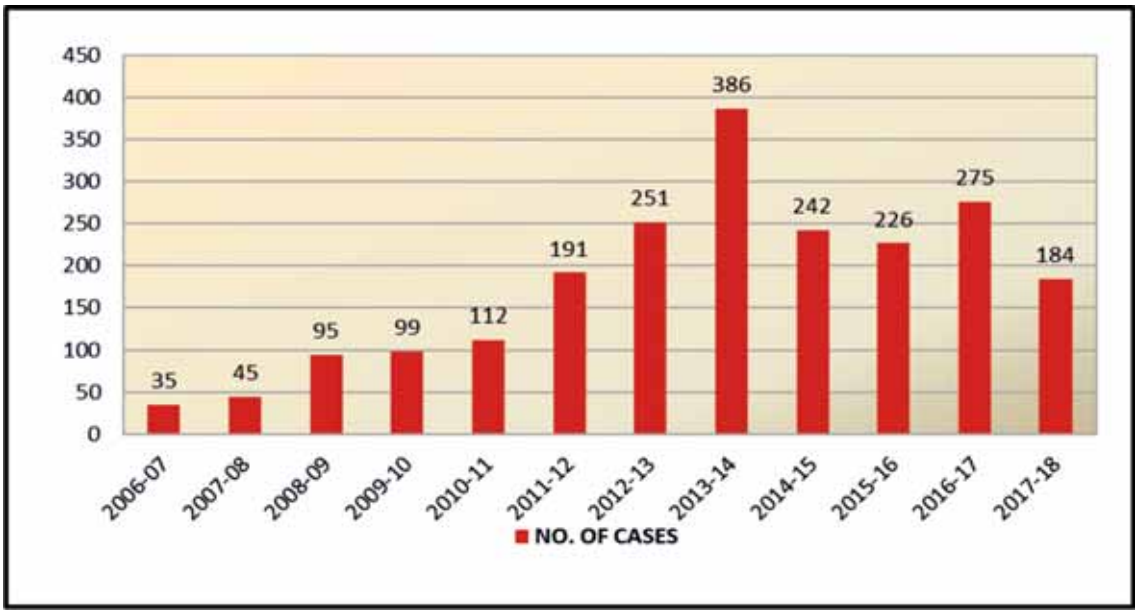
It is a preference to inform that the State Board is handling all the cases under the Right to Information Act- 2005 steadily. The State Board received a total of 184 applications under the Right to Information Act- 2005 from the different parts of West Bengal as well as country during 01.04.2017 to 31.03.2018. All the applications had been scrutinized properly under the different sections of the said Act and disposed of with relevant information. The State Board took the sincere effort for providing relevant information as sought for to all the applicants as early as possible as per the Right to Information Act, 2005.

(1) The rate of receiving applications has been enhanced heavily since the financial year of 2006-07. A total of 184 applications were received during last financial year (2017-18), which is however a 33.09% decrease in respect of the financial year 2016-17 (Table- 10.1).

Table- 10.1: Year-wise application received under the Right to Information Act, 2005

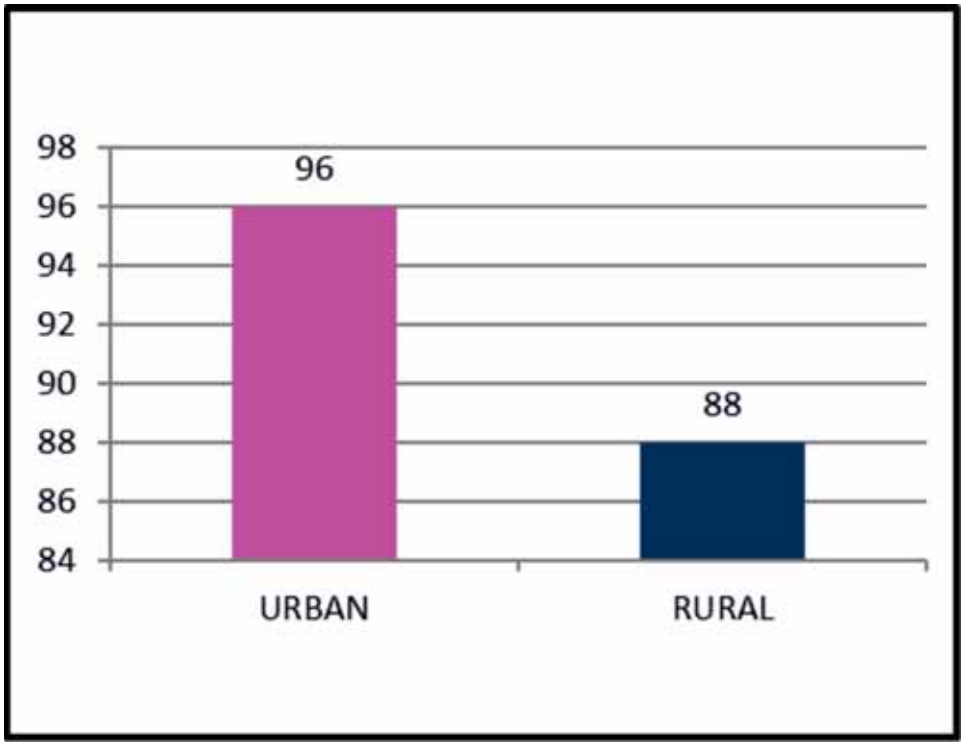
Year	No. of applications received	Increased percentage in respect of previous year	Compound increase of applications in percentage
2005-2006	8	.....	.....
2006-2007	35	337.5%	.....
2007-2008	45	28.57%	.....
2008-2009	95	111.11%	171.42% since 2006-07
2009-2010	99	4.21%	182.85% since 2006-07
2010-2011	112	13.13%	220% since 2006-07
2011-2012	191	70.53%	445.71% since 2006-07
2012-2013	251	31.41%	617.14% since 2006-07
2013-2014	386	53.78%	1002.85% since 2006-07
2014-2015	242	62.69% decreased percentage in respect of 2013-2014	691.42% since 2006-07
2015-16	226	6.61% decreased percentage in respect of 2014-2015	645.71% since 2006-07
2016-17	275	17.81%	785.71% since 2006-07
2017-18	184	33.09% decreased percentage in respect of 2016-2017	425.71% since 2006-07

Fig. 10.5: Year-wise applications received under the RTI Act, 2005 since 2006-07



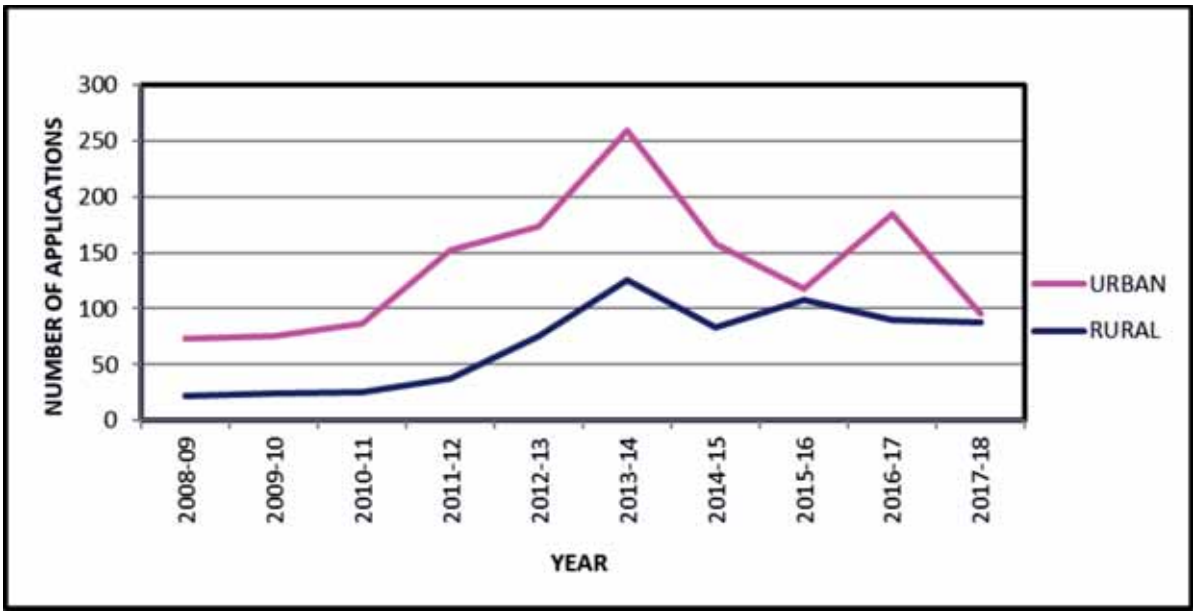
Some of the interesting facts are mentioned in the Table – 10.1. Just about 425.71% increase of applications received in 2016-17 since 2006-07. The Table–1 shows the increase of awareness regarding the Right to Information Act, 2005 and the pressure of jobs in connection with the processing of the applications under this Act regular basis. The Table- 10.1 also proofs the increase of awarenesss level regarding the Right to Information Act, 2005 and the consequent pressure of work in connection with the processing of the applications under this Act regular basis.

Fig. 10.6: Applications received from urban and rural sectors under the RTI Act, 2005 during 2017-18



During 2017-18, a total of 96 applications from urban areas and 88 applications from rural areas were received. That is 52.17% applications and 47.83% applications were received from urban and rural area respectively (Fig.– 10.6). Trends have changed, because 67.27% and 32.73% applications from urban and rural areas were received during financial year 2016-17.

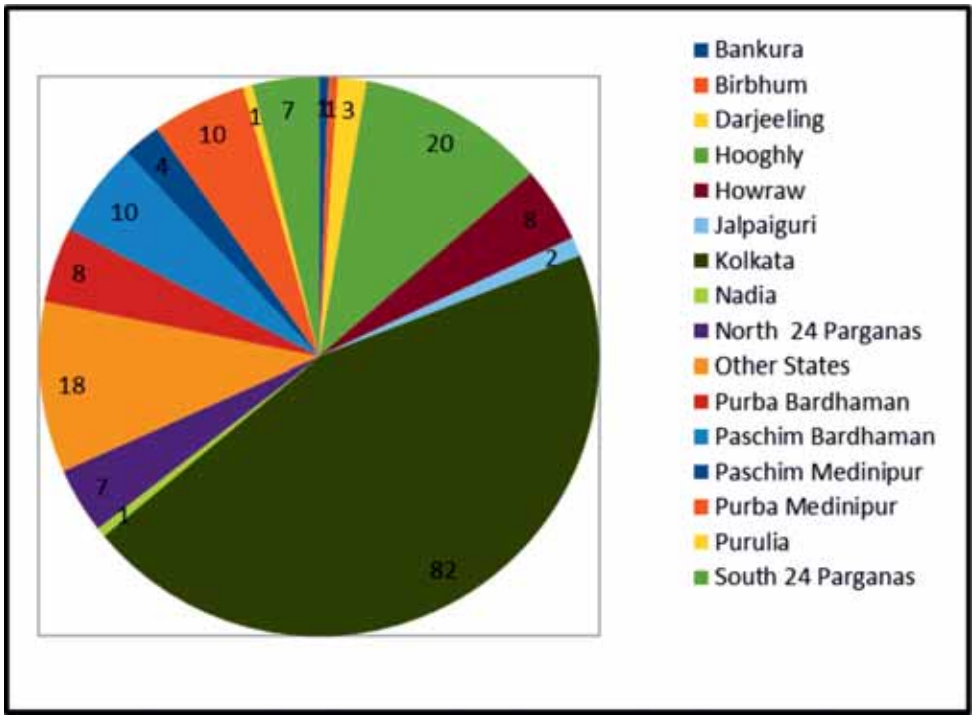
Fig. 10.7: Progressive status of urban and rural applications received under the RTI Act, 2005 over the years



According to chart-3, it is observed that the percentage of urban applications had increased at very minimal rate from 2008-09 up to 2010-11. Similarly percentage of rural applications had also increased at minimal rate from 2008-09 up to 2010-11. Percentage of urban application had drastically increased continuously during 2011-12 up to 2013-14 and similarly percentage of rural applications had also drastically increased during the same financial years. Again urban applications had continuously decreased during 2013-14 and 2014-15. Similarly, rural applications also continuously decreased during 2013-14 and 2014-15. Number of rural applications slightly increased during 2015-16 and the gap between the numbers of applications received from urban and rural areas during financial year 2015-16 narrowed down. The gap between the number of applications received from urban and rural areas during financial year 2016-17 again broadened. During 2017-18, the gap between the number of applications received from urban and rural areas narrowed down considerably.

During 2017-18, the State Board received 18 applications out of 184 from other States. Highest 06 number of applications were received from New Delhi. There are 05 number of applications were received from Maharashtra. Besides that, applications from Karnataka (3), Tamil Nadu (1), Rajasthan (1), Assam (1) and Uttaranchal (1) have been received during 2017-18. This is only 9% of total applications. It was 21.09% in 2016-17.

Fig. 10.8: District wise application received under the RTI act, 2005 during 2017-18



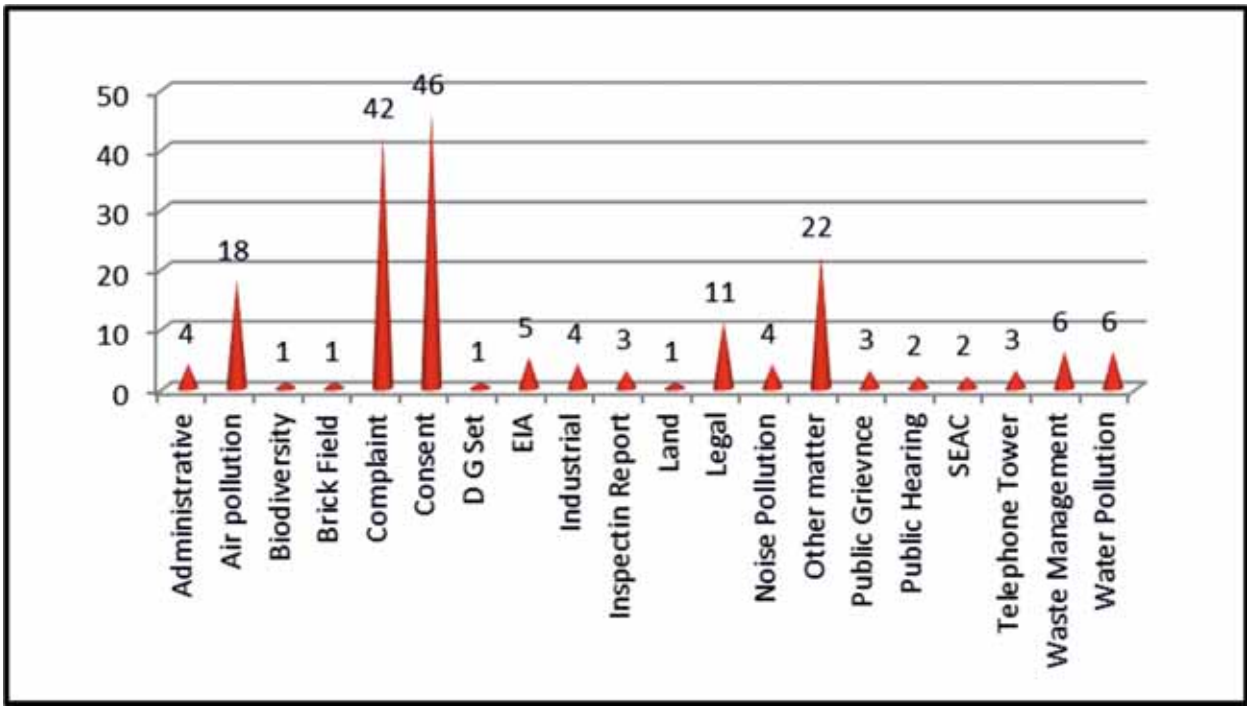
From Fig. 10.8, it can easily be understood that applicants from 15 districts of West Bengal sent their applications under this Act. It has been observed since last few years that the maximum number of applications is coming from Kolkata itself. It is about 44.56% applications (exactly 82 nos. applications out of 184) had been received from Kolkata only. About 40.72% applications were received from Kolkata in the financial year 2016-17. The districts of Hooghly (20 applications) and Purba Medinipur (10 applications) stood in second and third position respectively. Rest were received from other districts.

The State Board treated only 03 applications out of 184 (only 1.63%) as refusal for not submitting requisite fee under rule 3 of West Bengal Right to Information Rules 2006 or not for applying as per Section 3 of the Right to Information Act, 2005. All these applicants were informed regarding refusal of his/her application and were requested to furnish fresh application honouring the said Act.

Out of said 184 applications, the State Board received 09 such applications which were forwarded by the Ministry of Environment, Forests and Climate Change, Government of India; Central Pollution Control Board, New Delhi; Department of Environment, Government of West Bengal; Director of Forests, Government of West Bengal; Office of the District Magistrate, Bankura and Office of the Chief Minister, Government of West Bengal.

In this regard, all the available and relevant information under this Act were sent in favour of the original applicants, with copies were forwarded to the concerned Department, for necessary information.

Fig. 10.9: Various subjects asked for in different applications under the RTI Act, 2005 during 2017-18



Applicants furnished their applications under the Right to Information Act, 2005, seeking various information on different issues of environmental matters. The State Board received highest 46 applications in which information in connection with consent matters were sought for. The second highest, 42 applicants sent their applications seeking information in connection with complaint related issues. Moreover, applicants also sent their applications for seeking information in connection with legal, waste management, water pollution, EIA, administrative, industrial matters etc.

Table- 10.2: Summary of the status of applications/cases during 2017-18

Sl. No.	Particulars	No. of Applications	Remarks
1	Total No. received	184	Applications were received under the Right to Information Act, 2005 from the different parts of West Bengal as well as the country during 01.04.2017 to 31.03.2018.
2	Disposed with necessary information	167 (92.39%)	Board took sincere effort to provide relevant information against all the applications received. State Board provided relevant information against 92.39% applications. The numbers of pending cases are only 17, those are under process.
3	Refused Applications	03 (1.63%)	Only 1.63% of applications were treated as refusal for not submitting requisite fee under rule 3 of West Bengal Right to Information Rules 2006 or not for applying as per Section 3 of the Right to Information Act, 2005.

Sl. No.	Particulars	No. of Applications	Remarks
4	Forwarded by various Government Departments	09 (4.89%)	Around 4.89% of applications were forwarded by Ministry of Environment, Forests and Climate Change, Government of India; Central Pollution Control Board, New Delhi; Department of Environment, Government of West Bengal; Director of Forests, Government of West Bengal; Office of the District Magistrate, Bankura and Office of the Chief Minister, Government of West Bengal. In this regard, all the available and relevant information under this Act were sent in favour of the original applicants and copies were forwarded to the concerned Department, for necessary information.
5	Application received from other states	18 (9.78%)	Applications were received from New Delhi, Maharashtra, Karnataka, Tamil Nadu, Rajasthan, Uttaranchal and Assam.
6	Application received from West Bengal	166 (90.21%)	The State Board received applications from 15 districts. There are 82 applications were received only from Kolkata (44.56%).
7	Information mainly sought for	46 (25%)	Regarding consent matter
		42 (22.82%)	Complaint matter

Chapter - 11

CAPACITY BUILDING OF BOARD PERSONNEL

11.1 Introduction

According to United Nations Development Programme (UNDP), capacity is "the ability of individuals, institutions and societies to perform functions, solve problems, and set and achieve objectives in a sustainable manner." The terms capacity building or capacity development describe the task of establishing human and institutional capacity, i.e., human resource development as a whole. It encompasses the process of equipping individuals with specialized skills by proper training and providing updated information that enables them to perform effectively towards organizational development.

11.2 Status of Capacity Building in WBPCB during 2017-18

In the West Bengal Pollution Control Board, the total workforce comprises of scientists, engineers, legal professionals, researchers provided with efficient support staffs with administrative and financial expertise. The Board aims to improve the performance of its technical personnel through various training programmes. Most new entrant officials of the State Pollution Control Boards normally do not have any formal training in the field of prevention, abatement and control of pollution. When appointed in the Board, they face a gigantic task before them. Therefore, it is necessary to have them trained and oriented for discharging their responsibilities smoothly and efficiently in areas, such as consent management, and implementation of effluent and emission standards. In addition, there is a need to improve the capabilities of persons already working with the Board. It is necessary that uniform methods of analysis of pollutants, consent granting and other activities are adopted and ensured through training for proper and effective implementation of the provisions of the Acts.

In order to update the knowledge of the Board officials on various aspects of environmental issues, they participated in various training programmes organized by different agencies both at national and international levels. The Board officials attended 42 nos. of national level training programme (Table-11.1) during the financial year 2017-2018.

Table 11.1: National level Training Programme /Workshop attended by the Board Officials during 2017-2018

Sl. No.	Name	Designation	Course/Workshop	Sponsored by	Organizer	Period	Venue
1.	Dr.Subrat Mukherjee, IFS	Member Secretary	Effective Management of Hazardous Waste including E-waste Rules including-co-processing	CPCB	International Institute of Waste Management (IIWM), Bengaluru, Karnataka	11.04.2017 to 13.04.2017	The School of Ancient Wisdom, Devanahalli, Bengaluru
2.	Shri Sanjay Singh	Finance & Accounts Manager	Purchase Procedure in Government (GOI)	ATI	Administra-tive Training Institute	29.05.2017 to 31.05.2017	ATI, Salt Lake
3.	Shri Battula Easwar Rao	Superinten-dent	-do-	-do-	-do-	-do-	-do-

Sl. No.	Name	Designation	Course/Workshop	Sponsorer by	Organizer	Period	Venue
4.	Dr. Subrat Mukherjee, IFS	Member Secretary	National Conference on Air and Water Pollution : Innovations in Regulation, Abatement and Monitoring	—	University of Chicago Center, Delhi	07.07.2017	DLF Capital Point, Baba Kharak Singh Marg, Connaught place, New Delhi-01
5.	Shri Amiya Bhusan Mazumdar	Environmental Analyst	Sampling and Analysis of Specific Pollutants (Metals, Ions, Pesticides, PHAs, BTEX/VOCs, PCBs & Dioxins/ Furans etc. by CPCB.	CPCB	Indian Institute of Public Administra-tion, New Delhi	02.08.2017 to 04.08.2017	New Delhi
6.	Ms. Soumya Chakraborty	Environmental Analyst	Water & Sediment Quality Monitoring: Sampling,Analysis and Data Management	—	CSIR-NEERI	08.08.2017 to 11.08.2017	Nagpur
7.	Smt. Aishi Sengupta	Junior Scientist	Comprehensive study on Assessment of Water Quality and sediment Analysis to understand the Special properties of Ganga River from Gomukh to Hooghly	—	CSIR-NEERI	08.08.2017 to 11.08.2017	CSIR-NEERI, Nagpur
8.	Shri Sibasis Dhar	Environmental Analyst	-do-	—	-do-	-do-	-do-
9.	Dr. Subrat Mukherjee, IFS	Member Secretary	Eastern Regional Stakeholders Workshop for formulating Action Plan for Air Quality Management in non-attain towns	—	—	09.08.2017	Hotel Swosti Premium, Jayadev Vihar, Bhubaneswar
10.	Shri Debanjan Gupta	Senior Scientist	-do-	—	—	-do-	-do-

Sl. No.	Name	Designation	Course/Workshop	Sponsorer by	Organizer	Period	Venue
11.	Dr. Subrat Mukherjee, IFS	Member Secretary	Workshop on Waste Disposal and Management	—	Hon'ble National Green Tribunal, Eastern Zone Bench, Kolkata	09.09.2017 to 10.09.2017	Guwahati, Assam
12.	Shri Sandip Saren	Assistant Environmental Engineer	Development of protocol for granting consent and inspection procedures	—	CSE	11.09.2017 to 15.09.2017	New Delhi
13.	Smt. Gargi Ghosh	Scientist	Advance Instrumental Analytical Techniques	CPCB	NEERI	13.09.2017 to 15.09.2017	CSIR-NERI, Nagpur
14.	Smt. Mousumi Saha	Environmental Engineer	Urban Air Quality Management Strategies' Orientation Programme	—	Centre for Science and Environment	18.09.2017 to 20.09.2017	CSE, New Delhi
15.	Shri Subrata Ray	Scientist	-do-	—	-do-	-do-	-do-
16.	Shri Subrata Ghosh	Chief Engineer	One-day Conference on Pollution Prevention at source- Green Chemistry & Engineering Approach for SPCBs	—	Green Chemis tree Foundation	05.10.2017	Sapphire Ballroom, Ramada Hotel & Convention Centre, Mumbai
17.	Smt. Nupur Sengupta	Assistant Environmental Engineer	Training Programme on Best Practices in Environmental Governance	—	Centre for Science & Environment (CSE), New Delhi	06.10.2017 to 15.10.2017	1st two days in New Delhi & rest in Stockholm, Sweden
18.	Dr. Subrat Mukherjee, IFS	Member Secretary	-do-	—	-do-	-do-	-do-
19.	Dr. Somnath Narayan	Senior Environmental Engineer	Workshop on Faecal Sludge and Seepage Management (FSSM) in Urban Areas in India for SPCBs	—	—	13.11.2017	Taj Deccan Hyderabad

Sl. No.	Name	Designation	Course/Workshop	Sponsorer by	Organizer	Period	Venue
20.	Shri Biswajit Pan	Assistant Environmental Engineer	-do-	—		-do-	-do-
21.	Shri Chayan Gayen	Assistant Environmental Engineer	Self-Regulation and Environmental Auditing	—	CSE	22.11.2017 to 24.11.2017	CSE, New Delhi
22.	Shri Sudipto Banerjee	Assistant Environmental Engineer	Self-Regulation and Environmental Auditing	—	CSE	-do-	-do-
23.	Smt. Sumita Saha	Junior Scientist	National Workshop on Environmental Priorities and Challenges with Special Focus on Eastern and North-Eastern Regions	—	CSIR - NEERI	28.11.2017 to 29.11.2017	The Stadel, Kolkata
24.	Ms. Soumya Chakraborty	Environmental Analyst	-do-	—	-do-	-do-	-do-
25.	Shri Tapan Kumar Biswas	Environmental Engineer	One week specialized course on Cleaner Brick Production	—	CSE	11.12.2017 to 15.12.2017	CSE, New Delhi
26.	Shri Anindya Das Gupta	Environmental Engineer	-do-	—	-do-	11.12.2017 to 15.12.2017	-do-
27.	Shri Chayan Gayen	Assistant Environmental Engineer	-do-	—	-do-	11.12.2017 to 15.12.2017	-do-
28.	Dr. Subrat Mukherjee, IFS	Member Secretary	One Week Compulsory Training Course of the Indian Forest Service Officers on Building Competencies for Personal Excellence	—	—	18.12.2017 – 22.12.2017	The Art of Living Foundation, Bengaluru
29.	Shri Gautam Kumar Naskar	Accounts Officer	Purchase Procedure in Government (GOI)	ATI	ATI	15.01.2018 to 17.01.2018	ATI, Salt Lake, Kolkata
30.	Shri Bhaskar Chattopadhyay	Head Assistant	-do-	-do-	-do-	-do-	-do-
31.	Smt. Rita Dutta	Environmental Engineer	One week specialized course on Environmental Monitoring and Data Management	—	CSE	15.01.2018 to 19.01.2018	CSE, New Delhi

Sl. No.	Name	Designation	Course/Workshop	Sponsorer by	Organizer	Period	Venue
32.	Smt. Jayati Mitra	Environmental Engineer	-do-	—	-do-	-do-	-do-
33.	Shri Indrajit Chaudhuri	Junior Scientist	Urban Air Quality Management Strategies Training Programme	—	CSE	22.01.2018 to 25.01.2018	Anil Agarwal Environment Training Institute, Nimli near Alwar Tijara, Rajasthan
34.	Shri Biswajit Pan	Assistant Environmental Engineer	Training programme on web based system viz. 'Chemical Accident Reporting System (CAIRS)' and GIS Emergency Planning and Response System (GEPR)' and discussion on implementation of the Manufacture storage and import of Hazardous Chemicals (MSIHC) Rules, 1989 and the Chemical Accidents (Emergency Planning, reparedness and Response) Rules, 1996-regarding	—	—	02.02.2018	Teesta Conference Hall, 1st floor, Vayu Wing, Indira Paryavaran, Bhawan, MoEF & CC, New Delhi
35.	Smt. Sarmistha Kundu	Senior Environmental Engineer	Environmental Monitoring	—	CSE	06.02.2018 to 07.02.2018	CSE Training Institute, Tijara, Rajasthan
36.	Shri Bhim Tikader	Assistant Environmental Engineer	Vehicular Emission and Exhaust Monitoring	—	—	07.02.2018 to 09.02.2018	Gurgaon, Haryana
37.	Shri Nemai Chandra Barai	Assistant Environmental Engineer	CSE's regional training workshop on new environmental norms for coal based thermal power stations	—	CSE	19.02.2018 to 21.02.2018	Anil Agarwal Environment Training Institute, Nimli (near Alwar)

Sl. No.	Name	Designation	Course/Workshop	Sponsorer by	Organizer	Period	Venue
38.	Shri Gour Gopal Chakraborty	Assistant Environmental Engineer	-do-		-do-	-do-	-do-
39.	Shri Sudip Barua	Environmental Engineer	One week specialized course on Self-Regulation and Environmental Audit	— —	CSE	05.03.2018 to 08.03.2018	CSE, New Delhi
40.	Shri Bimalendu Mal	Assistant Environmental Engineer	One week specialized course on Self-Regulation and Environmental Audit	—	CSE	05.03.2018 to 08.03.2018	CSE, New Delhi
41.	Smt. Sudipta Pal	Computer Operator	Two week Short Term Course in Remote Sensing and GIS	—	—	12.03.2018 to 23.03.2018	Bikash Bhavan, Salt Lake, Kolkata – 91
42.	Shri Subrata Das	Technician (Contractual)	Entrepreneurship Development Programme on Solar Energy	Khadi & Village Industries Commissi-ons (KVIC)	—	17.03.2018 to 18.03.2018	Dee Empress Hotel, 12/2A, Dr. Md. Ishaque Road, Kyd St. New Market Area, Dharmatala, Kol-16

Chapter - 12

ENVIRONMENTAL AWARENESS PROGRAMMES

12.1 About environmental Campaign by the State Board

Environmentalism is an ideology that evokes the necessity and responsibility of humans to respect, protect, and preserve the natural world from its anthropogenic (caused by humans) afflictions. Environmental awareness is an integral part of the movement's success.The West Bengal Pollution Control Board is continuously carrying out its responsibility and hence contributing to all sincere efforts to spread environmental awareness among the people all over the State. The aims, objectives and the mode of the State Board's awareness campaign movement are:

1. To promote environmental awareness among all sections of the society;
2. To spread environment education about relevant laws and regulations and about their rights, interests, duties and responsibilities, as well as about the social, environmental and economic consequences of non-compliance, especially in the non-formal system, among different sections of the society;
3. To facilitate development of education/training/campaign materials and aids in the formal education sector;
4. To promote environment education through existing educational/scientific/research institutions;
5. Inclusion of awareness and environmental educational programmes in schools and other educational establishments;
6. To ensure training and manpower development for conducting environment education, awareness and training programmes;
7. To encourage non-governmental organizations, mass media and other concerned organizations for promoting awareness about environmental issues among the people at all levels;
8. To use different media including films, audio, visual and print, theatre, drama, advertisements, hoarding, banners, posters, seminars, workshops, competitions, meetings etc. for spreading messages concerning environment and awareness; and
9. To mobilize people's participation for preservation and conservation of environment.

The State Board is very much concerned about environmental protection. So, it conducts various environmental awareness or campaign programmes throughout the years as stated below:

1. National Green Corps (NGC) Programme;
2. Organizing seminars/workshops/conferences etc. on various environmental issues/topics;
3. Environmental awareness/campaign programmes on noise pollution, restrictions on using banned plastic carry bags and other environmental issues;
4. Sapling plantation programme,
5. Participation in various fairs/melas etc.

In a developing country like India, environmental awareness is very much required for each and every level of the civic society, of both urban and rural areas, irrespective of their economic entity. This is necessary as well as helpful for any government to build up active public participation in taking action for any kind of environmental cause. This large scale public involvement can strengthen environmental movements for the sake of implementation of environment-friendly rules and regulations by government machinery in a much better way to have the most desired result in terms of better environment to live in.

In West Bengal, considering the fact above, the State Board with active cooperation of the State Government has initiated various types of environmental awareness programmes, targeting people of all works of life. These positive initiatives also include Government of India sponsored National Green

Corps (NGC) Programmes since 2003 throughout the country for the school children. Apart from this, the Board conducts various campaign programmes throughout the year utilizing the services of local bodies, various educational institutions and government departments towards generation of environmental awareness among general people.

During 2017-18, various events were carried out under the State Board's environmental campaign/ awareness programme.

12.2 VariousTraining Programmes/Seminars/Workshops etc.organized during 2017-18

A. Workshop on finalising the Air Quality Improvement Action Plan

The Workshop was organised by the West Bengal Pollution Control Board on **27 April, 2017** at the Sonnet Hotel. The workshop was inaugurated by Shri SovanChatterjee, Hon'ble Minister in Charge, Department of Fire and Emergency Services, Housing and Environment, Govt. of West Bengal. The Hon'ble MIC, along with other distinguished delegates present in the programme, marked the beginning of the workshop by watering a plant.

Dr.Kalyan Rudra, Chairman of the West Bengal Pollution Control Board, in his welcome address expressed concern about the air pollution in present times which was mostly due to presence of high concentration of particulates and nitrogen oxides in the ambient air and stressed that an Action Plan was urgently required to address this issue in a holistic manner.

Dr.Rudra added that the State Board monitors air quality through 19 Ambient Air Quality Stations in Kolkata and 6 in Howrah, where 12 air quality parameters were monitored and generally non-compliance with permissible limits were observed mostly with respect to 3 parameters (PM_{10}, $PM_{2.5}$ and NO_2). In order to prepare an Action Plan for combating air pollution, the foremost requirement was to ascertain the sources of air pollution and the major contributors - therefore a source apportionment study has been assigned to NEERI by the WBPCB. He also emphasised that the extremely serious level of air pollution in Delhi last winter has been an eye-opener and we must take proactive measures in Kolkata to prevent recurrence of similar disaster.

In his inaugural address, the Hon'ble Minister-in-charge highlighted the importance of addressing the issue of air pollution in modern times. He said that the number of vehicles in Kolkata and Howrah was increasing at an alarming rate and this along with other sources like industrial emissions, burning of wastes etc. led to air pollution. Steps have already been taken by the State Government to reduce industrial emissions e.g. seriously polluting units are not allowed to be set up within municipal areas, action has been taken for fuel changeover in Small and Medium units, action has been taken to reduce emissions from crematoria, flyovers have been constructed, LPG driven auto rickshaw has been introduced, road conditions are being improved, parking has been restricted around Victoria Memorial and so on. However, it has been observed that pollution levels are still increasing and a concrete Action Plan is required to be formulated to combat air pollution. He stated that CNG buses had already been introduced in Asansol area in association with the Transport Department and recently Gas Authority of India Ltd. (GAIL) had approached the State government for supply of gas for running gas driven vehicles in Kolkata. An agreement between GAIL and the GoWB is likely to be signed soon for laying of pipeline for gas transportation and distribution. He informed that the KMC would be purchasing specially designed vehicles for watering roadside trees, parks and gardens and advised WBPCB to fund the purchase of some such vehicles.

Shri Arnab Roy, IAS, Principal Secretary, Department of Environment, GoWB, said that the reasons for air pollution were diverse and not limited to industrial sources and automobile emission only. Various urban activities contribute to air pollution. Therefore we needed to prepare an action plan urgently involving all concerned departments and this workshop was an important step towards that.

Technical Session 1:

Dr.Rakesh Kumar, Director, NEERI spoke on Urban Air Quality Management-Complexities and Possibilities.

The next speaker of the Technical Session 1, Dr.Dipanjana Moulik, Senior Environment Officer, Department of Environment, GoWB, spoke about State Level Air Pollution Control Action Plan. On behalf of Department of Environment, the speaker proposed the following List of Possible Actions for Air Quality Management which also identified the concerned Department/ agency responsible for implementation of the activity and the possible timeline for completion of the activity including preparatory work required, if any:

i. Estimation of Contribution from Various Emission Sources
ii. Mitigation of Re-suspension of Road/ Construction dust
iii. Introducing Economic Instrument for low emission vehicles
iv. Redesigning the Traffic management
v. Introducing cleaner fuel
vi. Streamlining efficiency of Auto Emission Testing Centres
vii. Encouraging Plantation
viii. Augmentation of air monitoring network

The next speaker of the Technical Session was Dr. Deepanjan Majumdar who deliberated on the topic "Source Apportionment Study of Kolkata and Howrah: Issues and Methodology".

Technical Session 2 :

The second Technical Session on 'Finalisation of Air Quality Action Plan with stakeholders' was chaired by Shri Arnab Roy, IAS, Principal Secretary, Department of Environment, Govt. of West Bengal and co-chaired by Shri Goutam Gupta, Deputy Commissioner of Police (II), Traffic Department.

On behalf of Kolkata Police, Sri Gupta explained that his department enforced court orders and directives of the West Bengal Pollution Control Board, related to pollution control issues. The Department conducted random checking of PUC certificates on a regular basis and recently they developed a software for sending SMS alerts to owners of vehicles who had failed to renew PUC certificates. The department also kept strict vigil on open transportation of construction material in order to curb air pollution. The Principal Secretary stressed that transport of construction materials should be done in covered vehicles.

The Public Works Department was represented by the Superintending Engineer who conveyed that their department was ensuring that all construction and demolition activities undertaken by the department were carried out in an environment friendly manner. The department was incorporating the Orders issued by the WBPCB and the Environment Department in their Tender Documents to ensure pollution prevention during execution of works. The department took NOC (if so required) from the WBPCB for carrying out any activity and gave due importance to environmental protection during transportation and stacking of materials on site. Replantation scheme was also undertaken if any project involves tree cutting.

The representative of Project Management Unit of the Kolkata Municipal Corporation (KMC) stated that the KMC undertook restoration/ beautification of water bodies as well as plantation activities as part of its initiatives for environmental protection. The Chairman of the session ShriArnab Roy, IAS, added that the KMC should undertake road paving and road repairing activities, wherever required and also take steps to stop solid waste burning and reduce emissions from mastic asphalt units in order to reduce air pollution. He also requested the WBPCB to give advice on how air pollution control could be done for such mastic asphalt units.

On behalf of the West Bengal Pollution Control Board, the Chief Scientist, Dr. U.K. Mukhopadhyay, stated that as per reports from air quality monitoring stations, both Kolkata and Howrah had been non-compliant in respect of both PM_{10} and $PM_{2.5}$ for at least 5 months in a year for the last 4 years, especially during winters. The values of NOx in the ambient air were also non-compliant with respect to permissible limit; the pollutant being emitted mostly from automobile tail pipe emissions. Other sources of emission include dust emission from construction activities, burning of fossil fuels from industries, waste burning

and resuspension of dust from non-paved areas. However, CO emission has reduced over the years from 2009 due to phasing out of old vehicles in Kolkata. The study on Source Apportionment for the twin cities have been awarded to the NEERI by the WBPCB following a direction from the CPCB, in pursuance to the Direction of the Hon'ble National Green Tribunal for improvement of Air Quality in Kolkata and Howrah. The WBPCB action plan would include monitoring of AETCs, construction activities, crematoria and industries, addition of more AAQM stations and increasing the number of readings. A graded response plan was required to be adopted based on air quality data.

The representative of the Howrah Municipal Corporation said that they had undertaken a project for proper disposal of solid wastes, in collaboration with a German firm.

The NEERI requested representatives of all concerned departments to share required data with them for conducting the study on source apportionment.

The session was finally summarised as follows:

- Natural gas may be introduced as fuel in automobiles for improvement of air quality
- Road paving and repair to be undertaken regularly and ways to reduce emissions from mastic asphalt plants to be explored
- Steps to be taken to stop open burning of solid waste
- Adequate precautions to be taken to prevent pollution from construction and demolition activities and storage of construction materials and demolition waste on roadside/ pavements to be stopped; open transportation of construction materials to be stopped.
- Plan to be formulated for regular monitoring of AETCs, construction sites, crematoria, etc.
- Air quality monitoring network to be expanded and graded response plan to be prepared based on air quality index
- All possible support to be provided to the NEERI by all stakeholders for collecting data for the source apportionment study.

Inaugural speech by Shri Sovan Chatterjee, Hon'ble MIC, Dept. of Environment, GoWB during the workshop

Keynote address by Dr. Kalyan Rudra, Chairman, WBPCB during the workshop

B. Various Training Programmes organised by the State Board for In-Service Police Personnel

Like earlier, this year also, the West Bengal pollution Control Board arranged three nos. of training programme for in-service Police Personnel of West BengalPoliceAuthority. Beside fundamentals of air, water, noise and Auto- emission pollution control, a special training on exhaust emission testing of in use Petrol/LPG and diesel vehicles was also arranged for them. A practical demonstration was arranged at the Board's Auto Emission Testing room. Machine manufacturers also shared their valuable suggestions on auto exhaust emission testing procedure.

Course outlines of Training cum Awareness Programme for in-service police personnel:

1. Fundamentals of air, water and noise pollution
2. Automobile Pollution with practical training for exhaust emission testing of in use vehicles.
3. Waste management
4. Sources of pollution and their effects on human being
5. Instruments used for various pollution measurements
6. Environmental Laws and Legal provisions on pollution control
7. Audio-visual show on environmental pollution.

Table- 12.1: Training-Cum- Awareness Programme for In – Service Police Personnel during 2017-18

Sl. No.	Date of training	No. of persons have been trained.
01	25.05.2017	30
02	27.07.2017	27
03	07.12.2017	36
	Total	**93**

C. Interactive workshop on implementation of Waste Management Rules, 2016 on 8 June, 2017

The Ministry of Environment, Forest & Climate Change, Govt. of India has notified the Solid Waste Management Rules, 2016; Construction and Demolition Waste Management Rules, 2016; Plastic Waste Management Rules, 2016; E-Waste (Management) Rules, 2016; Bio-Medical Waste Management Rules, 2016 and Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, under the Environment (Protection) Act,1986 super ceding the previous rules.

The West Bengal Pollution Control Board(WBPCB) after taking approval of the Department of Environment, Govt. of West Bengal had already taken initiatives by conducting a series of Awareness-cum-participatory Management Programmes on Waste Management at the regional level as well as district levels for awareness generation and effective implementation of the above mentioned six new waste management Rules. As a step towards achieving effective implementation of the rules, the WBPCB organised a series of orientation workshops involving various stake holders to discuss the provisions of the rules and share ideas and concerns on implementing the rules in West Bengal. Apart from these, District Magistrates from twenty two districts had been requested to conduct such type of workshops in their respective district and the WBPCB also sanctioned a sum of Rs. 50,000/- to each of the District Magistrates, subject to submission of reports. Subsequently, District Magistrates from Bankura, Hooghly, 24 Parganas(N), 24 Parganas(S), Malda and Dakshin Dinajpur districts had successfully organized awareness workshops and the WBPCB officials also attained the workshops. Moreover, several brainstorming meetings had been organised by the WBPCB at the Head Office involving the stakeholders for discussing the issues on implementation of the new Rules. A brief of the programmes organised in association with the Concerned District Magistrate is tabulated below :

Workshops convened at	Organised by	Date	Workshops held on
Board Room, Barrackpore Municipality Office, Barrackpore, 24 Parganas(N)	Barrackpore Regional Office, WBPCB.	14.01.2017	Solid Waste Management Rules, 2016
Aquamarina Kanagarh, Hooghly Station Road, Bandel, Hooghly.	Hooghly Regional Office, WBPCB	25.01.2017	Bio-Medical Waste Management Rules, 2016

Workshops convened at	Organised by	Date	Workshops held on
Hotel City Residency, NH-2, Nigha More, Asansol.	Asansol Regional Office, WBPCB	31.01.2017	Bio-Medical Waste Management Rules, 2016
New Building in WEBEL IT Park, Paribahan Nagar, Matigara, Siliguri, Darjeeling.	Siliguri Regional Office, WBPCB	09.02.2017	Bio-Medical Waste Management Rules, 2016
Sanaullah Mancha Malda College Auditorium, Rathbari More, Malda.	Malda Regional Office, WBPCB.	22.02.2017	Bio-Medical Waste Management Rules, 2016
Tagore Auditorium, Indian Oil Managament Academy, Haldia.	Haldia Regional Office, WBPCB.	01.03.2017	Bio-Medical Waste Management Rules, 2016
Auditorium, Paribesh Bhaban, Bidhannagar, Kolkata	Waste Management Cell of Head Office.	25.03.2017	Solid Waste Management Rules, 2016 & Plastic Waste Management Rules, 2016
Auditorium, Paribesh Bhaban, Bidhannagar, Kolkata	Waste Management Cell of Head Office.	27.03.2017	Bio-Medical Waste Management Rules, 2016

Workshop on implementation of Waste Management Rules at Paribesh Bhawan

As requested, by the Chairman, Central Pollution Control Board, vide letter, dt. 30.05.2017, the WBPCB had organised "One Day Interactive Meet on Implementation of Waste Management Rules" at Paribesh Bhaban, involving concerned stake holders from local bodies, health care facility providers, Industries, real estate developers, bulk waste generators, waste management facility operators, producer/ manufactures of plastic and electronic equipment etc. The interactive workshop was held on **8 June, 2017** at Meeting Hall of Paribesh Bhaban, Bidhannagar, Kolkata.

The workshop was organised in different slots involving people/representatives from respective fields to emphasise on the new Rules and to aware them about their responsibilities or duties as laid down in the new Rules under "Operator's Duty". The recyclers of hazardous wastes and E-Wastes and the waste management facilitators of hazardous and bio-medical wastes were also awakened about the new Rules and their roles in scientific and eco-friendly management of wastes. The Chairman, Member Secretary and Chief Engineers of West Bengal Pollution Control Board and Shri R. C. Saxena, Regional Director (East) and Smt. Rita Saha from Central Pollution Control Board were present in the inaugural session. Representatives from Municipal Bodies, Waste Plastic Recyclers, Infrastructure and Development Projects and distinguished guests attended the first session, which started at about 11am.

Welcome address was delivered by Shri Subrata Ghosh, Chief Engineer, Waste Management Cell (WMC), WBPCB and he briefed about the salient features of the new Rules.

Dr. Kalyan Rudra, Chairman, WBPCB in his address, briefed the objective of this workshop and highlighted the issues in the light of new six Rules implemented in 2016 and its probable impact on overall environment.

Dr. Subrat Mukherjee, IFS, Member Secretary, WBPCB in his address, briefed the amendments made in the new Rules, 2016 and the responsibility of different stake holders as mentioned in the provisions of the Rules.

Later on the Power Point Presentation were delivered on different Rules by the Engineers of the Waste Management Cell of the State Board in different slots.

Presentation on Provisions of the Solid Waste Management Rules, 2016, Construction and Demolition Waste Management Rules, 2016 and Plastic Waste Management Rules, 2016 was delivered by Shri Sisir Mondal, Environmental Engineer (WMC). The duties of different stakeholders as mentioned under the provisions of the said Rules had been described elaborately. Shri Subrata Ghosh, Chief Engineer (WMC), WBPCB had delivered a power point presentation on E-Waste Management Rules, 2016. He also briefed about the issues related to be addressed under the provisions of the new rules and also highlighted on the facts related to poor E-Waste Management practices undertaken by the recyclers and dismantlers in this State.

Presentation on Role of Waste Generators, Common Facility (West Bengal Waste Management Limited i.e. Common Hazardous Waste Treatment and Disposal Facility), Recyclers, State Pollution Control Board and the State Government as per the Hazardous and Other Waste (Management &Transboundary Movement) Rules, 2016 was delivered by Shri Q. Q. Hasan, Environmental Engineer (O&E) Cell.

Presentation on Role of Health Care Units (Occupiers), the State Pollution Control Board and the State Government as per the provisions of the Bio-medical Waste Management Rules, 2016 was delivered by Shri Biswajit Pan, Asst. Environmental Engineer (WMC).

Shri R. C. Saxena, Regional Director, Eastern Zonal Office, Central Pollution Control Board summed up the first session and explained the objective of organising the workshop cum seminar.

The Overall response of the participants from the respective sectors of the workshop was satisfactory. The entire workshop was interactive and the questions raised by the participants were addressed. The whole event ended satisfactorily and successfully.

12.3 Various Environmental Awareness and campaign programmes organized during 2017-18

A. Celebration of World Environment Day- 2017 by the State Board

'Connecting People to Nature', the theme for World Environment Day, 2017, pushes up the spirit within ourselves to explore the beautiful Nature around the world as much as possible and to realize the utmost necessity to protect it from any type of evil impacts. We the people should feel the urge from the bottom of our heart to care for the Nature for the sake of our wellbeing and even for our existence on this earth.

This year's theme invites us to think about how we are part of nature and how intimately we depend on it. It challenges us to find fun and exciting ways to experience and cherish this vital relationship.

Speech by Dr.Kalyan Rudra, Chairman, WBPCB on the World Environment Day- 2017 Programme

Like earlier years, the West Bengal Pollution Control Board celebrated World Environment Day- 2017 in a befitting manner. On this occasion, a program including a seminar was organized on 5 June, 2017 at the Auditorium of Bidyut Unnayan Bhawan, Bidhannagar, Kolkata. During the inaugural session of the program, Dr. Kalyan Rudra, Chairman of the WBPCB welcomed all the dignitaries, eminent persons, guests and participants. Shri Sovan Chatterjee, Hon'ble Minister-in-Charge, Departments of Environment, Fire &Emergency Service and Housing, Government of West Bengal inaugurated the programme by watering a plant, which symbolizes the theme of World Environment Day- 2017 very significantly and meaningfully. Dr. Subrat Mukherjee, IFS, Member Secretary, WBPCB and Shri Bidyut Bhattacharya, Special Secretary, Dept. Of Environment, Govt. of West Bengal were present in the programme. The Hon'ble Minister-in-Charge released the following publications of the State Board to mark the noble day.

- State of Environment Report- West Bengal, 2016
- Bengali version of Plastic Waste Management Rules, 2016
- Bengali version of Solid Waste Management Rules, 2016

World Environment Day, 2017-At a glimpse...

A Platform for Action :

World Environment Day is the United Nations most important day for encouraging worldwide awareness and action for the protection of our environment. Since it began in 1974, it has grown to become a global platform for public outreach that is widely celebrated in over 100 countries.

The People's Day :

Above all, World Environment Day is the 'peoples day for doing something to take care of the Earth or become an agent of change. That 'something can be focused locally, nationally or globally; it can be a solo action or involve a crowd – everyone is free to choose.

The Theme :

Each World Environment Day is organized around a theme that focuses attention on a particularly pressing environmental concern. The theme for 2017 is connecting people to nature.

The Host :

Every World Environment Day has a different global host country, where the official celebrations take place. The focus on the host country helps highlight the environmental challenges it faces, and supports theeffort to address them. This years host is Canada.

[*Source : www.unep.org*]

Speech by shri Sovan Chatterjee, Hon'ble MIC on the World Environment Day- 2017 Programme

Release of State of Environment Report-West Bengal, 2016

Apart from these, ten types of posters on various environmental issues were also released by him.

On behalf of the State Board, the Hon'ble Minister-in-Charge felicitated three eminent guests of the programme- Shri Kamal Chakraborty, Writer and Environmentalist, Dr. Debiprosad Duari, Director, Research Academics, M.P. Birla Institute of Fundamental Research and Shri Protul Mukhopadhyay, Singer and composer. Hon'ble Minister-in-Charge also distributed solar lanterns to the students of Valo Pahar School, situated in remote area of Purulia district.

Shri Sovan Chatterjee, Hon'ble MIC distributing solar lanterns to the students

The Hon'ble Minister-in-Charge delivered his valuable speech. During his speech he covered some of the important relevant areas –

He stressed on importance of wetland conservation and assured that illegal pond filling by anybody will not be allowed by the State Government.

The Hon'ble MIC informed about introduction of compactor vat in the city of Kolkata for waste disposal and building up of new waste disposal site at Rajarhat and Joka areas. He also talked about the project on development of advanced Solid Waste Management system, funded by the Asian Development Bank (ADB) to make the city waste free.

The second session of programme comprised of a seminar based on this year's theme- '**Connecting People to Nature'**. Dr. Kalyan Rudra, Chairman of the WBPCB started the session with the keynote address. Dr.Rudra covered various aspects of environmental pollution and its various impacts, like, global warming, loss of forest cover and pasture lands, hazards of plastic wastes, soil erosion, lowering of ground water level due to massive consumption and contamination of both surface and ground water etc.

Dr. Kalyan Rudra, Chairman, WBPCB distributing jute bags to the public at the Beliaghata market

Dr. Debiprosad Duari delivered an awesome lecture along with a presentation on 'A New View of the Solar System'. He explained beautifully about astronomy, space and established a connection between life and space.

Shri Kamal Chakraborty told about the necessity of afforestation to protect the environment. After that, Shri Protul Mukhopadhyay presented some songs to end the programme with a memorable note.

Dr. Kalyan Rudra, Chairman, WBPCB distributed jute bags at Beliaghata Market to promote using eco-friendly bags instead of banned plastic carry bags amongst the local people.

B. Noise Pollution Campaign Programme at different Bus Depots in Kolkata

According to the Noise Pollution (Regulation and Control) Rules, 2000, under the Environment (Protection) Act, 1986, 'Silence Zone' is defined as areas up to 100 meters around such premises as hospital, nursing homes, educational institutions, courts, religious places or any other area. It is also clearly stated in the Rule 6 (ii) that no horn can be blown in these Silence Zones/Areas.

According to the rule, the noise level at Silence Zones should be maintained as stated below.

Table- 12.2: Ambient Air Quality Standards in respect of noise

Category of Area/ Zone	Noise limits in dB (A) Leq.	
	Day time (6 am to 10 pm)	**Night time (10 pm to 6 am)**
Silence Zone	50	40

Despite the existence of such rules, it has been observed by the Hon'ble NGT that, the noise level is much above from what it ought to be.

In order to maintain the statutory noise level, which is the main objective of declaring such areas as Silence zones, the Hon'ble National Green Tribunal (NGT) issued an order on (O.A. No.- 158/2016/EZ) expressing its view about the necessity of making the people aware of the fact that the said areas are called ''Silence Zones'', where honking is strictly prohibited.

As directed by the Hon'ble NGT in the order, the West Bengal Pollution Control Board (WBPCB) took up immediate necessary action through organizing a number of awareness programmes to sensitize the drivers plying commercial, private or government vehicles about the health hazards of noise pollution. These awareness campaigns were organized at various bus depots/stands in Kolkata, where the Board officials visited and talked with the drivers, conductors and others about health hazards of noise pollution and requested them to stop honking near hospitals, nursing homes, educational institutions, courts, religious places or any other area, which are declared as "Silence Zones''.

Table-12.3: The schedule of the programmes

Sl. No.	Date	Venue
1	31.08.2017	• Tollygunge Tram Depot Bus Stand • Thakurpukur Bus Stand
2	01.09.2017	• South Bengal State Transport Corporation, Dharmatala· • Babughat Bus Stand
3	04.09.2017	• Ultadanga State Garage·Salt Lake State Garage· • Dum Dum Park 12C/1 Bus Depot • ParibeshBhawan, Bidhannagar, Kolkata
4	05.09.2017	• Ballygunge State garage·Jadavpur 8B Bus Stand

About 800 participants were present in all these campaign programmes and gave very supportive and positive response towards the State Board's gesture.

Noise pollution campaign at Tollygunj Tram Depot Bus Stand

Noise pollution campaign at Thakurpukur Bus Stand

Noise pollution campaign at Babughat State Garage

Noise pollution campaign at South Bengal State Transport Corporation, Dharmatala

Noise pollution campaign at WBPCB Head Office at Paribesh Bhawan, Bidhannagar, Kolkata

Noise pollution campaign at Salt Lake State Garage

Noise pollution campaign at Dum Dum Park Bus Depot

Noise pollution campaign at Ultadanga State Garage

Noise pollution campaign at Ballygunge State Garage

Noise pollution campaign at Jadavpur 8B Bus depot

C. Distribution of Lead-free paints to the idol-makers

Like earlier, the State Board organized a number of district wise programmes to distribute toxic metal-free paints to the idol-makers of various districts throughout the State before ensuing festive season- 2017.

Date	District	Place
13.9.17	Kolkata	Potua Para, Kumortuli, Beliaghata
	Nadia	Krishnagar (Ghurni)
	Burdwan	Asansol, Durgapur
20.9.17	Purba Medinipore	Haldia
06.09.2017	Hooghly	Chinsura, Chandannagore, Bansberia

D. Environmental Awareness Programme during FIFA U-17 World Cup Football Tournament

The prestigious FIFA U-17 World Cup Football Tournament, 2017 was organized in India. The matches were scheduled to be held at various metro and important cities including Kolkata. A number of matches were held at Swami Vivekanada Yubabharati Krirangan, Salt Lake since **8 October, 2017**. As directed by the Hon'ble National Green Tribunal, Eastern Zonal Bench, the West Bengal Pollution Control Board decided to hold an environmental awareness campaign drive by involving the school students prior to the tournament from **7 September, 2017 to 14 September, 2017** in order to ensure a healthy environment as far as possible and to maintain or improve the air quality of the surrounding areas of Salt Lake and especially in and around of the stadium. For this purpose, the State Board selected a number

of schools situated within five km. radius of the Stadium. As requested by the State Board the students participated in an environmental oath-taking progamme during their Morning Prayer time at schools for the sake of environmental concern.

The following schools participated in the gesture:

1. Bidhannagar Municipal School
2. Bhartiya Vidyabhaban
3. Kendriya Vidyalaya
4. Haryana Vidyapith
5. Lake Town School
6. Laboni Vidyatan
7. Deshbandhu High School
8. Shyamaprasad High School
9. Surakanya School
10. Sukanya Home

Environmental oath-taking programme by the students of various schools & Govt. Homes during U-17 FIFA Worldcup Football Tournament-2017

E. Board's involvement at various Fairs, Melas etc. in 2017

Like earlier years, the State Board was associated with various Fairs, Melas etc. by installing stalls at fair ground, displaying banner on different environmental issues, publishing advertisements in the souvenir of the particular Mela organizer, providing financial assistance etc. as stated below:

Table- 12.4: Board's participation in Fairs/Melas

Name of the Fair/Mela	Venue	Time period
Madhyamgram Paribesh Mela-12th Environmental Awareness Fair- 2017	Madhyamgram, 24 Paraganas (North)	From 21 December, 2017 to 25 December, 2017
Naihati Utsav Welfare Samity	Bijoynagar, Naihati, 24 Paraganas (North)	24 December, 2017 to 31 December, 2017

F. Felicitation and Eco-tour for the successful students of the competitions, organized by the Hon'ble National Green Tribunal-Eastern Zone

The West Bengal Pollution Control Board invited entries from the students across the State for Essay and Poster painting competition in the context of the Regional Conference on Waste Disposal and Management, organized by the Hon'ble National Green Tribunal-Eastern Zone Bench, Kolkata at

Guwahati, Assam on 9-10 September, 2017. The entries were evaluated by the panel of judges nominated by the Board on 27 July, 2017 and 28 July, 2017 respectively. As per the judgement of the panel, five (05) entries were selected for both the essay and poster competitions.

In this context, the State Board organized a programme to felicitate those ten (10) successful students on **29 December, 2017** at the Auditorium of Paribesh Bhawan, Bidhannagar, Kolkata. Dr.KalyanRudra, Chairman, WBPCB congratulated all the successful students and awarded them memento, prize money and certificate on behalf of the State Board. Shri Subrata Ghosh, Chief Engineer, WBPCB, Shri Abhijit Bose, WBCS (Exe), Jt. Secretary to Govt. of West Bengal and Sr. Personnel Manager, WBPCB, Shri S.K. Khamrui, Finance & Accounts Manager, WBPCB and other Board officials were present in the programme.

After the felicitation programme an Eco-tour was arranged for the students at Swami Vivekananda State Police Academy and Barrackpore Police Training School, Gandhi Ghat, Barrackpore, 24 Paraganas (North). The students visited the Bio-gas plant, installed by the State Board at the academy. They were demonstrated about the method of energy generation by utilizing the kitchen waste at the plant on the basis of the concept of **waste to energy**.

The following students participated in the programme :

1. **Maitri Porel**, Deulpara B.N. Vidyaniketan, Vill. & P.O.-Deulpara, P.S.-Pursura, Dist-Hooghly, Pin-712414
2. **Supriya Ghosh**, Palashan M.M. High School, Vill.& P.O.-Palasan, Dis-Burdwan, Pin-713424
3. **Arnab Manna**, Horashankar Gorkilla Santamoyee High School (H.S.), P.O.-Harashankar, Dist.- Purba Medinipur.
4. **Aplab Chatterjee**, Birbhum Zilla School, Suri, Birbhum, Pin-731101.
5. **Sudipta Roy**, Krishnapur Rahamania High School, Vill& P.O.-Dingapur, Dist.-Paschim Medinipur, Pin-721242.
6. **Nandita Mukherjee**, 2/13 Chandidas Avenue, B-Zone, Durgapur 5, Dist.- Burdwan.
7. **Suchana Das**, Hemshila Model School, Durgapur, Pin-713214
8. **Surajit Panja**, 16/3 Akbar Road, A Zone, Durgapur 04, Dist.-Burdwan.
9. **Jeshani Bagal**, Durgapur Girls High School, Durgapur, Pin-713202
10. **Ankit Mondal**, Barlow Girls High School, P.O.-Mokdampur, Dist.-Malda, Pin-732103.

Successful students of essay & poster competition during their Eco-tour programme at Barrackpore Police Training academy

G. Eco-tour Programme for school students

The State Board conducted Eco-tour programme for the school students of different districts across the State. The main objective of the initiative was to create awareness about environmental protection among the students.

Table- 12.5: Detailed schedule of the Eco-tour Programme

Date	Eco-tour venue	Name of the participating school	No. of participants
05.01.2018	Alipore Zoo	Mousini Co-operative High School (H.S.), 24 Paraganas (South) dist.	50
10.01.2018	Science City	Palashan M.M. High School (H.S.), Bardhaman dist.	50
17.01.2018	Indian Botanical Garden, Shibpur, Howrah	Krishnapur Adarsha Vidyamandir (H.S.), Dum Dum Park, Kolkata-700055	60

H. Report on environmental campaign during Kolkata International Book Fair-2018

The Kolkata International Book fair- 2018 was held at Salt Lake Central Park, Bidhannagar, Kolkata from **30 January, 2018 to 11 February, 2018**. On this occasion, the West Bengal Pollution Control Board organized a massive environmental campaign programme daily from 1.00 p.m. to 3.00 p.m. involving students and teachers of different schools under National Green Corps (NGC) Programme during the whole period of the fair. The main objective of the campaign programme was to make the mela ground clean and green and make the visitors aware about harmful effects of usage of banned plastic carry bags as well as clean environment during the said days.

Ten students from each of the below mentioned schools participated in the campaign every day and cleaned the plastic wastes from the mela ground to create awareness among the people there.

The participating schools were :

1. Behala Girls' High School
2. Behala Blind School
3. Behala Arjo Vidyamandir
4. Sarsuna High School (H.S.)
5. Beliaghata Shanti Sangha Vidyatan for Boys' (H.S.)
6. Nabagram Moyna Pulin Behari High School
7. Bharti Shiksha Sadan
8. Behala Sarada School for Girls
9. Behala Banitirtha Girls High School
10. Bidya Bharati Girls High School
11. South Suburban School (Main)
12. Tiljala Banitirtha High School for Girls
13. Garden Reach Nut Behari Das Girls High School

I. Orientation workshop on Green School Rating

The West Bengal Pollution Control Board organized an 'Orientation Workshop on Green School Rating' for teachers, on **23 February, 2018** at 11:00 a.m. at the Auditorium of Paribesh Bhawan, Bidhannagar, Kolkata. The programme was the part of the 'Green School Programme', sanctioned by the Dept. of Environment, Govt. of West Bengal and coordinated by the Centre for Science and Environment (CSE), New Delhi.

The Centre for Science & Environment (CSE) is conducting Green Schools Programme for past few years. This is basically a kind of environmental education programme for the school students with an objective to make them more concerned about their surrounding environment and to inspire them to practically involve in various effective activities for the sake of better environment. The speciality of this programme is that it is not a typical theory or text book based education but it encourages the students to think in a broad spectrum, produce new ideas and implement those practically to get positive impact. It is also an environment management system that audits, through students, the consumption of natural resources within school campuses and helps schools become good environmental managers by deploying pragmatic solutions to reduce wastage of precious resources.

Dignitaries present in the meeting

Dr. Kalyan Rudra, Chairman, WBPCB welcomed all the teachers, delegates from CSE, New Delhi, other dignitaries, guests and Board officials. He briefly explained the outline of the programme and described the important role played by the West Bengal Pollution Control Board by implementing Rain Water Harvesting System and distribution of Solar Panel to a number of schools in some districts of West Bengal. This initiative of the State Board has helped those schools to move a path forward towards becoming a GREEN SCHOOL.

Ms.Aditi Sharma and Ms.Nirma Bora from CSE, New Delhi delivered interesting speeches and delivered power point presentation and beautifully explained the topic to the participants. After that, they held an interactive session, in which the participating teachers explained their views and experience.

About 32 teachers of various schools in Kolkata and other districts, like, 24 Paraganas (North), 24 Paraganas (South), Burdwan, Hooghly, Howrah, Purba Medinipore etc. participated in the programme.

12.4: Other initiatives for environmental awareness taken during 2017-18

A. Meeting with the representatives of different High-rise and Housing Committees and Police Authorities

Like previous year, this year also the West Bengal Pollution Control Board organized a meeting on **14 October, 2017** at the Auditorium of Paribesh Bhawan, Kolkata with the representatives of various Housing Committees in and around Kolkata as part of the environmental awareness campaign initiatives regarding restrictions on bursting banned fire crackers during Kali Puja and Diwali, 2017. The meeting was presided over by Dr. Kalyan Rudra, Chairman, WBPCB. Shri Biswajit Ghosh, Dy. Commissioner (Reserved Force), Kolkata Police Authority, Shri Dhrubojyoti Dey, Dy. Commissioner, Barrackpore Police Commissionerate, other senior police officials from Kolkata Police Authority, Howrah Commissionerate, Shri Rohit Tiwari, Officer-on-special duty, WBPCB, Shri Subrata Ghosh, Chief Engineer, WBPCB, Dr. T.K. Gupta, Chief Engineer, WBPCB and Shri Abhijit Bose, Sr. Personnel Manager & Jt. Secretary to the Govt. of West Bengal, were present in the meeting.

Shri Subrata Ghosh, Chief Engineer, WBPCB welcomed all the participants and inaugurated the meeting.

The Chairman, WBPCB delivered keynote address to the participants. In the speech, he described about the noise level and air quality throughout the year. He also talked about various environmental

awareness programmes including campaigning against noise pollution and other environmental issues organized by the State Board. In this connection, he informed about the recent campaigning about 'No Horn at silence zone areas' at a number of prominent Bus Stops in Kolkata, oath-taking programme at various schools to protect the environment and various necessary initiatives to maintain the air quality of Kolkata during the upcoming under- 17 FIFA Football World Cup tournament. Further, Dr.Rudra emphasized on the necessity of awareness among the students as well as general people to combat environmental pollution.

Dy. Commissioner (Reserved Force), Kolkata Police and Dy. Commissioner, Barrackpore Police Commissionerate addressed the audience and shared some important information and steps taken by the Police authorities to combat noise pollution during Kali Puja/ Diwali stated below :

- Organizing 5 nos. of Bazi Bazars at different places
- Various restrictions imposed on bursting of fire crackers, like, limiting time for bursting of fire crackers between 6:00 pm to 10:00 pm in an open area.
- Banning of bursting of crackers on roof top of a building or on road.
- Raids and seizure of banned fire crackers.
- Banning use of black DG set and DJ.
- Essentiality of usage of sound limiter with loudspeaker, as per the order issued by Hon'ble NGT.
- Campaigning through mobile van, distributing leaflets, posters etc.

This session was followed by the interaction session with the participating Housing Committee representatives.

The Meeting ended with a positive note. Dr. Rudra thanked all the participants present in the meeting.

Chapter - 13

NEW INITIATIVES OF THE STATE BOARD

The State Board has undertaken various new developmental initiatives during 2017-2018. The details of such significant activities have been elaborated below :

1. On the basis of concurrence of the Dept. of Environment, Govt. of West Bengal, the WBPCB has adopted the "Ease of Doing Business" for providing efficient, convenient, transparent and integrated electronic services to the applicants in line with the policy of the Department of Industrial Policy & Promotion, Ministry of Commerce & Industries, Govt. of India. Under the "Ease of Doing Business" initiative, the procedure of compliance inspection has been formulated and official circular has been issued vide Circular No. 2845-1M-37/2016 Dated 26th October, 2017.

2. The WBPCB has facilitated the installation of 110 nos. 5KWp roof top Solar Power Voltaic (SPV) power plants in different schools and institutions during the years as a part of promotion of non-conventional energy.

3. The WBPCB has facilitated reclamation and rejuvenation of 39 ponds in the recent times in several areas of Kolkata and South 24 Parganas district.

4. The WBPCB has provided financial assistance for setting up 32 nos. rain water harvesting structure (RWHS) at dry districts of West Bengal i.e Bankura, Birbhum, Purulia, Jhargram and Paschim Medinipore through Panchayet and Rural Development Department, GoWB.

5. The Board has facilitated for setting up of a Bio-Gas plant at Swami Vivekanada Police Training Academy, at Latbagan, Barrackpore in this year.

Chapter - 14

EXTERNALLY AIDED PROJECTS OF THE STATE BOARD

14.1 Introduction

The collection and disposal of municipal solid waste is one of the major concerns of city life. With the growing urbanization as a result of economic growth and industrialization, the problems of managing solid waste are becoming acute and call for immediate and concerted action. Dhapa is the only dumping ground for the huge amount of solid wastes generated in Kolkata. (per day solid waste). A recent survey by a team of Kolkata Municipal Corporation and experts revealed that Dhapa dumping ground can no longer take the burden of city's 3,500 MT of garbage produced every day which is transported to the dumping ground through 500 trucks and recently introduced garbage compactor machines. Overall the adverse environmental impact of the current dumpsite on the surrounding areas is investigated and reported in the Sample Analysis and Assessment of Site Pollution Levels report and summarized in the Environmental and Social Assessment report. The identified environmental impacts of the dumpsite in the current situation are mainly related to leachate and upper groundwater contamination, surface water and soil contamination (also impacts on surface water and soil from activities at neighbouring Bone Processing Factory) and aesthetics impacts due to the presence of closed dumpsite.

14.2 World Bank Funded Project for Remediation/Closure and Containment of Dhapa Municipal Dumpsite, Kolkata

The West Bengal Pollution Control Board (WBPCB) has taken up the project for remediation of closed municipal solid wastes dumpsite at Dhapa, Kolkata with aid from the World Bank. The project was sanctioned by the MoEF&CC and Govt. of West Bengal. 15% of project cost will be borne by the State Government.

After necessary formalities, the WBPCB engaged M/s COWI A/S, Denmark, for consultancy services for Assessment of Contamination, Design of Remediation Plan, Bid preparation, supervision of Remediation work of Dhapa Closed Dumpsite on 06.03.2012.

Assessment work completed in the month of April 2013 and remediation plan was accepted on 25.06.2013 by Technical Evaluation Panel of the MoEF&CC.

Remediation work could not be started even after two times of bidding process as no bidder was found suitable to match the qualifying Criteria.

In the third bidding process Evaluation Committee of the WBPCB recommended the lowest quoted bidder for acceptance. LOA was issued in favour of M/s Saurastra Enviro Projects Pvt. Ltd. Gujarat, with project cost of Rs. 47,91,76,132.95 for execution of works for Remediation/ Closure and Containment of Dhapa Municipal Dumpsite, Kolkata.

Work is in progress andthe timeline for completion of the work is 30.09.2018.

Leachate Treatment Plant for treatment of Leachate generated from MSW Dumpsite

LOA for Supply, Construction, Erection, Testing, Commissioning, and O&M during Defect Liability period of Leachate Treatment Plant was issued in favour of M/s Trans Organics (I) Private Ltd. for an amount of Rs. 2,99,00,000.00.

Work is in progress and timeline for completion of work is 30.09.2018.

Photographs of the on-going Remediation work

Laying of HPPE Cover

View of MSW site

Profiling of MSW

Laying of HDPE Cover

Boring of Gas well

Gas drainage Layer

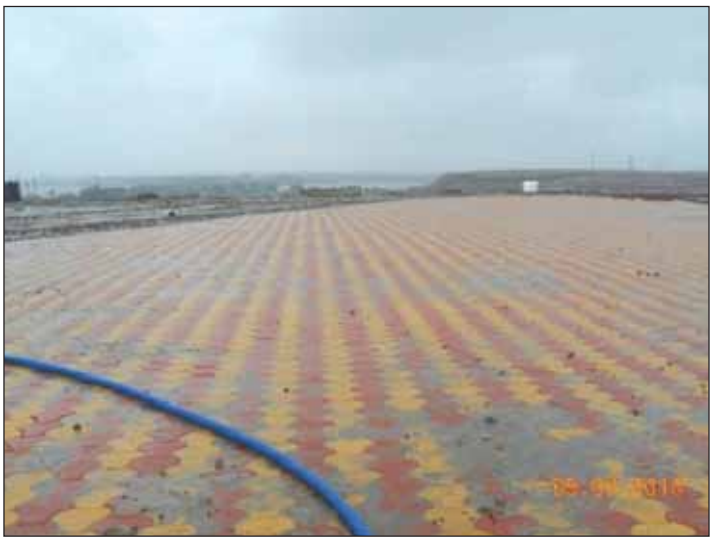
Geotextile Cover

HDPE cover over berm

View of levelled surface

Laying of soil

Grass carpet over dumpsite



Paver block laid on top of the site

Aerial view of site

Chapter - 15

FINANCIAL SUMMARY OF THE WEST BENGAL POLLUTION CONTROL BOARD

15.1 Financial overview (Unaudited)

The financial summary for the financial year 2017-2018 reveals that during the said period, the total receipts of the State Board were Rs.9165.40 Lakhs and total expenditure were Rs.5876.01 Lakhs only. The State Board earned a major portion of its total revenue from different industrial units of West Bengal on account of Consent Administration, Hazardous Authorization fees, Bio-Medical Authorization fees, Reimbursement of Water Cess from Govt. of India and Grants from State and Central Government. The State Board incurred major portion of its total expenditure towards Pay & Allowances including Superannuation benefits and Other Contingency expenditure towards pollution control abatement measure.

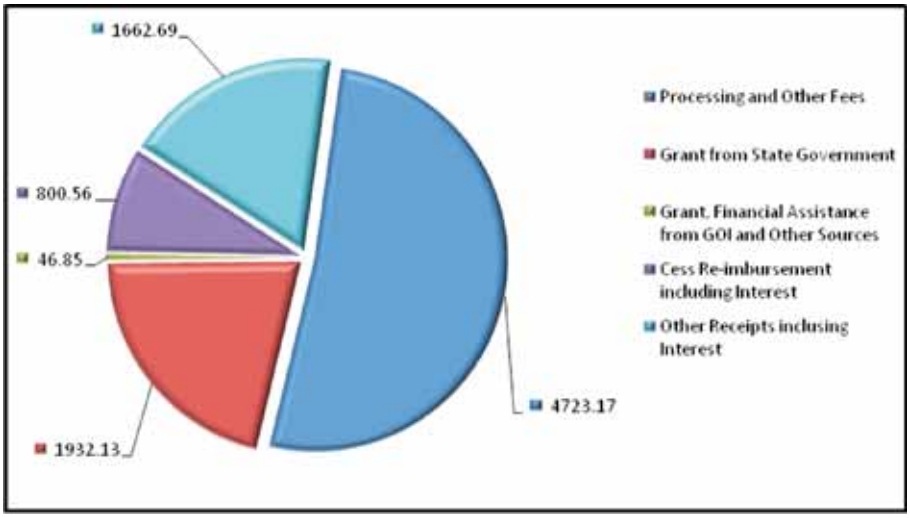
The financial summary for the financial year 2017-2018 is placed in table 15.1 below:-

Table 15.1: Financial Summary for the financial year 2017-2018 (Unaudited)

Sl. No.	Head of Account	Amount (Rs. In Lakh)
1	**Receipts Under Non Plan Head :-**	
	i) Processing Fees from NOC, Consent to Operate, Hazardous / Biomedical Waste Authorization fees, Import Clearance fees, effluent / emission Sample analysis charges etc.	4723.17
	ii) Grants from State Government (towards salary grants)	359.82
	iii) Cess Re-imbursement for office establishment & Operation	400.28
	iv) Other receipts including interest	1662.69
	Receipts Under Plan Head :-	
	v) Grants, Financial Assistance from GoI and Other Sources	46.85
	vi) Grants from State Govt. under Plan head	1572.31
	vii) Cess Re-imbursement for pollution control abatement measure	400.28
2	**Total Receipts (i to vii)**	**9165.40**
3	**Expenditure under Non-Plan Head :-**	
	i) Pay & Allowance including Superannuation Benefits	1682.09
	ii) Other Contingencies (including office rent and other Administrative Exp.)	1372.26
	Expenditure under Plan Head :-	
	iii) Expenditure on Grants, Subsidies, Cess etc.	2703.46
	iv) Other Expenditure	118.20
4	**Total Expenditure incurred from the fund receipts during the year (i to iv)**	**5876.01**
5	Excess of Receipts over Expenditure (2-4)	**3289.39**

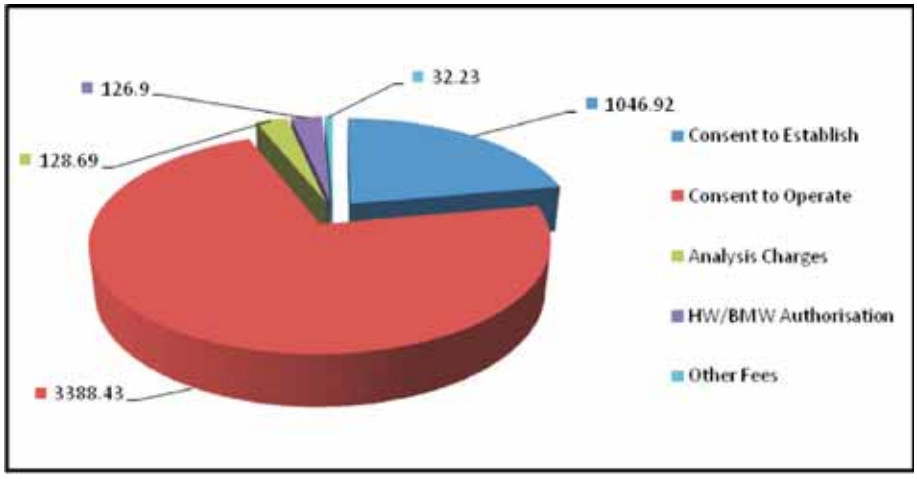
During the Financial year 2017-2018, total receipts of the State Board were Rs.9165.40 Lakhs. The total receipts of the State Board have been shown under five separate heads i.e. Receipts of Processing Fees was Rs.4723.17 Lakhs, Receipts of Grants from State Govt. was Rs.1932.13 Lakhs, Receipts of Grants from GoI and other sources was Rs. 46.85, reimbursement of Water Cess (including interest) was Rs.800.56 Lakhs and from other receipts was Rs.1662.69 lakhs only as shown Fig. 15.1.

Fig. 15.1: Receipts Under Different Heads during F.Y. 2017-2018



Processing fees collected from Industrial/Non Industrial Units of West Bengal under Consent Administration, Hazardous Authorization & Biomedical Waste Authorization, Analysis Charges, and Import Clearance for Hazardous Chemical during the financial year was Rs.4723.17 lakhs (Fig. 15.2).

Fig. 15.2 Sub-Component wise break up of processing fees during 2017-2018



In addition to that Water Cess is also a major component to contribute to the receipts of the Board. The Water (Prevention and Control of Pollution) Cess Act, 1977 provide for the levy and collection of a Cess on water consumed by Persons carrying on certain industries and by local authorities, with a view to augment the resources of the State Board. The assessed amount so collected is first transferred to the consolidated fund of Govt. of India, thereafter; Govt. of India reimbursed up to 80% of the amount so transferred.

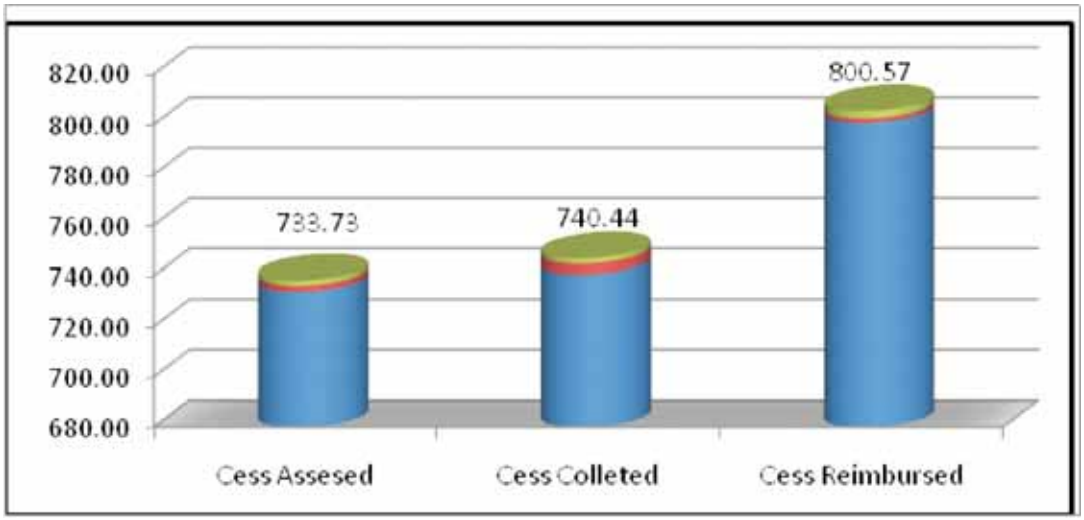
Details of Water Cess Assessed, Collection and Reimbursement are given below:-

Table- 15.2: Details of Water Cess Assessed, Collection and Reimbursement

Sl. No.	Head of Account	Amount (Rs. In Lakh)
11	**Details of Water Cess :**	
	a) Water Cess Assessment	733.73
	b) Water Cess Collection	740.44
	c) Water Cess Reimbursement	800.57

In terms of the order of the Ministry of Environment, Forest & Climate Change vide No.Q-17015/01/2010-CPW dated 20th December, 2010, 50% of the reimbursement amount was utilized for operation and maintenance of the establishment and the remaining part of the reimbursement amount was utilized for different programs on pollution control abatement measures. The Water Cess Assessment, Collection and Reimbursement from Govt. of India during the financial year are shown in Fig. 15.3 below:

Fig. 15.3 Details of Water Cess



The Taxation Laws (Amendment) Act, 2017 has repealed the Water (Prevention & Control of Pollution) Cess Act, 1977 and subsumed with the Goods and Service Tax (G.S.T.) implemented w.e.f. 1st July, 2017.

Total Expenditure of the Board during this financial year was Rs.5876.01 lakhs. The total expenditure of the Board has been shown in four major heads i.e. the expenditure of different heads was:-

i. Expenditure on Pay & Allowances including Superannuation benefit during the financial year was Rs.1682.09 lakhs and;

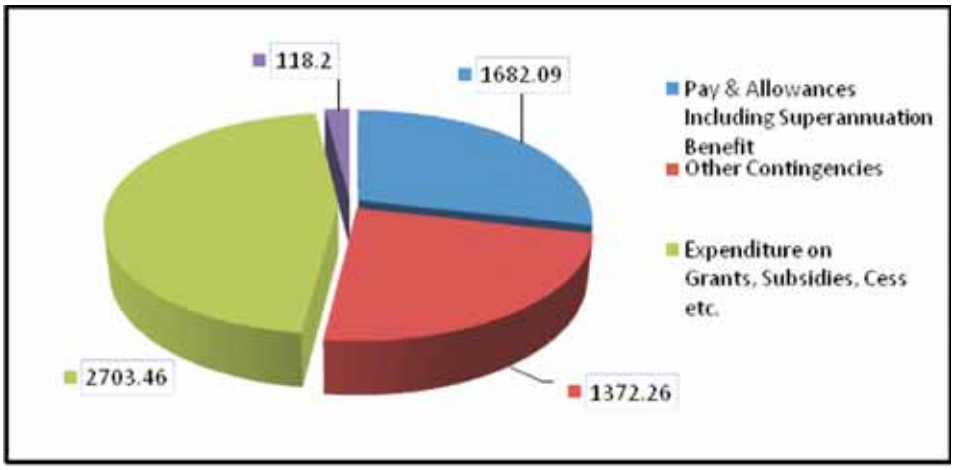
ii. Expenditure on other contingencies was Rs.1372.26 lakhs

iii. Expenditure on Grants, Subsidies, Cess etc. was Rs.2703.46 lakhs

iv. Other Expenditure was Rs.118.20 lakhs

Details of Expenditure shown in Fig. 15.4.

Fig. 15.4 Head wise and Component wise expenditure



15.2 Financial position of the World Bank funded CBIPM Project (Unaudited)

In addition to the above, the State Board is implementing World Bank funded Capacity Building for Industrial Pollution Management Project for remediation of one municipal Waste dump site located at Dhapa, Kolkata vide Project Agreement against Loan No.7924-IN and Credit No.4755-IN made on 22 July, 2010 between International Bank for Reconstruction and Development (Bank), International Development Association and the State of West Bengal. The period of the project was for 5 (five) years and extended further for 2 (two) years and 6(six) months. The terminal date of effect of the project is upto 31 March, 2018.

There are three major components in the project namely;

1. Strengthening of Environmental Institution;
2. Investment in priority Remediation;
3. Project Management;

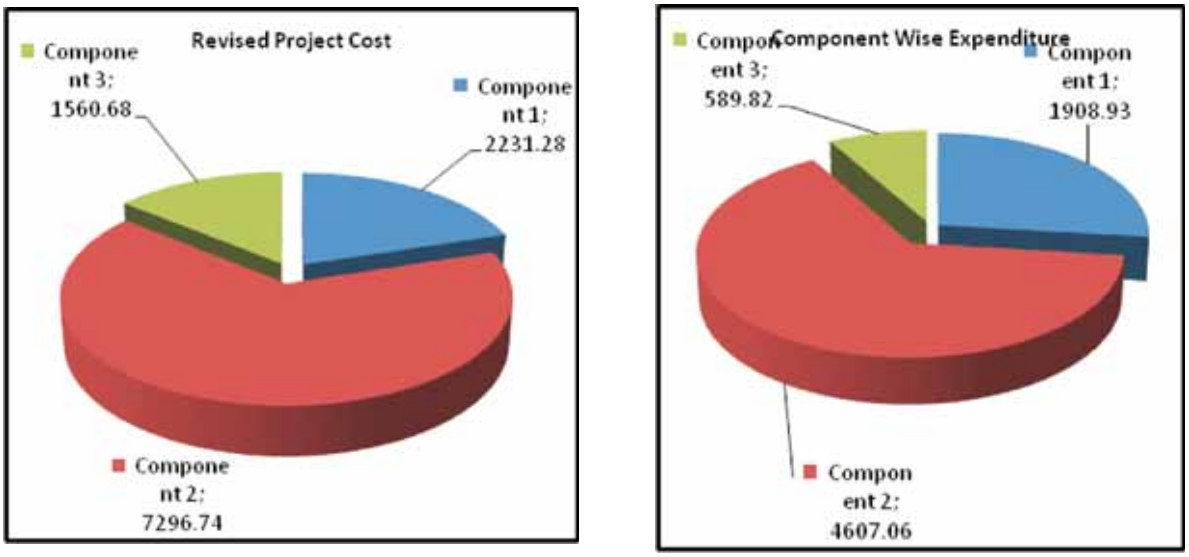
Component wise Project Cost as per the Project Appraisal Document (PAD). Received Project Cost and Expenditure till 2017-18 are shown in table 15.3 below :

Table 15.3: Component wise Project cost as per PAD, revised Project Cost and Expenditure till 31.03.2018

Sl. No.	Particulars	Project cost as per PAD		Revised Project Cost		Expenses till 31.03.2018 (In Lakh)
		In US $ Million	In INR Lakhs	In US $ Million	In INR Lakhs	
1.	Strengthening of Environmental Institution: Building Capacity for addressing pollution remediation	8.61	3870.00	3.43	2231.28	1908.93
2.	Investment in priority remediation and Environmental Improvements: Rehabilitation of orphan hazardous waste sites and municipal dump sites	18.05	8127.00	11.23	7296.74	4607.06
3.	Project Management	2.40	1080.00	2.40	1560.68	589.82
	TOTAL	**29.06**	**13077.00**	**17.06**	**11088.70**	**7105.81**

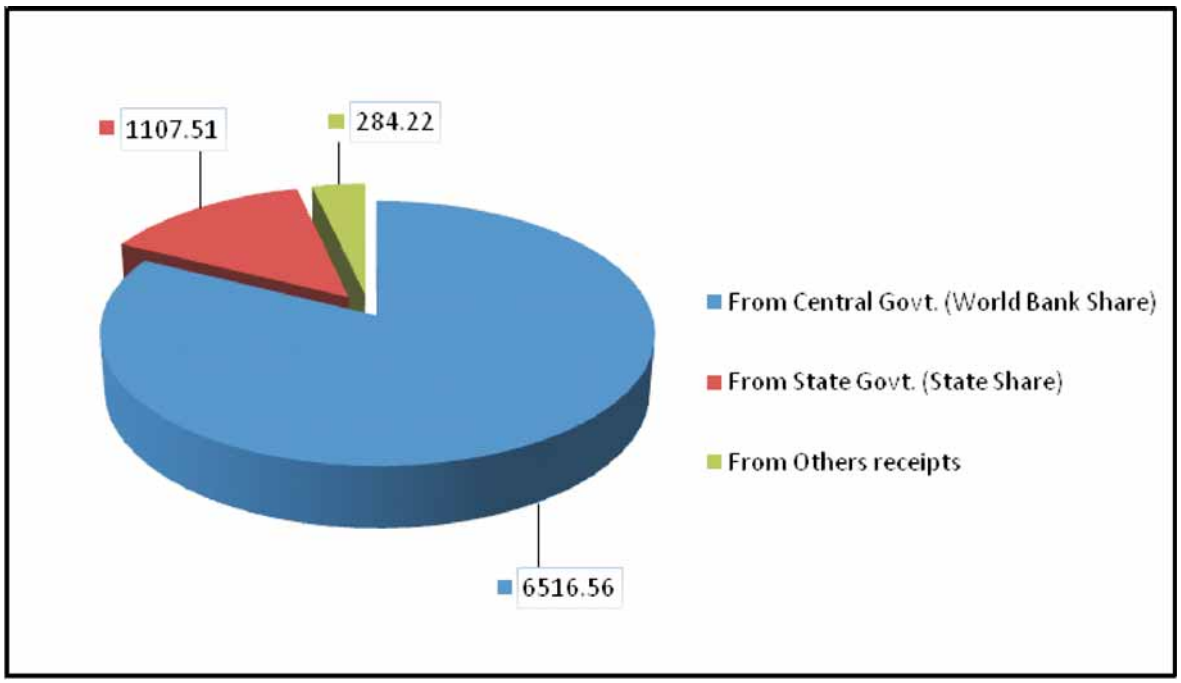
Component wise revised project cost and expenditure for the financial year 2017-2018 is shown below in Fig. 15.5.

Fig. 15.5: Component wise revised project cost and expenditure



Till the project period total fund received was Rs.7908.29 lakhs which includes fund received from the Central Government (World Bank Share) which was Rs.6516.56 lakhs and from the state Government which is Rs.1107.51 lakhs in the ratio 85:15 and other receipts is Rs.284.22 lakhs as shown in Fig. 15.6.

Fig. 15.6: Detail breakup of receipts



ANNEXURES

Annexure-I

Industry Category List of the West Bengal Pollution Control Board

(This version is available in www.wbpcb.gov.in)

LIST-A

RED CATEGORY

Sl. No.	Activity
1	Isolated storage of hazardous chemicals (as per schedule of manufacturing, storage of hazardous chemicals rules, 1989 as amended)
2	Automobile manufacturing (integrated facilities) and heavy engineering including ship building (with investment on plant and machinery > 10 crores)
3	Industries engaged in recycling / reprocessing / recovery / reuse of Hazardous Waste under schedule iv of HW (M, H & TBM) rules, 2008 - Items namely - Spent cleared metal catalyst containing copper, Spent cleared metal catalyst containing zinc
4	Manufacturing of lubricating oils, grease and petroleum based products
5	DG Set of capacity > 5 MVA
6	Industrial carbon including electrodes and graphite blocks, activated carbon, carbon black
7	Lead acid battery manufacturing (excluding assembling and charging of lead - acid battery in micro scale)
8	Phosphate rock processing plant (including grinding)
9	Power generation plant (including Waste to Energy plants > 15 MW capacity which attract provisions of EIA Notification, 2006 as amended) [except Wind and Solar renewable power plants of all capacities and Mini Hydel power plant of capacity < 25 MW] (Other than Thermal Power Plants)
10	Industries engaged in recycling / reprocessing / recovery / reuse of Hazardous Waste under schedule-IV of HW (M, H& TBM) Rules, 2008 - Items namely - Spent catalyst containing nickel, cadmium, Zinc, copper, arsenic, vanadium and cobalt
11	Processes involving chlorinated hydrocarbons [including rigid PVC pipe manufacturing]
12	Sugar (excluding Khandsari)
13	Fibre glass production and processing (excluding moulding) [including glass wool and rock wool production, manufacturing of mica based electrical insulating products using thinners/ solvents]
14	Fire crackers manufacturing and bulk storage facilities
15	Industries engaged in recycling / reprocessing / recovery / reuse of Hazardous Waste under schedule iv of HW (M, H & TBM) rules, 2008 - Items namely - Dismantlers Recycling Plants — Components of waste electrical and electronic assembles comprising accumulators and other batteries included on list A, mercury-switches, activated glass cullets from cathode-ray tubes and other activated glass and PCB-capacitors, or any other component contaminated with Schedule 2 constituents (e.g. cadmium, mercury, lead, polychlorinated biphenyl) to an extent that they exhibit hazard characteristics indicated in part C of this Schedule.

Sl. No.	Activity
16	Milk processes and dairy products (integrated project)
17	Phosphorous and its compounds
18	Pulp & Paper (waste paper based without bleaching process to manufacture Kraft paper)
19	Coke making, liquefaction, coal tar distillation or fuel gas making
20	Manufacturing of explosives, detonators, fuses including management and handling activities [including manufacturing of safety match]
21	Manufacturing of paints varnishes, pigments and intermediate (excluding blending / mixing)
22	Organic Chemicals manufacturing [including phenolic products, rubber chemicals]
23	Airports and Commercial Air Strips (waste water generation >100 KLD.)
24	Asbestos and asbestos based industries
25	Basic chemicals and electro chemicals and its derivatives including manufacturing of acid
26	Cement
27	Chlorates, per-chlorates & peroxides
28	Chlorine, fluorine, bromine, iodine and their compounds
29	Dyes and Dye–Intermediates
30	Health-care Establishment (as defined in BMW Rules) for waste water generation >100 KLD or with incinerator or both
31	Hotels (3 star and above) and hotels having e”100 rooms or waste-water generation e”100 KLD
32	Industries engaged in recycling / reprocessing / recovery / reuse of Hazardous Waste under schedule iv of HW (M, H & TBM) rules, 2008 - Items namely - Lead acid battery plates and other lead scrap / ashes / residues not covered under Batteries (Management and Handling) Rules, 2001. [* Battery scrap, namely: Lead battery plates covered by ISRI, Code word “Rails” Battery lugs covered by ISRI, Code word “Rakes”. Scrap drained / dry while intact, lead batteries covered by ISRI, Code word “rains”
33	Industries engaged in recycling / reprocessing / recovery / reuse of Hazardous Waste under schedule iv of HW (M, H & TBM) rules, 2008 - Items namely - Integrated Recycling Plants — Components of waste electrical and electronic assembles comprising accumulators and other batteries included on list A, mercury - switches, activated glass cullets from cathode -ray tubes and other activated glass and PCB -capacitors, or any other component contaminated with Schedule 2 constituents (e.g. cadmium, mercury, lead, polychlorinated biphenyl) to an extent that they exhibit hazard characteristics indicated in part C of this Schedule
34	Manufacturing of glue and gelatin [excluding glue from starch and including manufacturing of synthetic adhesives, shellac processing, rubber based adhesives, industrial adhesives using paraffin wax and resin powder (for polishing leather goods, shoes etc.)]
35	Mining and ore beneficiation
36	Nuclear power plant
37	Pesticides (technical) (excluding formulation)
38	Photographic film and its chemicals
39	Railway locomotive work shop / Integrated road transport workshop / service centers having waste-water generation e”100 KLD

Sl. No.	Activity
40	Yarn / Textile processing involving any effluent / emission generating processes including bleaching, dyeing, printing and colouring [including composite woolen mill, dewaxing of raw wool and raw silk, manufacturing of woolen blanket from woolen fibre]
41	Chlor Alkali
42	Ship Breaking Industries
43	Oil and gas extraction including CBM (offshore & on-shore extraction through drilling wells)
44	Industry or process involving metal surface treatment or process such as pickling / electroplating / paint stripping / heat treatment using cyanide bath / phosphating or finishing and anodizing / enamellings / galvanizing
45	Tanneries
46	Ports and harbour, jetties and dredging operations
47	Synthetic fibers including rayon, tyre cord, polyester filament yarn [including natural fibre, raw wool, raw silk, cellophane paper, cellulose nitrate]
48	Thermal Power Plants
49	Slaughter house (as per notification S.O.270 (E) dated 26.03.2001) and meat processing industries, bone mill, processing of animal horn, hoofs and other body parts
50	Aluminium Smelter
51	Copper Smelter
52	Fertilizer (basic) (excluding formulation / granulation / blending only)
53	Iron & Steel (involving processing from ore / integrated steel plants) and or Sponge Iron units
54	Pulp & Paper (waste paper based units with bleaching process to manufacture writing & printing paper)
55	Zinc Smelter
56	Oil Refinery (Mineral Oil or Petro Refineries)
57	Petrochemicals Manufacturing (including processing of Emulsions of oil and water)
58	Pharmaceuticals (Basic Drugs) and related R & D
59	Pulp & Paper (Large-Agro & wood), Small Pulp & Paper (agro based-wheat straw / rice husk) [including straw board, grey board, duplex board and de-inking, bleaching activity]
60	Distillery (molasses / grain / yeast based) including Fermentation industry with waste water generation e"100 KLD (including blending, bottling of alcoholic products with waste water generation e"100 KLD)
61	Ceramic, Refractories having coal consumption e"12 MT / day
62	Common treatment and disposal facilities (CETP, TSDF, E-waste recycling, CBMWTF, effluent conveyance project, incinerators, solvent / acid recovery plant, MSW sanitary landfill sites, STP)
63	Ferrous and Non-ferrous metal extraction >1 MT/hr involving different furnaces through melting, refining, reprocessing, casting and alloy making and including metal extraction from Lead [including gold and silver smithy using greater than 1.0 litre sulfuric acid / nitric acid per month, forging with coal fired boilers and smelting, lead, zinc and other metals]

Sl. No.	Activity
64	Industrial estates / parks / complexes / areas / export processing zones / SEZs / biotech parks (For Red Category member industries)
65	Industry or process involving foundry operations(foundries having capacity e"5 MT/hr and requiring coal / coke consumption e"500 kg/hr)
66	Manufacturing of glass (bulb, lamp, optical lens etc.) using coal / wood fired kiln including manufacturing of lead glass
67	Parboiled rice mills (Waste Water generation e"100 KLD or fuel e"12 MTD or both)
68	Synthetic detergents and soaps (excluding formulation) waste water generation e"100 KLD
69	Vegetable oils including solvent extraction and refinery / hydrogenated oils having waste water generation e"100 KLD.
70	Non-alcoholic beverage (soft drink) and bottling of non-alcoholic products with waste water generation e"100 KLD
71	Building and construction projects >20,000 sq.mtr. built up area (waste water generation e"100 KLD)
72	Cleaning / washing of old PVC and MS drums using mineral turpentine oil, kerosene oil and water
73	Steel and steel products using various furnaces like blast furnaces / open hearth furnace / induction furnace / arc furnace / submerged arc furnace / basic oxygen furnace [industries attracting EIA (Notification) 2006 as amended]
74	Any industry / industrial activity (irrespective of category), having solid fuel fired boiler / Thermic Fluid Heater (TFH) irrespective of capacity or oil / gas fired boiler >5 TPH

Note:-

a) Any industry / industrial activity which is not covered in category lists, having coal fired boiler with steam generation capacity >5 TPH, will be considered under Red category subject to approval by the categorisation committee of the Board.

b) Any industry / industrial activity using solid fuel (coal / wood / husk etc.) fired boiler / TFH irrespective of capacity and oil / gas fired boiler >5 TPH will be considered under Red category.

c) Capacity of boilers / furnace / kiln / oven / DG set etc. in any unit refers to the cumulative capacity of all such respective items.

d) For activities attracting EIA notification, Environmental Clearance is mandatory followed by 'Consent to Establish' and 'Consent to Operate' of the Board.

e) Detailed information for selection of specific nature of activity under industry category is available in the EMIS of the Board for facilitating project proponents.

ORANGE CATEGORY

Sl. No.	Activity
1	Dismantling of rolling stocks (wagons / coaches)
2	Bakery / confectionery / Sweet production units with capacity > 1 TPD [with oven / furnaces], units with solid fuel fired oven of any capacity
3	Chanachur and laddoo from puffed and beaten rice (muri and chira) using husk coal / wood fired oven
4	Coated electrode manufacturing
5	Compact disc, computer floppy and cassette manufacturing / Reel manufacturing
6	Flakes from rejected PET bottles
7	Food and food processing including fruits and vegetable processing
8	Jute processing without dyeing
9	Manufacturing of silica gel
10	Manufacturing of tooth powder, toothpaste, talcum powder and other cosmetic items
11	Printing or etching of glass sheet using hydrofluoric acid
12	Silk screen printing, saree printing by wooden blocks
13	Synthetic detergents and soaps (excluding formulation) having waste water generation < 100 KLD
14	Thermometer manufacturing
15	Cotton spinning and weaving (medium and large scale)
16	Almirah, grill manufacturing (dry mechanical process and with painting)
17	Aluminium and copper extraction from scrap using oil fired furnace (dry process only)
18	Railway locomotive workshops / integrated road transport workshop / Automobile servicing, repairing and painting having waste water generation < 100 KLD) (excluding only fuel dispensing)
19	Ayurvedic and homeopathic medicine [with boiler]
20	Brickfields (excluding fly ash brick manufacturing using lime process)
21	Building and construction projects > 20,000 sq.mtr. built up area (waste water generation < 100 KLD)
22	Ceramic, Refractories (coal consumption < 12 MT / day)
23	Coal washeries
24	Dairy and dairy products (small scale)
25	DG set of capacity > 1 MVA but < 5 MVA
26	Dry coal processing / mineral processing, industries involving ore sintering, pelletization, grinding, pulverization

Sl. No.	Activity
27	Fermentation industry having waste water generation < 100 KLD [including manufacture of yeast, beer, distillation of alcohol (Extra Neutral Alcohol)]
28	Ferrous and non-ferrous metal extraction (d"1 MT / hour production and excluding metal extraction from Lead) involving different furnaces through melting, refining, reprocessing, casting and alloy making
29	Fertiliser (granulation / formulation / blending only)
30	Fish feed, poultry feed and cattle feed
31	Fish processing and packing [excluding chilling of fish]
32	Forging of ferrous and non-ferrous metal (using oil or gas fired furnaces)
33	Formulation / pelletization of camphor tablets, naphthalene balls from camphor / naphthalene powders [including pesticide formulation]
34	Glass, ceramic, earthen potteries and tile manufacturing using oil or gas fired kiln, coating on glasses using cerium fluoride, magnesium fluoride etc. [including cement products like pipe, pillar, concrete sleeper using oil fired boiler]
35	Gravure printing, digital printing on flex, vinyl
36	Heat treatment using oil fired furnace (excluding cyaniding)
37	Hot mix plants
38	Hotels (< 3 star) or hotels having > 20 rooms and < 100 rooms having waste-water generation < 100 KLD and > 10 KLD, and / or having boiler / heater / oven etc. [including restaurants with capital investment on land, building, plant and machinery > 30 lac]
39	Ice cream
40	Industries engaged in recycling / reprocessing / recovery / reuse of Hazardous Waste under schedule IV of Hazardous Wastes (M, H & TBM) Rules, 2008 and its amendments : items namely Paint and ink Sludge / residues
41	Industries engaged in recycling / reprocessing / recovery / reuse of Hazardous Waste under schedule IV of Hazardous Wastes (M,H & TBM) Rules, 2008 and its amendments : Items namely Brass Dross, Copper Dross, Copper Oxide Mill Scale, Copper Reverts, Cake & Residues, Waste Copper and copper alloys in dispersible form, Slags from copper processing for further processing or refining, Insulated Copper Wire, Scrap / copper with PVC sheathing including ISRI-code material namely "Druid", Jelly filled Copper cables, Zinc Dross-Hot dip Galvanizers SLAB, Zinc Dross-Bottom Dross, Zinc ash / Skimming arising from galvanizing and die casting operations, Zinc ash / Skimming / other zinc bearing wastes arising from smelting and refining, Zinc ash and residues including zinc alloy residues in dispersible form
42	Industry or process involving foundry operations (foundries having capacity < 5 MT/hr requiring coal / coke consumption < 500 kg/hr)
43	Lime manufacturing (using lime kiln)
44	Liquid floor cleaner, black phenyl, liquid soap, glycerol monostearate manufacturing
45	Manufacturing of glass (excluding solid fuel fired kiln and excluding lead glass)
46	Manufacturing of iodized salt from crude / raw salt
47	Manufacture of mirror from sheet glass
48	Manufacturing of mosquito repellent coil

Sl. No.	Activity
49	Manufacturing of starch / sago
50	Mechanized laundry using oil fired boiler
51	Modular wooden furniture from particle board, MDF, sawn timber etc., ceiling tiles / partition board from saw dust, wood chips etc. and other agricultural waste using synthetic adhesive resin, wooden box making (with boiler)
52	New highway construction projects
53	Non-alcoholic beverage (soft drink) and bottling of non-alcoholic products with waste water generation < 100 KLD
54	Paint blending and mixing (ball mill) including construction chemicals manufacturing by mixing
55	Paints and varnishes (mixing and blending)
56	Plyboard manufacturing (including veneer and laminate) with oil fired boiler / thermic fluid heater (without resin plant)
57	Potable alcohol (IMFL) by blending, bottling of alcoholic products (Waste water generation < 100 KLD)
58	Printing ink manufacturing
59	Printing press
60	Reprocessing of waste plastic (including PVC)
61	Rolling mill (oil or coal fired)
62	Spray painting, paint baking, paint stripping
63	Steel and steel products using various furnaces like blast furnaces / open hearth furnace / induction furnace / arc furnace / submerged arc furnace / basic oxygen furnace [not attracting EIA (Notification) 2006 as amended]
64	Stone crushers
65	Surgical and medical products involving prophylactics and latex
66	Teflon based products
67	Thermocol manufacturing (with boiler)
68	Tobacco products including cigarettes and tobacco / opium processing
69	Transformer repairing / manufacturing (dry processing only)
70	Tyres and tubes vulcanization / hot retreading
71	Vegetable oils including solvent extraction and refinery / hydrogenated oils having waste water generation < 100 KLD [including manufacturing of citronella oil (herbal aromatic chemical), bio-diesel from vegetable oil by trans-esterification process, jute batching oil and oil for sizing in paper industries from waste vegetable oil]
72	Wire drawing and wire netting [including bailing straps, wire drawing by cold process only]
73	Dry cell battery (excluding manufacturing of electrodes) and assembling and charging of acid lead battery in micro scale
74	Pharmaceutical formulation and related R&D

Sl. No.	Activity
75	Synthetic resins
76	Synthetic rubber excluding moulding[including reclamation of rubber, manufacture of rubber solution containing mineral naphtha and rubber wastes]
77	Cashew nut processing
78	Coffee seed processing
79	Parboiled rice mills (Waste Water < 100 KLD and fuel < 12MTD)
80	Foam manufacturing
81	Industries engaged in recycling / reprocessing / recovery / reuse of Hazardous Waste under schedule IV of Hazardous Wastes (M,H & TBM) Rules, 2008 and its amendments : Used Oil – As per specifications prescribed from time to time
82	Industries engaged in recycling / reprocessing / recovery / reuse of Hazardous Waste under schedule IV of Hazardous Wastes (M,H & TBM) Rules, 2008 and its amendments : Waste Oil – As per specifications prescribed from time to time
83	Producer gas plant using conventional up-drift coal gasification (linked to rolling mills, glass and ceramic industry, refractories for dedicated fuel supply)
84	Airports and commercial air strips (waste water generation < 100 KLD)
85	Tea processing with boiler
86	CETP and effluent conveyance project, (only Orange category member industries)
87	Health care establishment (as defined in BMW Rules) having waste water generation ≤100 KLD and without incinerator
88	Industrial estates / parks / complexes / areas / export processing zones / SEZs / biotech parks / leather complex (only Orange category member industries)
89	Heavy engineering (investment on plant and machinery ≤10 crore)
90	Waste to Energy plants ≤15 MW capacity
91	Handicraft products like terracotta work, sculptures (plaster of paris and fibre glass)
92	Infrastructure development project
93	Any industry / industrial activity which is not covered in category lists, using oil / gas fired boiler of capacity > 2 TPH and ≤ 5 TPH

Note:-

a) Any industry/industrial activity which is not covered in Orange category list, using oil/gas fired boiler of capacity > 2 TPH and ≤ 5 TPH will be considered under Orange category subject to approval by the Categorisation Committee of the Board.

b) Capacity of boilers /furnace/kiln/oven/DG set etc. in any unit refers to the cumulative capacity of respective items.

c) Sl.No.16 (Almirah, grill manufacturing) is not permitted in municipal areas of West Bengal.

d) For activities attracting EIA notification, Environmental Clearance is mandatory followed by 'Consent to Establish' and 'Consent to Operate' of the Board.

e) Detailed information for selection of specific nature of activity under industry category is available in the EMIS of the Board for facilitating project proponents.

GREEN CATEGORY

Sl. No.	Activity
1	Aluminium utensils from aluminium circles by pressing only (dry mechanical operation)
2	Ayurvedic and homeopathic medicines (without boiler)
3	Bakery / confectionery / sweets products (with production capacity < 1tpd (with oil, gas or electrical oven)
4	Bi-axially oriented PP film along with metalizing operations [including adhesive coating, viscose / polyester coated brass, glass yarn]
5	Biomass briquettes (sun drying) without using toxic hazardous wastes
6	Blending of melamine resins & different powder, additives by physical mixing [including simple mixing and mould / coating compound by mixing, versatile master batch / polymer compound using talc, calcite, pigment, additives, polymer etc. as raw material]
7	Brass and bell metal utensils manufacturing from circles (dry mechanical operation without re-rolling facility)
8	Candy
9	Cardboard or corrugated box and paper products (excluding paper or pulp manufacturing and without using boilers)
10	Carpentry & wooden furniture manufacturing (excluding saw mill) with the help of electrical (motorized) machines such as electrical wood planner, steel saw cutting circular blade, etc. [including modular wooden furniture from particle board, MDF, sawn timber etc., ceiling tiles / partition board from saw dust, wood chips etc. and other agricultural waste using synthetic adhesive resin, wooden box making (without boiler)]
11	Cement products (without using asbestos / boiler / steam curing) like pipe, pillar, jafri, well ring, block / tiles etc. (should be done in closed covered shed to control fugitive emissions)
12	Ceramic colour manufacturing by mixing & blending only (not using boiler and wastewater recycling process)
13	Chilling plant, cold storage and ice making (including only chilling of fish)
14	Coke briquetting (sun drying)
15	Cotton spinning and weaving (small scale)
16	Dal Mills
17	Decoration of ceramic cups and plates by electric furnace
18	Digital printing on PVC Clothes
19	Facility of handling, storage and transportation of food grains in bulk
20	Flour mills (dry process)
21	Glass, ceramic, earthen potteries, tile and tile manufacturing using electrical kiln or not involving fossil fuel kiln (including activity not involving kiln)
22	Glue from starch (physical mixing) with gas / electrically operated oven / boiler
23	Gold and silver smithy (purification with acid, smelting operation and sulphuric acid polishing operation) (using d"1 litre of sulphuric acid / nitric acid per month)

Sl. No.	Activity
24	Heat treatment with any of the new technology like ultrasound probe, induction hardening, ionization beam, gas carburizing etc. (including heat treatment using electrical heater)
25	Insulation and other coated papers (excluding paper or pulp manufacturing)
26	Leather foot wear and leather products (excluding tanning and hide processing except cottage scale)
27	Lubricating oil, greases or petroleum based products (only blending at normal temperature)
28	Manufacturing of pasted veneers using gas fired boiler or thermic fluid heater and by sun drying
29	Oil mill ghani and extraction (no hydrogenation / refining)
30	Packing materials manufacturing from non-asbestos fibre, vegetable fibre yarn
31	Phenyl / toilet cleaner formulation and bottling
32	Polythene and plastic processed products manufacturing (virgin plastic)
33	Poultry, Hatchery and Piggery
34	Power looms (without dyeing and bleaching)
35	Puffed rice (muri) (using oil, gas or electrical heating system)
36	Pulverization of bamboo, scrap wood, rice husk, groundnut, soya waste, coconut shell
37	Ready mix cement concrete
38	Reprocessing of waste cotton including dhania mill & cotton from scrap cloth
39	Rice mill (Rice hullers only)
40	Rolling mill (gas fired) and cold rolling mill
41	Rubber goods industry (with oil / gas operated baby boiler d″ 2 TPH steam generation capacity)
42	Saw mills
43	Soap manufacturing (handmade without steam boiling / boiler)
44	Spice grinding (d″ 20 HP motor)
45	Spice grinding (>20 HP motor)
46	Steel furniture without spray painting
47	Steeping and processing of grains
48	Tyres and tube retreating (without boilers)
49	Ice making without using ammonia
50	CO2 recovery (including core CO2 manufacturing)
51	Distilled water (without boiler) with electricity as source of heat
52	Hotels (up to 20 rooms) without boilers or with electrical / gas fired boiler / heater / oven etc. having d″10 KLD waste water generation and only restaurants with capital investment on land, building, plant and machinery upto 30 lac

Sl. No.	Activity
53	Manufacturing of optical lenses (using electrical furnace)
54	Mineralized water (including water softening and demineralization plant)
55	Tamarind powder manufacturing
56	Cutting, sizing and polishing of marble stone
57	Emery powder (fine dust of sand) manufacturing
58	Flyash export, transport & disposal facilities
59	Mineral stack yard / railway sidings
60	Oil and gas transportation pipeline
61	Seasoning of wood in steam heated chamber
62	Synthetic detergent formulation (excluding LABSA manufacturing)
63	Tea processing (without boiler)
64	Thermocol manufacturing (without boiler)
65	Industrial estates / parks / complexes / areas / export processing zones / SEZs / biotech parks / leather complex (Only for Green Category member industries)
66	Common Effluent Treatment Plant and effluent conveyance project (Only for Green Category member industries)
67	Any industry / industrial activity which is not covered in category lists, using oil / gas fired boiler of capacity < 2 tph

Note:-

a. Any industry / industrial activity which is not covered in category lists, using oil / gas fired boiler of capacity < 2 TPH will be considered under Green category subject to approval by the Categorisation Committee of the Board.

b. Any industry / industrial activity using oil / gas fired boiler of capacity < 2 TPH will be considered under Green category.

c. Capacity of boilers / furnace / kiln / oven / DG set etc. in any unit refers to the cumulative capacity of respective items.

d. For activities attracting EIA notification, Environmental Clearance is mandatory followed by 'Consent to Establish' and 'Consent to Operate' of the Board.

e. Detailed information for selection of specific nature of activity under industry category is available in the EMIS of the Board for facilitating project proponents.

WHITE CATEGORY

Sl. No.	Activity
1	Assembly of air coolers / conditioners, repairing and servicing
2	Assembly of bicycles, baby carriages and other small non motorizing vehicles
3	Bailing (hydraulic press) of waste papers
4	Bio fertilizer and bio-pesticides without using inorganic chemicals
5	Biscuits trays etc. from rolled PVC sheet (using automatic vacuum forming machines)
6	Blending and packing of tea (including tea garden)
7	Block making of printing without foundry (excluding wooden block making)
8	Chalk making from plaster of paris (only casting without boilers etc. - sun drying / electrical oven)
9	Compressed oxygen gas from crude liquid oxygen (without use of any solvents and by maintaining pressure & temperature only for separation of other gases)
10	Cotton and woolen hosiery making (dry process only without any dyeing / washing operation)
11	Diesel pump repairing and servicing (complete mechanical dry process)
12	Electric lamp (bulb) and CFL manufacturing by assembling only
13	Electrical and electronic item assembling (completely dry process) (including manufacturing of electrical and electronic items, electronic and mechanical toys, hardware for computers and other information technology instruments)
14	Engineering and fabrication units [dry process without any heat treatment / metal surface finishing operations / painting]
15	Flavoured betel nuts production / grinding (completely dry mechanical operations)
16	Fly ash bricks / block manufacturing
17	Fountain pen manufacturing by assembling only
18	Glass ampoules and vials making from glass tubes (including laboratory wares)
19	Glass putty and sealant (by mixing with machine only)
20	Ground nut decorticating
21	Handloom / carpet weaving (without dyeing and bleaching operation)
22	Leather cutting and stitching (> 10 machine and using motor)
23	Manufacturing of coir items from coconut husks
24	Manufacturing of metal caps, containers etc.
25	Manufacturing of shoe brush and wire brush
26	Medical oxygen
27	Organic and inorganic nutrients (by physical mixing)
28	Organic manure (manual mixing)

Sl. No.	Activity
29	Packing of powdered milk [including repacking of chemicals, bitumen etc. in small container without any processing or heating]
30	Paper pins and u clips [including safety pins]
31	Repairing of electric motors and generators (dry mechanical process)
32	Rope (plastic and cotton)
33	Scientific and mathematical instrument manufacturing
34	Solar module non-conventional energy apparatus manufacturing unit
35	Solar power generation through solar photovoltaic cell, wind power and mini hydel power (< 25 MW)
36	Surgical and medical products assembling only (not involving effluent / emission generating processes)
37	Almirah, grill manufacturing (Dry mechanical process and without painting operation)

Note :

(a) There is no necessity of obtaining consent for White Category of industries and an intimation to WBPCB is sufficient.

(b) Industry / industrial activity mentioned in the White category is permitted in any area in West Bengal subject to site clearance by local authority.

(c) Sl.No.31 (Repairing of electric motor and generator) is not permitted in congested areas.

(d) Sl.No.37 (Almirah, grill manufacturing) is not permitted in municipal areas of West Bengal.

EXEMPTED CATEGORY

Sl. No.	Activity
1	Agarbati manufacturing and packaging
2	Assembly of domestic electrical appliances, servicing and repairing
3	Atta chakkis (wheat grinding)
4	Auto emission testing centres
5	Ball pen refill
6	Bamboo and cane products (only dry operation)
7	Biogas plant
8	Black smithy (should not be allowed in congested areas)
9	Boarding and lodging
10	Book binding
11	Cable TV network
12	Candles manufacturing
13	Colour/black and white studio
14	Cushions/pillows and quilts manufacturing
15	Cyber café
16	Diesel generator sets (≤ 1 MVA) for residential buildings, commercial buildings and health care organisation etc.
17	Gold and silver smithy (excluding purification/polishing with any acid and smelting operation)
18	Handicraft products like conchshell, coconutshell, dokra, cane and bamboo products, balucharisaree, stone carving, wood carving, batik, sola work etc.
19	Handmade paper
20	House hold decorative (interior and exterior) involving coloured artificial flowers, sola, palms, jute etc. (without dyeing and bleaching of flowers and other items)
21	Building and construction projects upto 20,000 sq.mtr. built up area
22	Leather cutting and stitching (d"10 machines and without any motor)
23	Leather footwear and leather products (excluding tanning and hide processing) (cottage scale only)
24	Manual brass painting
25	Manufacture of steel trunks and suitcases
26	Manufacturing and packaging of 'alta' and packaging of 'sindoor'
27	Manufacturing of umbrella (only assembling)
28	Mushroom plantation and spawn
29	Musical instrument manufacturing

Sl. No.	Activity
30	Optical frames
31	Optical lens manufacturing (without furnace)
32	Photo framing
33	Plant tissue culture laboratory
34	PP and PE bag (only cutting and sealing)
35	Radio assembling, servicing and repairing work
36	Repairing & servicing of bicycles, baby carriage and other non-motorised vehicles
37	Repairing and servicing of electronic equipment
38	Shoelace manufacturing
39	Soft toys, wooden toys manufacturing (except electronic and mechanical toys)
40	Software development for information and technology industry
41	Sports goods manufacturing
42	Storage and distribution of LPG cylinders less than threshold storage quantity at a time, as per rules
43	Tailoring and garment stitching/garment and apparel manufacturing
44	Tank calibration centre
45	Weigh bridge (not manufacturing)
46	Wooden block making for printing
47	Xerox and photocopying
48	Zari embroidery work
49	Automobile fuel outlet (only dispensing)
50	E-waste collection Centre
51	Rubber goods industry (without boiler)

D. Exempted category industries

(a) Industry / industrial activity mentioned in the Exempted category is permitted in any area in West Bengal subject to site clearance by local authority.

(b) Industry / industrial activity mentioned in the Exempted category need not apply for either 'Consent to Establish' or 'Consent to Operate' from the Board.

Annexure-II

LIST-B

Industrial Sitting / Locational Policy in West Bengal

A. Red category industries

(a) Setting up of any Red category industry is not permitted within municipal areas of Kolkata Metropolitan Area (KMA) and within municipal areas of Burdwan district except Jamuria Industrial Estate. These can however be set up beyond the municipal areas of KMA and Burdwan district with adequate pollution abatement system subject to site clearance by local authority.

(b) However, for Red category industry / industrial activity in following serial nos., the consideration for siting within municipal areas of KMA and municipal areas of Burdwan district is location specific and will be decided by the Board.

Sl. No.	Industry / Activity Type
RED 1	Isolated storage of hazardous chemicals (as per schedule of manufacturing, storage of hazardous chemicals rules, 1989 as amended)
RED 2	Only heavy engineering including ship building (with investment on plant and machinery > 10 crores)
RED 5	DG Set of capacity > 5 MVA
RED 9	Power generation plants (applicable only for Waste to Energy plants)
RED 23	Airports and Commercial Air Strips (for airports having waste water generation > 100 KLD.)
RED 30	Health-care establishment (as defined in BMW Rules) for waste water generation > 100 KLD or with incinerator or both
RED 31	Hotels (3 star and above) and hotels having ≥100 rooms or waste-water generation ≥100 KLD
RED 39	Railway locomotive work shop / Integrated road transport workshop / service centers having waste-water generation ≥ 100 KLD
RED 42	Ship breaking activities
RED 43	Oil and gas extraction including CBM (offshore & on-shore extraction through drilling wells)
RED 46	Ports and harbour, jetties and dredging operations
RED 62	Common treatment and disposal facilities (CETP, effluent conveyance project, incinerator, MSW sanitary landfill site, STP only)
RED 64	Industrial estates / parks / complexes / areas / export processing zones / SEZs / biotech parks (for Red Category member industries and only activities which do not attract siting restrictions)

(c) Diversification / modification / modernization / expansion of existing Red Category industry situated within the municipal boundaries of KMA is allowed on a case to case basis considering the location of industry, type of activity, environmental impact, environmental pollution management proposal for such activity.

Orange category industries

(a) Setting up of any Orange category industry is not permitted within Kolkata Municipal Corporation (KMC) and Howrah Municipal Corporation (HMC) areas (except industrial estates in KMC and HMC area). These can however be set up beyond the KMC and HMC areas and in industrial estates in KMC and HMC area with adequate pollution control measures subject to site clearance by local authority.

(b) However, for Orange category industry/industrial activity in following serial nos., the consideration for siting within KMC and HMC areas will be location specific and will be decided by the Board.

Sl. No.	Industry / Activity Type
ORANGE 1	Dismantling of rolling stocks (wagons / coaches)
ORANGE 18	Railway locomotive workshops / integrated road transport workshop / Automobile servicing, repairing and painting having waste water generation < 100 KLD) (excluding only fuel dispensing)
ORANGE 21	Building and construction projects >20,000 sq.mtr. built up area (waste water generation <100 KLD)
ORANGE 25	DG set of capacity >1 MVA but <5 MVA
ORANGE 37	Hot mix plants
ORANGE 38	Hotels (< 3 star) or hotels having >20 rooms and < 100 rooms having waste-water generation <100 KLD and >10 KLD, and / or having coal / oil fired boiler / heater / oven etc. [including restaurants with capital investment on land, building, plant and machinery >30 lac]
ORANGE 50	Mechanized laundry using oil fired boiler
ORANGE 51	Modular wooden furniture from particle board, MDF, sawn timber etc., ceiling tiles / partition board from saw dust, wood chips etc. and other agricultural waste using synthetic adhesive resin, wooden box making (with boiler)
ORANGE 52	New highway construction projects
ORANGE 54	Paint blending and mixing (ball mill) [including construction chemicals manufacturing by mixing]
ORANGE 55	Paints and varnishes (mixing and blending)
ORANGE 56	Plyboard manufacturing (including veneer and laminate) with oil fired boiler / thermic fluid heater (without resin plant)
ORANGE 59	Printing press
ORANGE 73	Dry cell battery (excluding manufacturing of electrodes) and assembling and charging of acid lead battery in micro scale
ORANGE 74	Pharmaceutical formulation and related R&D
ORANGE 84	Airports and commercial air strips (waste water generation <100 KLD)
ORANGE 87	Health-care Establishment (as defined in BMW Rules) for waste water generation ≤100 KLD or with incinerator or both
ORANGE 89	Heavy engineering (investment on plant and machinery ≤10 crore)
ORANGE 90	Waste to Energy plants upto 15 MW capacity
ORANGE 92	Infrastructure development project

(c) Activity under sl. no. 16 (Almirah, grill manufacturing - dry mechanical process and with painting) is not permitted in municipal areas of West Bengal.

(d) Activity under 71 (Transformer repairing / manufacturing (dry processing only) is not permitted in congested areas.

(e) There is no restriction for allowing expansion of Orange Category of industries within KMC and HMC area without prejudice to any existing Order.

C. Green category industries

(a) Setting up of any Green category industry is permitted in any area of West Bengal with adequate pollution control measures subject to the site clearance by local authority.

(b) However, for Green category industry / industrial activity in following serial nos., the consideration for siting will be location specific and will be decided by the Board.

Sl. No.	Industry / Activity Type
GREEN 33	Poultry, Hatchery and Piggery
GREEN 41	Rubber goods industry (with oil / gas operated baby boiler ≤ 2 TPH steam generation capacity)
GREEN 62	Synthetic detergent formulation (excluding LABSA manufacturing)
GREEN 13	Chilling plant, cold storage and ice making (including only chilling of fish)
GREEN 56	Cutting, sizing and polishing of marble stone
GREEN 58	Flyash export, transport & disposal facilities
GREEN 59	Mineral stack yard / railway sidings

D. White category industries

(a) There is no necessity of obtaining consent for White Category of industries and an intimation to WBPCB is sufficient.

(b) WHITE37 (Almirah, grill manufacturing) is not permitted in municipal areas of West Bengal.

(c) Industry / industrial activity mentioned in the White category is permitted in any area in West Bengal subject to site clearance by local authority.

E. Exempted category industries

(a) Industry / industrial activity mentioned in the Exempted category is permitted in any area in West Bengal subject to site clearance by local authority.

(b) Industry / industrial activity mentioned in the Exempted category need not apply for either 'Consent to Establish' or 'Consent to Operate' from the Board.

F. Special Restrictions

(a) Specific 60 categories of water intensive industries (Annexure-1) are not permitted in within 10 Km. radius (specified Mouzas mentioned in Annexure-2) around the integrated leather complex at Bantala.

(b) For area around Victoria Memorial Hall (as per Order of the Hon'ble Calcutta High Court):-

(i) All hotels and restaurants situated within a radius of 3 Km. of Victoria Memorial Hall shall use cleaner fuels such as LPG.

(ii) No dry leaf is allowed to be burnt within a radius of 3 Km. of Victoria Memorial Hall.

(iii) There will be total ban on establishing new industrial units and expansion of the existing industries within 10 Km. from the Victoria Memorial Hall which may emit CO_2, SO_2, NO_x or other gaseous substance which form acids in contact with moisture in the atmosphere.

(c) Green Category industries will be allowed to operate in the premises vacated by tanneries earlier operating at Tiljala, Topsia, Tangra and Pagladanga area within KMC. Consent to Establish and Consent to Operate for such Green category industries will be issued by the Board only.

(d) For East Kolkata Wetland (declared as a RAMSAR site) area:-

[Order no. S/EN/487/177/08 dated 03.03.2008 of Department of Environment, Govt. of West Bengal read with The East Kolkata Wetlands (Conservation and Management) Act, 2006 published vide No. 404-L dated 31.03.2006]

(i) Local authority should not issue any license or building plan for any commercial activity without clearance from the East Kolkata Wetland (EKW) Authority.

(ii) Land & Land Reforms Department of the concerned area will not issue any certificate for change of character of land without clearance from the EKW Authority.

(iii) The occupiers of EKW areas cannot transfer land to any person(s) in any manner through Deed of Sale, or through providing lease or tenancy right, without clearance from the EKW Authority.

(iv) The Registration Authority of land or houses in the EKW area shall not allow registration of land, house or pond of EKW area (specified in Annexure-3) without clearance from the EKW Authority (http://www.ekwma.com).

(v) The occupiers of EKW areas may approach the Member Secretary, EKW Authority for obtaining necessary clearance for transfer of land and EKW Authority will consider such prayer within 2 months from the receipt of such application.

(e) For Kalyani and Gayeshpur Industrial Estate:-

a) Setting up new red category of industries will be allowed in the vacant plots of Block-D of Kalyani Industrial area excepting Plot No. 39. Expansion of existing red category of industries in the area will also be permitted.

b) Setting up of new red category of industries in the vacant plots and in the premises of closed units in Phase-II of WBIDC of Kalyani Industrial Estate, Block-A will be allowed on a case to case basis considering the environmental pollution load of the proposed unit.

c) Setting up new red category of industries in the closed industrial premises of Phase-I of WBIDC and/or in Gayeshpur will be allowed on a case to case basis comparing the pollution load of the proposed unit with that of the closed units. Expansion of red category of industries will also be permitted on a case to case basis considering the pollution load of the proposed activity.

(f) Hotels, restaurants and resorts are not to be developed within a radius of 1 km. of reserve forests area, notified wild life sanctuaries within the State of West Bengal without prior permission of the Department of Tourism, Government of West Bengal.

Annexure-1

List of Industries restricted in Mouzasas mentioned in Annexure-2

1. Distillery including Fermentation industry
2. Sugar (excluding khandsari)
3. Fertiliser (Basic) (excluding formulation)
4. Pulp & Paper (paper manufacturing with or without pulping)
5. Basic Drugs & Pharmaceuticals (excluding formulation)
6. Chlor - alkali
7. Dyes and Dye-intermediates
8. Pesticides (excluding formulation)
9. Oil refinery (Mineral oil or Petro refineries)
10. Tanneries
11. Petrochemicals (Manufacture of and not merely use of as raw material)
12. Cement
13. Thermal power plants
14. Iron and Steel (Involving processing from ore / scrap / integrated steel plants)
15. Zinc smelter
16. Copper smelter
17. Aluminium smelter
18. Synthetic rubber
19. Rubber goods industry (with boiler)
20. Ferrous & Non - ferrous metal extraction (different furnaces & smelting), refining, casting, forging, alloy making etc.
21. Paints and varnishes (excluding units with only blending / mixing)
22. Pigments and intermediates
23. Lubricating oils, greases or petroleum - based products (excluding blending at normal temperature)
24. Synthetic & natural fibre including rayon, tyre cord, polyester filament yarn & raw woolen, raw silk
25. Synthetic detergent (excluding formulation) and soap (with steam boiling)
26. Chemical, petrochemical and electrochemicals, manufacture (including distillation) of acids such as Sulphuric Acid, Nitric Acid, Phosphoric Acid etc.
27. Industrial or inorganic gases
28. Chlorates, perchlorates and peroxides
29. Glue and gelatine
30. Integrated textile mills (processing involving scouring, bleaching, dyeing, printing or any effluent / emission generating process)

31. Vegetable oils processing including solvent extracted oils, hydro-genated oils.
32. Industry or process involving metal treatment or process such as pickling, surface coating (excluding spray, manual brush, dip painting, paint baking. paint stripping), heat treatment (only cyaniding), phosphating or finishing etc.
33. Electroplating operations
34. Galvanizing operations
35. Asbestos and asbestos-based industries
36. Slaughter houses and meat processing units
37. Steel and steel products including coke plants involving use of any of the equipment such as blast furnaces, open hearth furnace, induction furnace or arc furnace etc. or any of the operations or processes such as heat treatment, acid pickling, rolling or galvanizing etc.
38. Power generating plants (excluding D.G. Sets)
39. Lime manufacturing
40. Phosphate rock processing plants
41. Coke making, coal liquefaction, coal tar distillation or fuel gas making, coke briquetting (excluding sundrying)
42. Phosphorous and its compounds
43. Processes involving chlorinated hydrocarbons
44. Chlorine, fluorine. bromine, iodine and their compounds
45. Hydrocyanic acid and its derivatives
46. Milk processing and dairy products (Integrated Project)
47. Industry or process involving foundry operations
48. Rubber chemicals
49. Electrochemicals
50. Food and food processing (with more than Rs.20 lac investment on plant and machinery)
51. Dyeing of fabrics, yarns etc.
52. Bone Mill
53. Phenolic products
54. Radioactive elements
55. Stone crushing
56. Rolling mill
57. Shellac processing
58. Plyboard manufacturing (with captive resin manufacturing plant)
59. Acid lead batteries
60. Lead Smelting

Annexure-2

List of Mouzas within 10 km. radius of Kolkata Leather Complex

Police Station: Bhangore

Sl. No.	J.L. No.	Name of Mouza
1	2	Kochpukurria
2	3	Jotibhirn
3	4	Hatgachha
4	5	Nadia
5	6	Oharmatala Pachuria
6	7	Kulberia
7	8	Chanda Kanthalberia
8	9	Hatisala
9	10	Bhagabanpur
10	12	Dakshih Khairpur
11	13	Tarahadia
12	14	Swastayangachhi
13	15	Anantapur
14	17	Uttar Ghazipur
15	18	Uriapara
16	22	Jaynagar
17	23	Naoabad
18	24	Pithapukuria
19	25	Jirancachhi
20	26	Wari
21	27	Beonta
22	28	Paikan
23	29	Chariswar
24	30	Sukpukuria
25	31	Krolbaria
26	32	Karaidanga
27	33	Bhatipota
28	34	Kharamba
29	35	Gangapur
30	36	Andulgari
31	37	Mousal
32	38	Taradah Kapasati
33	39	Narayantala
34	40	Ushpara
35	41	Bairampur
36	42	Biqhari
37	43	Dakshin Gazipur
38	44	Ghomineghi
39	45	Bamunia
40	46	Kachua
41	47	Uttar Mashikelbaria
42	48	Norgalbeki
43	49	Seduli
44	50	Majherhat

Sl. No.	J.L. No.	Name of Mouza
45	51	Uttar Kashipur
46	52	Chandihat
47	56	Bhogati
48	61	Bankachua
49	62	Kantadanga
50	63	Sonpur
51	64	Rampur
52	65	Nimkuria
53	66	Dheati
54	67	Sanpukuria
55	68	Uttar Rajapur
56	69	Chakbaria
57	70	Jawpur
58	71	Chak Maricha
59	72	Maricha
60	73	Serpur
61	74	Narayanpur
62	75	Madhabpur
63	76	Hosaidara
64	77	Taldighi
65	78	Kasiadanga
66	79	Maheshpukuria
67	80	Kasinagar
68	81	Sundia
69	82	Kamarhati
70	83	Dari Madhabpur
71	84	Amreswar
72	85	Dara
73	86	Padmapuria
74	87	Malancha
75	88	Chak Barali
76	89	Bhangore Raghunathpur
77	90	Panapukur
78	91	Uttar Khatalia
79	92	Gobindapur
80	99	Ghatakpukur
81	100	Kalikapur
82	101	Nalmuri
83	102	Ranigachhi
84	103	Balipur
85	104	Chak Bhika
86	105	Bazarati
87	106	Bangoda
88	107	Karunarhati

Sl. No.	J.L. No.	Name of Mouza
89	108	Dharmatala
90	109	Dakshin Kasipur
91	110	Satbaria
92	114	Jalalabad
93	115	Kasinathpur
94	116	Chandaneswar
95	117	Bausahar
96	118	Chungri
97	119	Sankshar
98	120	Erenda
99	121	Sainhati
100	122	Sangachhi
101	123	Jagulgachhi
102	141	Situri

Police Station: Rajarhat

Sl. No.	J.L. No.	Name of Mouza
1.	18	Mahishbathan
2.	19	Thakdari
3.	20	Mahishgot
4.	23	Ghuni
5.	24	Jatragachhi
6.	25	Kadampukur
7.	32	Mahammadpur
8.	33	ChakPachuria
9.	34	Baligori
10.	35	Chhapna
11.	36	Patharghata
12.	37	Bauragari
13.	38	Jhalgachhi
14.	39	Kasinathpur
15.	40	Kalikaour
16.	41	Umarhati
17.	42	Jamalpara
18.	49	Sikharpur
19.	50	Bazelari
20.	51	Arbelia
21.	52	Bagu
22.	53	Naoabad
23.	54	Hadarait
24.	55	Akandakesri

Police Station: Sonarpur

Sl. No.	J.L. No.	Name of Mouza
1	1	Chak Kolarkhal
2	6	Ranabhutia
3	7	Kantipota
4	8	Bhaqabanpur
5	9	Kharki
6	10	Deara
7	11	Kheadaha
8	12	Khodhati
9	13	Goalapota
10	14	Kumarpukuria
11	15	Tardaha
12	16	Tihuria
13	17	Nayabad
14	18	Gangajoara
15	19	Dihi
16	20	Chandpur
17	21	Khurigachhi
18	23	Ghasiara
19	25	Jagadishpur
20	26	Radhanagar
21	27	Gopalpur
22	28	Araoalch
23	29	Hasanpur
24	41	Kamrabandh
25	91	Samukpota
26	92	Protapnagar
27	93	Garal
28	94	Metiari
29	95	Kalikapur
30	96	Muragacha
31	97	Natagachhi
32	105	Chakbaria
33	106	Makrampur
34	107	Kustia
35	108	Sangur
36	109	Nabhasan

Police Station: Kasba

Sl. No.	J.L. No.	Name of Mouza
1	2	Dhapa

Police Station: Salt Lake

Sl. No.	J.L. No.	Name of Mouza
1	1	Dhapa Manpur

Annexure-3

District	Police Station	Mouza	J.L. No.	Area	Sl. No. as shown in the the map in Schedule-II
(1)	(2)	(3)	(4)	(5)	(6)
24-Parganas (South)	Tiljola	Dhapa	2	as specified in Table 1	1
		Chowbaga	3	as specified in Table 2	2
		Bonchtala	4	as specified in Table 3	3
		Dhalenda	8	as specified in Table 4	4
		Paschim Chowbaga	9	as specified in Table 5	5
		Nonadanga	10	as specified in Table 6	36
	Sonarpur	Chak Kolar Khal	1	as specified in Table 7	6
		Karimpur	2	as specified in Table 8	7
		Jagatipota	3	as specified in Table 9	8
		Mukundapur	4	as specified in Table 10	9
		Atghara	5	as specified in Table 11	10
		Ranabhutia	6	as specified in Table 12	11
		Kantipota	7	as specified in Table 13	12
		Bhagabanpur	8	as specified in Table 14	13
		Kharki	9	as specified in Table 15	14
		Deara	10	as specified in Table 16	15
		Kheadaha	11	as specified in Table 17	16
		Khodahati	12	as specified in Table 18	17
		Goalpota	13	as specified in Table 19	18
		Kumapukuria	14	as specified in Table 20	19
		Tardaha	15	as specified in Table 21	20
		Tihuria	16	as specified in Table 22	21
		Nayabad	17	as specified in Table 23	22
		Samukpota	91	as specified in Table 24	23
		Pratapnagar	92	as specified in Table 25	24
		Garal	93	as specified in Table 26	25
	Kolkata Leather Complex	Dakshin Dhapa Manpur	1	as specified in Table 27	34
		Dhapa Manpur (presently Kochpukur)	2	as specified in Table 28	35
		Hatgachha	4	as specified in Table 29	26
		Haldia	5	as specified in Table 30	27
		Dharmatala Pachuria	6	as specified in Table 31	28
		Kulberia	7	as specified in Table 32	29
		Beonta	27	as specified in Table 33	30
		Tardaha Kapashati	38	as specified in Table 34	31
	Purba Jadabpur	Kalikapur	20	as specified in Table 35	33
24-Parganas (North)	South Bidhan Nagar	Dhapa Manpur	1	as specified in Table 36	32
	Rajarhat	Thakdari	19	as specified in Table 37	37

Note : Table 1-37 available at http://www.ekwma.com

Annexure-III

Application Fees for Licenses from WBPCB
(Effective from 15th June, 2018)

Capital investment on Land, Building, Plant & Machinery (without depreciation) excluding capital investment on pollution control equipment	Existing fee for 'Consent to Establish'			Revised fee for 'Consent to Establish'			Existing fee for 'Consent to Operate' (per year)			Revised fee for 'Consent to Operate' (per year)		
	Spl. Red & Ord. Red	Orange	Green	Spl. Red & Ord. Red	Orange	Green	Spl. Red & Ord. Red	Orange	Green	Spl. Red & Ord. Red	Orange	Green
Upto Rs. 5 lakh	Rs. 400/-	Rs. 250/-	Rs. 150/-	Rs. 600/-	Rs. 400/-	Rs. 200/-	Rs. 850/-	Rs. 500/-	Rs. 250/-	Rs. 1,100/-	Rs. 700/-	Rs. 400/-
Above Rs. 5 lakh to Rs. 10 lakh	Rs. 800/-	Rs. 500/-	Rs. 250/-	Rs. 1,100/-	Rs. 700/-	Rs. 400/-	Rs. 2,150/-	Rs. 1,300/-	Rs. 600/-	Rs. 2,800/-	Rs. 1,700/-	Rs. 800/-
Above Rs. 10 lakh to Rs. 25 lakh	Rs. 1,650/-	Rs. 1,100/-	Rs. 500/-	Rs. 2,200/-	Rs. 1,500/-	Rs. 700/-	Rs. 2,900/-	Rs. 1,900/-	Rs. 900/-	Rs. 3,800/-	Rs. 2,500/-	Rs. 1,200/-
Above Rs. 25 lakh to Rs. 50 lakh	Rs. 3,250/-	Rs. 2,200/-	Rs. 1,100/-	Rs. 4,300/-	Rs. 2,900/-	Rs. 1,500/-	Rs. 5,800/-	Rs. 3,750/-	Rs. 1,800/-	Rs. 7,600/-	Rs. 4,900/-	Rs. 2,400/-
Above Rs. 50 lakh to Rs. 1 crore	Rs. 19,500/-	Rs. 11,700/-	Rs. 5,450/-	Rs. 25,400/-	Rs. 15,300/-	Rs. 7,100/-	Rs. 9,900/-	Rs. 6,500/-	Rs. 3,250/-	Rs. 12,900/-	Rs. 8,500/-	Rs. 4,300/-
Above Rs. 1 crore to Rs.1.5 crore	Rs. 27,300/-	Rs. 19,500/-	Rs. 8,200/-	Rs. 35,500/-	Rs. 25,400/-	Rs. 10,700/-	Rs. 20,800/-	Rs. 13,000/-	Rs. 6,500/-	Rs. 27,100/-	Rs. 16,900/-	Rs. 8,500/-
Above Rs.1.5 crore to Rs. 5 crore	Rs. 36,400/-	Rs. 23,400/-	Rs. 10,900/-	Rs. 47,400/-	Rs. 30,500/-	Rs. 14,200/-	Rs. 24,700/-	Rs. 16,250/-	Rs. 7,800/-	Rs. 32,200/-	Rs. 21,200/-	Rs. 10,200/-

Capital investment on Land, Building, Plant & Machinery (without depreciation) excluding capital investment on pollution control equipment	Existing fee for 'Consent to Establish'			Revised fee for 'Consent to Establish'			Existing fee for 'Consent to Operate' (per year)			Revised fee for 'Consent to Operate' (per year)		
	Spl. Red & Ord. Red	Orange	Green	Spl. Red & Ord. Red	Orange	Green	Spl. Red & Ord. Red	Orange	Green	Spl. Red & Ord. Red	Orange	Green
Above Rs. 5 crore to Rs.10 crore	0.1% of capital investment.	0.08 % of capital investment.	0.065% of capital investment.	0.13% of capital investment.	0.104% of capital investment.	0.085% of capital investment.	Rs. 33,150/-	Rs. 26,000/-	Rs. 20,800/-	Rs. 43,100/-	Rs. 33,800/-	Rs. 27,100/-
Above Rs. 10 crore to Rs. 50 crore							Rs. 65,000/-	Rs. 54,600/-	Rs. 42,900/-	Rs. 84,500/-	Rs. 71,000/-	Rs. 55,800/-
Above Rs.50 crore to Rs.100 crore							Rs. 1,62,500/-	Rs. 1,30,000/-	Rs. 1,04,000/-	Rs. 2,11,300/-	Rs. 1,69,000/-	Rs. 1,35,200/-
Above Rs.100 crore to Rs.500 crore	0.1% of capital invest. Sub to max. Rs. 39 lacs	0.08% of capital invest. Sub to max. Rs. 39 lacs	0.065% of capital invest. Sub to max. Rs. 39 lacs	0.13% of capital invest. Sub to max. Rs. 50 lacs	0.104% of capital invest. Sub to max. Rs. 50 lacs	0.085% of capital invest. Sub to max. Rs. 50 lacs	Rs. 3,25,000/-	Rs. 2,60,000/-	Rs. 1,95,000/-	Rs. 4,22,500/-	Rs. 3,38,000/-	Rs. 2,53,500/-
Above Rs. 500 crore							Rs. 6,50,000/-	Rs. 5,20,000/-	Rs. 3,90,000/-	Rs. 8,45,000/-	Rs. 6,76,000/-	Rs. 5,07,000/-

(B) Revised structure of application fee for 'Consent to Operate' for Housing Complexes, Commercial Complexes, Office Complexes including IT and Infrastructural and Town Development Projects

	Existing Fee for Consent to Establish	Revised Fee for Consent to Establish	Existing Fee for Consent to Operate (Per Year)	Revised Fee for Consent to Operate (Per Year) above 20000 sq.m Built up Area
Housing Complex, Commercial Complex, Office Complex, infrastructure IT Complex, infrastructure and township development projects. Total Builtup Area (Sq.m)			On the basis of the capital investment as mentioned in table (A) subject to a maximum of Rs.1,30,000/-	On the basis of the capital investment as mentioned in table (A) subject to a maximum of Rs.1,69,000/-.
20,000 - < 50,000	Rs. 2,60,000/-	Rs. 3,38,000/-	Non profit Organizations will be allowed a concession 25% on the fees.	Non profit Organizations will be allowed a concession 25% on the fees
50,000 - <1,00,000	Rs. 5,20,000/-	Rs. 6,76,000/-		
1,00,000 - <1,50,000	Rs. 7,80,000/-	Rs. 10,14,000/-		
1,50,000 and above	Rs. 13,00,000/-	Rs. 16,90,000/-		

(C) Revised structure of application fee for 'Consent to Operate' for local bodies, urban townships and industrial townships

Population in the area under local body, urban township, industrial township (based on decennial population census)	Existing fee for 'Consent to Operate' (per year)	Revised fee for 'Consent to Operate' (per year)
Upto 50,000	Rs. 1,150/-	Rs. 1,500/-
Above 50,000 to 1,00,000	Rs. 1,950/-	Rs. 2,600/-
Above 1,00,000 to 5,00,000	Rs. 3,900/-	Rs. 5,100/-
Above 5,00,000 to 10,00,000	Rs. 7,800/-	Rs. 10,200/-
Above 10,00,000	Rs. 19,500/-	Rs. 25,400/-

(D) Revised structure of application fee for 'Consent to Establish' and 'Consent to Operate' for Diesel Generator sets (above 15 KVA) for non-industrial use excepting Health Care Establishments

Capacity of Diesel Generator Sets (cumulative capacity)	Existing fee for 'Consent to Establish'	Revised fee for 'Consent to Establish'	Existing fee for 'Consent to Operate' (per year)	Revised fee for 'Consent to Operate' (per year)
15 KVA - 50 KVA	Rs. 150/-	Rs. 200/-	Rs. 250/-	Rs. 400/-
Above 50 KVA to 100 KVA	Rs. 250/-	Rs. 400/-	Rs. 500/-	Rs. 700/-
Above 100 KVA to 500 KVA	Rs. 500/-	Rs. 700/-	Rs. 1,050/-	Rs. 1,400/-
Above 500 KVA	Rs. 800/-	Rs. 1,100/-	Rs. 1,550/-	Rs. 2,100/-

(E) Revised structure of application fee for 'Consent to Establish' and 'Consent to Operate' for Fireworks Manufacturing Units

Quantity of fireworks manufactured / to be manufactured per year	Existing fee for 'Consent to Establish'	Revised fee for 'Consent to Establish'	Existing fee for 'Consent to Operate' (per year)	Revised fee for 'Consent to Operate' (per year)
Upto 10,000 kg.	Rs. 250/-	Rs. 400/-	Rs.500/-	Rs. 700/-
Above 10,000 kg. to 20,000 kg.	Rs. 500/-	Rs. 700/-	Rs. 1,300/-	Rs. 1,700/-
Above 20,000 kg. to 50,000 kg.	Rs. 1,100/-	Rs. 1,500/-	Rs. 1,900/-	Rs. 2,500/-
Above 50,000 kg.	Rs. 2,200/-	Rs. 2,900/-	Rs. 3,750/-	Rs. 4,900/-

(F) Revised structure of application fee for 'Consent to Establish', 'Consent to Operate' and Authorization for Bio-Medical Waste management under Bio-Medical Waste Rules for Health Care Establishments

Categories		Existing fee (per year for 'Consent to Operate' & 'Authorisation')	Revised fee (per year for'Consent to Operate' & 'Authorisation')
On bed capacities of institutions providing service to indoor patients	Upto 25 beds	Rs. 650/-	Rs. 900/-
	26-50 beds	Rs. 975/-	Rs. 1,300/-
	51-100 beds	Rs. 2,600/-	Rs. 3,400/-
	101-200 beds	Rs. 3,900/-	Rs. 5,100/-
	201 beds and above	Rs. 10,000/-	Rs.13,000/-
On number of patients per month in case treatment/service is not provided to indoor patients	Less than 1000 patients p.m.	Rs. 250/-	Rs. 400/-
	1000-2000 patients p.m.	Rs. 1,300/-	Rs. 1,700/-
	More than 2000 patients p.m.	Rs. 2,600/-	Rs. 3,400/-
All 'Not for profit' Institution		Rs.100/-	Rs.100/-
Government Hospital		Rs.100/-	Rs.100/-

(G) Revised structure of application fee for Authorisation for Operators under Bio-medical Waste (Management and Handling) Rules, 1998 and subsequent amendments

Categories	Existing fee (per year)	Revised fee (per year)
Collection and/or transport of bio-medical waste	Rs. 1,300/-	Rs. 1,700/-
Collection, transport, storage, treatment, disposal of any other form of handling bio-medical waste	Rs. 6,500/-	Rs. 6,500/-
All 'Nonprofit Operators' including Municipal Corporation and Municipalities	Rs. 100/-	Rs. 100/-

(H) Revised structure of application fee for Authorisation under Hazardous Wastes (Management & Handling) Rules, 1989 and subsequent amendments

Particulars	Existing fee for authorization (5 years)	Revised fee for Authorization (5 years)
All industry generating / managing / handling / storing / treating / disposing of Hazardous Wastes	Rs. 9,750/-	Rs. 13,000/-

(I) Revised structure of application fee for 'Consent to Operate' for Ship Breaking Industries

Particulars	Existing fee for 'Consent to Operate' (per Light Displacement Ton)	Revised fee for 'Consent to Operate' (per Light Displacement Ton)
Per Ship Breaking Activity	Rs.65/-	Rs.85/-

(J) Authorization fees for handling and processing of Municipal Solid Waste

Particulars	Fees for Authorization (per year)	Revised Fees for Authorization (per year)
Fees for Private Operator	Rs.2,000/-	Rs.2,600/-

(K) Registration fees for Hazardous Waste recycling units

Particulars	Existing Fees for Authorization (For five year)	Revised Fees for Authorization (For Five Year)
Hazardous Waste recycling units	Rs.10,000/-	Rs.13,000/-

(L) Registration fees for Dealers of Lead Acid Storage Batteries

Particulars	Existing Fees for Authorization (For five year)	Revised Fees for Authorization (For Five Year)
All dealers of Lead Acid Storage Batteries	Rs.5,000/-	6,500/-

(M) Application fees for 'Consent to Establish' and 'Consent to Operate' for common Bio-medical Waste Treatment Facilities owned by the Government Institutions, non-profit organizations, Municipal Corporations and Municipalities

Particulars	Existing Fees for 'Consent to Establish'	Revised Fees for 'Consent to Establish'	Existing Fees for 'Consent to Operate (per year)	Revised Fees for 'Consent to Operate (per year)
Government Institutions, non-profit organizations, Municipal Corporations and Municipalities	Rs.100/-	Rs.100/-	Rs.100/-	Rs.100/-

(N) Authorization fees under E-Waste (Management & Handling) Rules, 2011

Particulars	Fees for Authorization (For Five Year)
Producers, collection centers, dismantlers and recyclers	Rs.13,000/-

Annexure-IV

List of 17 Category Industries and Grossly Polluting Industries (GPIs)

List of 17 Category Industries

Sl. No.	Name of and Address of the Industry
1	M/s ACC Limited, Damodhar Cement Works, Madhukunda, P.O. Sunuri, District Purulia, 723121
2	M/s Ambuja Cement Ltd. (Unit Farakka) Kendua, P.O. Srimantapur, District Murshidabad, Pin 742212
3	M/s Ambuja Cement Ltd. Village & P.O. Dhulagori District Howrah, Pin 711302
4	M/s ASO CEMENT LIMITED Salua Road, Vill& P.O. GOPALI District Medinipore(W), Pin 721145
5	M/s ATC International Pvt. Ltd. Ramjibanpur Road, Sataisha, P.O. Sitarampur, District Burdwan, Pin 713359
6	M/s Balmukund Cement &Roofings Ltd. Muldi, P.O. Nanduka, District Purulia, Pin 723145
7	M/s Bhawani Cement Pvt. Ltd. P.D. Nagar Industrial Complex, Village Balanpur, P.O. Ikrah, District Burdwan Pin 713362
8	M/s Burnpur Cement Ltd.Palashdiha, P.O. Kanyapur, District Burdwan, Pin 713341
9	M/s Durgapur Cement Works (Birla Corporation Ltd.), Kada Road, Waria, P.O. Durgapur District Burdwan, Pin 713203
10	M/s Jagadamba Fiscal Services (P) Ltd. Bidhan Commercial Complex, Mouza Bhiringi, Plot No 757 Durgapur, Pin 713 203
11	M/s Lafarge India Private Limited Amdanga, P.O. M.T.P.S. (D.V.C.) District Bankura, Pin 722183
12	M/s Bharat Hitech Cements (Formerly Pronto Commercial Pvt. Ltd.), Bongabari, District Purulia, Pin 723147
13	M/s Mirdha Cement Pvt. Ltd.,Ketlapur, P.O. Rukni, District Purulia, Pin 723145
14	M/s Pragati Cement (India) Pvt. Ltd. Vill& P.O. Simulia District Purulia, Pin 723102
15	M/s Rashmi Cement Ltd. Vill. Baria, P.O. GarhSalboni, District Midnapore (W), Pin 721507
16	M/s ShriShyam Cement Works Pvt. Ltd., Mangalpur, P.O. Raniganj, District Burdwan, Pin 713347
17	M/s. Shristi Cement Ltd., ADDA, Industrial Estate, Mangalpur, P.O. Raniganj, District Burdwan, Pin 713347
18	M/s Swasata Cement Ltd. Vill& P.O. Nanduka District Purulia, Pin 723145
19	M/s Ultratech Cement Ltd., (L &T Ltd. West Bengal Cement Works Ltd.), P.O. Rajbandh, Burdwan, 713212
20	M/s Durgapur Chemicals Ltd.Vill. Raturia, P.S. Coke Oven, P.O. Durgapur, Dist. Burdwan, Pin. 713215

Sl. No.	Name of and Address of the Industry
21	M/s Hindustan Heavy Chemicals Ltd., 19 B.T. Road, Khardah, P.O.- B.D. Sopan
22	Eastern Distillery & Chemicals Ltd., 34 B.L. Shah Road,
23	M/s IFB Agro Industries Ltd., Vill. Durgapur, P.O. Noorpur, Via-Shrisha Ashram, Ramnagar, Pin – 743368
24	Sharda Fertilizer Ltd., Vill. Deshabund, Onda, Bankura.
25	Hindustan Fertilizer Corporation Ltd., (Durgapur Unit), Burdwan, Durgapur
26	M/s Jayashree Chemicals & Fertilizers, Nanda Bose Road, Khardah
27	M/s Tata Chemicals Ltd Durgachak, Haldia, P.O. + P.S. Durgachak, Dist. Medinipore (E), Pin. 721602
28	M/s Teesta Agro Industries Ltd. Vill. Majhabari, P.O. + P.S. Rajganj, Pin. 735134
29	M/s The Phosphate Company Limited.Vill. + P.O. Rishra, P.S. Srirampore, Pin. 712248
30	M/s Adhunik Corporation Ltd.Angadpur,P.O. Durgapur, P.S. Coke Oven, Dist. Burdwan, Pin. 713215
31	M/s. Amiya Steel Pvt. Ltd., Vill. Tarapur, P.O. & P.S. Mejia, Dist. Bankura, Pin. 722143
32	M/s Ankit Metal & Power Ltd. P.O. Jorehira, P.S. Chhatna, Dist. Bankura, Pin. 722137
33	M/s. Aryabrata Steel Pvt. Ltd., Lohamelya, P.O. Mohanpur, P.S. Jhargram, West Midnapore, Pin 721507
34	M/s. SreeSanyjee Steel and Power Ltd. (formerly ASL Iron and Steel Co. Pvt. Ltd). Vill. Dantia, P.O. Shyamnagar, P.S Balarampur, Dist. Purulia - 723143
35	M/s Bhagawati Sponge (P) Ltd., Jamuria Industrial Estate, P.O.-Ikrah, Dist.- Burdwan, Pin. 713336
36	M/s Bisco Metal & Power Ltd. P.O. Rangadih P.S. Balarampur, Dist. Purulia, Pin 723143
37	M/s Bravo Sponge Iron Pvt. Ltd., Vill. Mahuda, P.O. Rukni (Near Rly. Station), Dist. Purulia, Pin. 723145
38	M/s. C.P. Sponge Iron Pvt.Ltd. Raturia Angadpur Industrial Area, Durgapur, Dist. Burdwan, Pin-713215
39	M/s Calstar Sponge Ltd. Mouza – Ikra, Jamuria Industrial Estate, Jamuria, Dist. Burdwan, Pin- 713362
40	M/s. Concast Bengal Industries Ltd.Vill. Gourandi, P.O. AchuriSalboni, Bankura Pin- 722102
41	M/s D.D. International (P) Ltd. P.O.- Shyamnagar, Dist.- Purulia, Pin- 723143
42	M/s DamodarIspat Ltd. Jamuria Industrial, Estate, Damodarpur, Jamuria, Dist. Burdwan, Pin. 713336
43	M/s Dhanbad Fuels Ltd, Mangalpur Industrial Estate, Raniganj, Dist.-Burdwan, Pin 713 347
44	M/s Divyajyoti Sponge Iron (P) Ltd., Nandanpur, P.O. Ranipur, Mejia, Dist.-Bankura, Pin- 722133
45	M/s Durgapur Steel Plant (SAIL) P.O. Durgapur, Pin- 713203
46	M/s Electrosteel Casting (Sponge Iron Unit) Vill. Kashberia, P.O. Shivramnagar, Haldia, Dist. Purba Midnapore, Pin 721 635

Sl. No.	Name of and Address of the Industry
47	M/s Gagan Ferrotech Ltd., Jamuria Industrial Estate, Vill + P.O. Ikra, Dist. Burdwan, Pin- 713362
48	M/s. Govinda Impex Pvt. Ltd. located at Sahebdihi, P.O.-Hatasuria, P.S.- Barjora, Dist.- Bankura, Pin. 722202
49	M/s Haldia Steels Ltd. Unit – I & II, Raturia Industrial Area, Angadpur, Durgapur, Dist. Burdwan, Pin. 713215
50	M/s Howrah Gases Ltd. G/4A, Mangalpur Industrial Estate, P.O. Raniganj, Dist. Burdwan, Pin713347
51	M/s SAIL-IISCO Steel Plant, Vill and P.O. Burnpur Pin 713325
52	M/s IspatDamodar Ltd. Nabagram, P.O. Digha, P.S. Neturia, Dist. Purulia, Pin. 723121
53	M/s Jai Balaji Industries Ltd., Unit – I, G-1, Mangalpur Industrial Complex, P.O. Baktarnagar, Dist. Burdwan, Pin713321
54	M/s. KunjBihari Steel Pvt. Ltd. Jamuria Industrial Area, P.O. Nandi, P.S. Jamuria, Dist. Burdwan, Pin. 713344
55	M/s MB Ispat Corporation Ltd., Plot No. 1861, Durgapur Bankura Road, P.O. Borjora, Dist. Bankura, Pin. 722202
56	M/s Ma Amba Sponge Iron Ltd., Vill.-Jemua, P.O. & P.S.- Mejia, Dist.- Bankura, Pin. 722143
57	M/s Ma Chandi DurgaIspat Pvt.Ltd. Kanjilal Avenue, P.O. Durgapur, P.S. Coke Oven, Dist. Burdwan, Pin. 713 210
58	M/s Shakambhari Ispat & Power Ltd., Vill. Madandih, P.O. Bartoria, Dist. Purulia, Pin. 723121
59	M/s Maheshwary Ispat Ltd., Beldanga, P.O.-Chhotoramchandrapur, Dist.- Burdwan, Pin- 713148
60	M/s Mark Steels Ltd, Jagannathdihi, P.O.-Murulia, Block- Santuri, Purulia, Pin. 723121
61	M/s MB Sponge & Power Ltd., P.O. Hijalgoda, Near Ikrah Railway Station, Dist. Burdwan, Pin. 713362
62	M/s. Maithan Steel & Power Ltd. Bonra, P.S. Neturia, Dist. Purulia, Pin. 723121
63	M/s Rabindra Enterprises Pvt. Ltd. P.O. Digha, P.S. Neturia, Dist. Purulia Pin. 723121
64	M/s Rajshri Iron Industries Pvt. Ltd. Jamuria Industrial Area, Seikhpur, P.O. Nandi, Dist. Burdwan, Pin. 713344
65	M/s Ramsarup Lohh Udyog Ltd. Vill. Kharagpur, P.S. Kharagpur (local), P.O. Rakhajungle, Pin. 721301
66	M/s Rashmi Cement Ltd. (Steels & Power Division) Vill. Jitusole, P.O. Garhsalboni, P.S. Jhargram, Dist. Paschim Medinipur, Pin. 721507
67	M/s Rashmi Ispat Ltd. Vill: Gajasimul, P.O. Lodhasuli, PS Jhargram, Dt. Midnapore (W), Pin. 721513
68	M/s Rishabh Sponge Ltd., Durgapur – Bankura Main Road, Barjora, Dist. Bankura, Pin. 722 202

Sl. No.	Name of and Address of the Industry
69	M/s RiteshTradefin Ltd. Plot No. 3513 (P), Lenin Sarani (Kanjilal Avenue), Durgapur Pin 713210
70	M/s Satyam Iron & Steel Co. Pvt. Ltd. G-7, Mangalpur Industrial Area, P.O. Raniganj, Dist. Burdwan, 713347
71	M/s Satyam Smelters Pvt. Ltd. Jamuria Industrial Area P.O. Ikrah, Jamuria, Dist. Burdwan, Pin. 713362
72	M/s Savitri Sponge Iron (P) Ltd Mangalpur, Raniganj, G.T. Road, Dist.- Burdwan, Pin. 713347
73	M/s Sen Ferro Alloy Pvt. Ltd. Vill Dejudi, P.O. UnraJambedia, P.S. Barjora, Dist. Bankura, Pin. 722202
74	M/s Shiv Shankar Sponge (P) Ltd. Mouza- Dantia, P.S.-Balarampur, Dist.- Purulia, Pin. 723143
75	M/s Shree Gopal Govind Sponge (P) Ltd., Mangalpur Industrial Estate, Raniganj, Dt.- Burdwan, Pin. 713347
76	Shree Ramruapai Balaji Industries., Banskopa, Kanksa, Durgapur, Burdwan.
77	M/s Shyam Sel& Power Ltd. Palitpur Road, Dewandighi, P.O. & P.S. Burdwan, Dist. Burdwan, Pin. 713102
78	M/s Shyam Steel Industries Ltd. Angadpur, P.O. Durgapur, Dist. Burdwan, Pin. 713215
79	M/s SovaIspat Ltd. JemuaMouza, Mejia Block, Dist. Bankura, Pin. 722143
80	M/s SPS Steels and Power Ltd. Vill. + P.S. Durgapur, Dist. Burdwan, Pin. 713206
81	M/s. S.R.S. Sponge (P) Ltd. Vill. Dantia, P.O. Rangadih, P.S. Balarampur, Dist. Purulia, Pin. 723143
82	M/s. Super Smelters Ltd., Unit-3 Jamuria Industrial Area, P.O. Ikra, P.S. Jamuria, Dist. Burdwan, Pin. 713362
83	M/s. Shivam Dhatu Udyog Pvt. Ltd. Jamuria Industrial Area, P.O. Ikra, P.S. Jamuria, Dist. Burdwan, Pin. 713362
84	M/s Vijaya Sponge &Ispat (P) Ltd., Mouza- Kourang, Kantadih, Dist.- Purulia. Pin. 723153
85	M/s Vision Sponge Iron Pvt. Ltd. Rakta, P.O. Madhukunda, P.S. Santuri, Dist. Purulia, Pin. 723121
86	M/s Emami Paper Mills Limited (Unit- Gulmohar), P.O. Alambazar, P.S. Belghoria, Dist. 24 PGS (N), Pin. 700035
87	M/s Ballavpur Paper Mfg. Ltd. Vill. + P.O. Ballavpur, P.S. Ranigunj, Dist. Burdwan, Pin. 713323
88	M/s Indian Oil Corporation Limited- P.O. Haldia Refinery, Dist. Medinipore (E), Pin. 721606
89	Titagarh Paper Mills, (Unit- I)
90	Titagarh Paper Mills, (Unit- II)
91	M/s Papyrus Paper & Pulp Ltd., Kalyani, Nadia
92	M/s Indian Pulp & Paper (P) Ltd. Vill. Naihati, P.O. Hazinagar, Dist. 24 PGS (N), Pin. 743135

Sl. No.	Name of and Address of the Industry
93	M/s Arambag Paper Mills Pvt. Ltd. Vill. Parul, Ponpas, Arambagh, Hooghly
94	M/s KRISHNA TISSUES PRIVATE LIMITED Vill. Madari, P.O. Kantapukur, P.S. Bagnan, Dist. Howrah, Pin. 711303
95	M/s ITC Limited PSPD Tribeni Vill. Tribeni, P.O. Chandrahati, P.S. Mogra, Dist. Hooghly, Pin. 712504
96	M/s Supreme Paper Mills Limited Vill. Raninagar, P.O. + P.S. Chakdaha, Dist. Nadia, Pin. 741222
97	M/s UNIGLOBAL PAPER MILLS Jhargram, West Medinipur Pin 721507
98	M/s Unitech Paper Mills Pvt Ltd Vill. + P.S. Debra, P.O. Chakshyampur, Dist. Medinipore (W) Pin. 721124
99	M/s United Phosphorus Limited (SWAL Corporation) P.O. +P.S. Durgachak, Dist. Medinipore (E), Pin. 721602
100	M/s ANKAR INDUSTRIES PRIVATE LIMITED Vill. +P.O. MADHYAMGRAM, P.S. Barasat, Dist. 24 PGS (N), Pin. 700129
101	M/s Rallis India Ltd., Howrah Road, Salkia, Golabari, Howrah
102	M/s Haldia Petrochemicals Limited. P.O. +P.S. Durgachak, Dist. Medinipore(E), Pin. 721602
103	M/s MCC PTA India Corp. Pvt. Ltd Vill. + P.O. Bhuniaraichak, Haldia Dist. Medinipore(E), Pin. 721635
104	M/s Dhunseri Petrochem & Tea Ltd. (Petrochem Divn.) Vill. +P.O. Khanjanchak, Dist. Medinipore (E), Pin. 720602
105	M/s East India Pharmaceuticals Works Ltd. (Pathakpara) P.O. Parnashree, P.S. Behala, Pin. 700060
106	M/s ASG Biochem Pvt. Ltd. Vill. + P.O. Ganganagar, P.S. Airport, Dist. 24 PGS (N), Pin. 700132
107	M/s Dey's Medical Stores (Mfg.) Ltd. [De-Se-Chem Division] P.O. Ballygunge, P. S. Karaya, Pin. 700019
108	M/s Fresenius Kabi Oncology Limited. Vill. + P.O. KALYANI, Dist. Nadia,Pin. 741235
109	M/s East India Pharmaceutical Works Limited. Vill. Durgapur, P.O. Durgapur – 15, P.S. Coke Oven Pin. 713215
110	M/s Ahemadpur Sugar Mills, P.O. Ahmedpur, P.S. Santhia, Birbhum
111	M/s Khaitan (India) Ltd. Vill. Plassey, P.O. Plassey Sugar Mill, Dist. Nadia, Pin. 741157
112	M/s Shree Renuka Sugars Ltd. P.O. Debhog, P.S. Bhabanipur, Dist. Medinipore (E), Pin. 721657
113	M/s. West Bengal Power Development Corporation Ltd. Bakreswar Thermal Power Station, P.O – Bk.T.P.P, Dist – Birbhum, PIN – 731 104.
114	M/s. West Bengal Power Development Corporation Ltd. Bandel Thermal Power Station, P.O – Tribeni, Dist – Hooghly, PIN – 712 503.
115	M/s. CESC Limited, Budge Budge Generating Station,Budge Budge, PO – Pujali, Dist – 24 Parganas (South) PIN – 700 138

Sl. No.	Name of and Address of the Industry
116	M/s. CESC Limited, New Cossipore Generating Station, 28, Jheel Road, PO – Cossipore, PIN – 700 002.
117	M/s. CESC Limited, Southern Generating Station, PO & PS – Garden Reach, PIN- 700024, West Bengal
118	M/s. CESC Limited, Titagarh Generating Station, PS – Khardah, PIN – 700 119, Dist – 24 Parganas (North).
119	M/s Mejia Thermal Power Station, Vill Durlavpur, P.O. MTPS, P.S. Gangajalghati, Bankura, Pin 722183
120	Dishergarh Power Supply Co. Ltd.) Chinakuri Unit; PO.Sundarchak,
121	M/s India Power Corporation Limited (formerly Dishergarh Power Supply Co. Ltd.) Dishergarh Unit; PO. Sitarampur, Burdwan
122	M/s. West Bengal Power Development Corporation Ltd. Kolaghat Thermal Power Station, P.O. – Mecheda, Dist. – Purba Medinipur, PIN – 721 137.
123	M/s. NSPCL NTPC - SAIL Power Company Private Limited –Durgapur CPP-II, DSP Complex, Dist. Burdwan, Durgapur– 713 203.
124	M/s. NTPC, Farakka, P.O.– Nabarun, Dist.– Murshidabad, PIN– 742 236, West Bengal.
125	M/s. West Bengal Power Development Corporation Ltd. Santaldih Thermal Power Station, P.O. – S.T. Plant, Dist– Purulia, PIN– 723 146, West Bengal
126	M/s. Durgapur Projects Ltd., Durgapur, District – Burdwan, West Bengal. 713 201
127	M/s Durgapur Thermal Power Station D.V.C.P.O. Durgapur, Burdwan, Pin 713 207
128	M/s. West Bengal Power Development Corporation Ltd. Sagardighi Thermal Power Station, P.O.– Manigram, P.S.– Sagardighi, Dist– Murshidabad, PIN – 742 237.
129	M/s Bata India Ltd., Batanagar, Maheshtala, Kolkata
130	M/s Shyam Sel & Power Ltd. Mangalpur Industrial Area, P.O. & P.S. Raniganj, Dist. Burdwan, Pin. 713347
131	M/s Vikash Metal & Power Limited Poradiha, Santuri, P.O. Pachhandapur, Purulia Pin- 722153

List of Grossly Polluting Industries

Sl. No.	Name and Address of the Industry
1.	Adani Wilmar Ltd., Debhog, HPL Link Road, Haldia-721 657
2.	Aditya Birla Nuvo Ltd., Unit-Jayshree Textiles, 5, P.B.Sarani, Rishra, PO. Pravash Nagar, Hooghly, Pin- 712 249
3.	Ballavpur Paper Manufacturing Ltd., PO. Ballavpur, Ranigunj, Dist. Burdwan, Pin 713 323
4.	Bengal Beverages Pvt. Ltd.; Durgapur Expressway, PO. DCC, P.S. Dankuni, Hooghly 712 310
5.	Berger Paints India Ltd., 14 & 15 Swarnamoyee Road, P.O. B.Garden, Howrah-3
6.	Berger Paints India Ltd.; 103, G.T.Road, Rishra, Hooghly-712 248
7.	Britannia Industries, 15, Taratola Road, Kolkata–88
8.	Dankuni Coal Complex (South Eastern Coal Fields Ltd.); P.O.DCC Township, Dankuni, Hooghly–310
9.	Diamond Beverages Ltd.; P–41, Taratola Road, P.O.Brace Bridge, P.S.Taratola, Kolkata–88
10.	Durgapur Projects Ltd.; P.O. Durgapur, Burdwan–713 201
11.	Durgapur Steel Plant, Durgapur–3, Burdwan
12.	East India Pharmaceutical Works Ltd.; RaturiaWaria Road, P.S.Coke Oven, L.B.D.M.C., Durgapur–15
13.	Emami Paper Mills Ltd. [Gulmohar Paper Ltd.], R.N.Tagore Road, P.S.Belgharia, Kolkata–35
14.	Exide Industries Ltd., Haldia, PO. & PS. Durgachak, Haldia, Purba Medinipur-602
15.	Exide Industries Ltd.; Shyamnagar, 91, New Chord Road, Thakurpukur, Pin-743128
16.	Gun & Shell Factory, Cossipore, 7, K.C.Road, PO. & PS. Cossipore, Kolkata-2
17.	Haldia Petrochemicals Ltd.; P.O. &P.S.Durgachak, East Medinipur–721 602
18.	Hindustan Unilver Ltd.; 63, Garden Reach Road, South Port Police Station, Kolkata–24
19.	IFB Agro Ltd.; Vill–Durgaur, P.O. Noorpur, P.S. Diamond Harbour, Gram Panchayat, 24 Pgs.(S)–743 368
20.	Indian Iron & Steel Co. (IISCO), [Burnpur Works], P.O.Burnpur, P.S. Hirapur, Burdwan
21.	Indian Oil Corporation Ltd., Haldia Refinery, P.O. Haldia Oil Refinery, East Midnapur
22.	ITC Ltd. (Tribeni Tissues Division), P.O. Chandrahati, P.S. Magra, Hooghly–504
23.	Kesoram Rayon, P.O. Nayasari, PS. Morga, Hooghly-513

Sl. No.	Name and Address of the Industry
24.	Kohinoor Paper & Newsprint Pvt.Ltd.; FIGC, Phase-II, Sector-V, P.O. Kalatalahat, PS.Falta, 24-Pgs(S), Pin-743504
25.	Krishna Tissue Pvt.Ltd., Madari, PO. Kantapukur, PS. Bagnan, Dist. Howrah
26.	MCC PTA India Corporation Pvt. Ltd.; Vill&P.O.Bhuniaraichak, P.S.Haldia, Medinipur–721 635
27.	Mother Dairy Kolkata, P.O.Dankuni Coal Complex, P.S. Dankuni, Hooghly–310
28.	Nalco Chemicals India Ltd., Konnagar, Hooghly, pin 712 235
29.	Ordnance Factory, Dum Dum, Kolkata-2
30.	PMC Rubber Chemicals (ICI India Ltd., Rubber Division), P.O.Rishra–Konnagar, Hooghly–248
31.	Ruchi Soya Industries Ltd., Durgachak, Haldia, PurbaMedinipur, Pin 721 602
32.	DhunseriPertochem Ltd. (formerly,South Asian Petrochem Ltd.) P.O.Khanjanchak, P.S. Durgachak, Medinipur(E), Haldia–721 602
33.	Supreme Paper Mills Ltd.; Vill–Raninagar, P.O. &P.S.Chakdah, L.B.Chanduria, Nadia Pin 741 222
34.	Tata Chemicals Ltd., Durgachak, Haldia, PurbaMedinipur, Pin 721 602
35.	Unitech Paper Mills (Pvt.) Ltd., Balichak, PS.Debra, Chakshyampur, Dist.Midnapur, Pin 721124
36.	United Breweries Ltd., Vittal Mallya Road, Kalyani, Nadia Pin 741 235
37.	United Phosphorus Ltd. [SWAL Corporation Ltd.]; PO. Durgargachak, Medinipur, Haldia–602
38.	Pepsico India Holdings Pvt. Ltd. (M/s. Frito-Lay Division) JL No.2 & 4 (Kanduapanchayat), Mouza- Jaladhulagori, VIA Andul Mouri, Sankrail,P.O-Dhulagorh, P.S-Howrah 711302
39.	Shree Renuka Sugars, City center, PO- Debhog, Dist.– Poorba Medinipore, Pin. – 721651
40.	AB Mauri India Pvt. Ltd. [formarly, Kalyani Yeast], Chandmari More, Gayeshpur, Kalyani, Nadia–741 235
41.	Indian Pulp and Paper Pvt. Ltd. P.O. Hazinagar, P.S. Naihati, Dist. 24 Pgs(N), PIN 743 135
42.	Khaitan India Ltd.; Khaitan Nagar, Pollashi, Nadia, 741157
43.	Universal Paper Mills Ltd. [Uniglobal Paper Mill (P) Ltd.], PO. Jhargram, Paschim Medinipur, Pin-721 507

Annexure-V

Hearings conducted by the Technical Cell of the Board for the period from 01.04.2017 to 31.03.2018

Sl. No.	Name & Address of the Industry
1.	M/s Global Industries, Jalan Industrial Complex, P.O. Begri, P.S. Domjur, Howrah 711411
2.	M/s Alom Extrusions Ltd., 184, J.N. Mukherjee Road, Bandhaghat, P.S. Malipanchghora, Howrah – 711106
3.	M/s Serampore Sub-Divisional Hospital (Walsh S.D. Hospital), T.C. Goswami Street, P.O. Serampore, Dist. Hooghly, Pin. 712201
4.	M/s ESI Hospital, Serampore, P.O. Mallickpara, P.S. Serampore, Dist. Hooghly, Pin- 712203
5.	M/s Fortis Hospitals Ltd., 730, Anandapur, P.O. & P.S. Tiljala, Kolkata – 700107
6.	M/s Lakshman Chandra Hazra Galvanizing Works, 24/2, Noor Md. Munshi Lane, P.O. & P.S. Howrah, Pin. 711101
7.	M/s Maithan Steel & Power Ltd., Vill. & P.O. Bonra, P.S. Neturia, Dist. Purulia, Pin. 723121
8.	M/s United Breweries Ltd., D-18, Industrial Area, Vittal Mallya Road, Block –D, P.O. & P.S. Kalyani, Dist. Nadia, Pin. 741235
9.	M/s A.B. Mauri India Pvt. Ltd., Chandmari More, P.O. Gayeshpur, P.S. Kalyani, Dist. Nadia, Pin-741234
10.	M/s Sreema Dyeing & Bleaching Works, 28 B.T. Road, P.O. & P.S. Cossipore, Dist. Kolkata, Pin. 700002
11.	M/s. Suchitra Industries, 12Q, Paikpara Row, P.O. & P.S.- Belgachhia, Kolkata – 700 037
12.	M/s. Sisir Electroplating Works, 226 (258A), Motilal Gupta Road, P.O.- Barisha, Kolkata – 700 008
13.	M/s. S.R. International Paper Mills Pvt. Ltd., Bhatpukur, P.O.- Kampa, P.S.- Bizpur, Dist.- 24 Parganas (N), Pin-743 166
14.	M/s. Alpha Industries, Jalan Industrial Complex, Bipraannapara, P.O.- Begri, P.S.- Domjur, Dist.- Howrah, Pin-711411
15.	M/s. Quality Processing, Howrah Amta Road, Baltikuri, P.O.- Baltikuri, P.S.- Jagacha, Dist.- Howrah
16.	M/s. Jaffs Leather Works, Plot No. 239, Zone-3, Calcutta Leather Complex, P.O.- Bhojerhat, Dist.- 24 Parganas (S), Pin- 743 502
17.	M/s. Sylvan Chemicals, 40/1, 'A' Road, Bamungachi, P.O.- Salkia, P.S.- Liluah, Howrah-711 106
18.	M/s. Kohinoor Paper & Newsprint Pvt. Ltd., J.L. No. 18, 19, Falta Industrial Growth Centre, Phase-II, Sector-V, P.S.- Ramnagar, Dist.- South 24 Parganas
19.	M/s. N.N. Galvanizing Works, Vill.- Gabberia, P.O.- Dosotina, P.S.- Bishnupur, Dist.- 24 Parganas (S), Pin-743 503

Sl. No.	Name & Address of the Industry
20.	M/s. Annapurna Plating, 121, Pramanick Ghat Road, P.O. & P.S.- Baranagar, Kolkata-700 036
21.	M/s. Welmac Leathers, Plot No. 474, Zone-7, Calcutta Leather Complex, P.O.- Bhojerhat, Dist.- 24 Parganas (S), Pin- 743 502
22.	M/s. Hen Ley Tannery, Plot No. 354, Zone-5, Calcutta Leather Complex, P.O.- Bhojerhat, Dist.- 24 Parganas (S), Pin- 743 502
23.	M/s. Chieh Shing Tannery, Plot No. 355, Zone-5, Calcutta Leather Complex, P.O.- Bhojerhat, Dist.- 24 Parganas (S), Pin- 743 502
24.	M/s. Dash International, Plot No. 22, Zone-I, Calcutta Leather Complex, P.O.- Bhojerhat, Dist.- 24 Parganas (S), Pin- 743 502
25.	M/s. Suniti Papers Private Limited, Vill. & P.O.- Orgram, P.S.- Bhatar, Dist.- Burdwan, Pin – 713 167
26.	M/s. Debjyoti Pulp & Paper Pvt. Ltd., Vill. -Melakola, P.O.- Sitarampur, P.S.- Salanpur, Dist.- Burdwan, Pin – 713 359
27.	M/s. Patranabis Leather Industries, Plot No. 18, Zone-I, Calcutta Leather Complex, P.O.- Bhojerhat, Dist.- 24 Parganas (S), Pin- 743 502
28.	M/s. Sree Bajrang Bleaching Co., 68/2, B.T. Road, P.O.- Cossipore, P.S.- Tala, Kolkata – 700 002
29.	M/s. Sreema Enterprise, 1, Gurudas Dutta Garden Lane, P.O. & P.S.- Ultadanga, Kolkata – 700 067
30.	M/s. Sangam Processing, Vill. – Khamar, P.O.- Rajarhat Bishnupur, P.S.- Rajarhat, District – 24 Parganas (N)
31.	M/s. N.N. Galvanizing Works, Vill.- Gabberia, P.O.- Dosotina, P.S.- Bishnupur, 24 Parganas (S)
32.	M/s. Hen Ley Tannery, Plot No. 354, Zone-5, CLC, P.O.- Bhojerhat, Dist.- 24 Parganas (S)
33.	M/s. Chieh Shing Tannery, Plot No. 355, Zone-5, CLC, P.O.- Bhojerhat, Dist.- 24 Parganas (S)
34.	M/s. Asansol Goods Shed Siding, Asansol Division, Eastern Railway, Near Apcar Garden, P.O.- Asansol, P.S.- Asansol (S), Dist.- Burdwan, Pin-713 304
35.	M/s. Shiv Parboti Company, 2, Kumarpara Road, P.O. & P.S.- Liluah, Dist.- Howrah, Pin-711 204
36.	M/s. Manaksia Steels Ltd., Vill. & P.O.- Bhuniaraichak, P.S.- Durgachak, Dist.- Purba Medinipur, Pin - 721635
37.	M/s. Trans Rubber Industries, Plot No.- 152, Zone-2, Calcutta Leather Complex, P.O.- Bhojerhat, Dist.- 24 Parganas (S), Pin- 743 502
38.	M/s. Annapurna Bleachers, 13B, Seals Garden Lane, P.O. & P.S.- Cossipore, Kolkata – 700 002
39.	M/s. Gokul Refoils & Solvent Ltd., HPL Link Road, City Centre, P.O.- Debhog, P.S.- Bhabanipur, Haldia, Dist.-Purba Medinipur, Pin-721 657.

Sl. No.	Name & Address of the Industry
40.	M/s. Lalbaba Seamless Tubes (P) Ltd., Kashberia, Bardhanyaghata, HPL Link Road, P.O.- Debhog, P.S.- Bhabanipur, Haldia, Dist.- Purba Medinipur, Pin – 721 657
41.	M/s. Unitech Paper & Board Industries Ltd., Gajasimul, P.O.- Rajabasha, P.S.- Jhargram, Dist.- Jhargram
42.	M/s. The East India Natural Goods Co., BBT Road, Vill. Gopalpur, P.O. Sarkarpool, P.S. Maheshtala, Dist. 24 Paraganas(S), Pin-700143
43.	M/s. Alishan Steel (P) Ltd., Hetedoba, P.O. Ukhra, P.S. Faridpur, Dist. Paschim Bardhaman, Pin – 713363
44.	M/s. Shiv Shakti Iron Foundry, Mahishrekha, Tulsiberia Road, P.O. Kulgachia, P.S. Uluberia, Dist. Howrah, Pin-711303
45.	M/s. Ganapati India International (P) Ltd., C 71A, Sahid Khudiram Sarani, City Centre, Durgapur, Dist. Paschim Bardhaman-713216
46.	M/s. Shree Shyam Bleaching Co., 38A, Raja Manindra Road, P.O. Belgachia, P.S. Chitpur, Kolkata – 700 037
47.	M/s. SoluxGalfab (P) Ltd., D.H. Road, Bagirhat, Kharibeira, P.O. & P.S. - Bishnupur, Dist. 24 PGS (S), Pin. – 743503
48.	M/s. GTZ (India) Pvt. Ltd., Diamond Harbour Road, Khariberia, P.O. & P.S. Bishnupur, Dist. South 24 Paraganas (S), Pin. 743503
49.	M/s. DivyaJyoti Sponge Iron Pvt. Ltd., Nandanpur, P.O. Ranipur, P.S. Mejia, Dist. Bankura, Pin. - 722133
50.	M/s. Jai Balaji Industries (Unit – IV)., Baskopa, P.O. Rajbandh, Durgapur - 713212
51.	M/s. Om Shakti Smelters Pvt. Ltd., 3513, Lenin Sarani, P.O. MAMC, P.S. Durgapur, Burdwan – 713210
52.	M/s. M.K. Products, Plot No.- 452, Zone-7, Calcutta Leather Complex, P.O.- Bhojerhat, Dist.- South 24 Parganas, Pin- 743 502
53.	M/s. Laqua Overseas, Plot No. 180A, Zone-2, CLC, P.O.- Bhojerhat, Dist.- South 24 Parganas, Pin – 743 502
54.	M/s. Shree Ambey Ispat Pvt. Ltd., Vill.- Basudebpur, P.O. & P.S.- Barjora, Dist.- Bankura, Pin – 722 204
55.	M/s. Mejia Thermal Power Station (D.V.C.), Vill.- Durlavpur P.O. M.T.P.S., P.S.- Gangajalghati, Dist.- Bankura, Pin – 722 183
56.	M/s. Brindaban Prints,Vill.- Sahapur, P.O.- Parbatpur, P.S.- Jamalpur, Dist.- Purba Bardhaman, Pin – 713 408
57.	M/s. Bengal Nestor's Industries Ltd., Somaipur Colony, Ausgram Road, P.O. & P.S.- Ausgram, Dist.- Purba Bardhaman, Pin – 713 156
58.	M/s. Mayur Processors Pvt. Ltd. 23, Monmohan Banerjee Road, P.O.- Sahapur, P.S. Behala, Dist.- 24 Paraganas (S)Pin-700 038
59.	M/s. Tirupati Industries, 3/1, Ramsaran Poddar Lane, P.O.- New Alipore, P.S.- Behala, Kolkata – 700 053

Sl. No.	Name & Address of the Industry
60.	M/s. ARCL Organics Ltd., Rampur, Budge Budge Trunk Road, P.O.- Gobindapur, P.S.- Maheshtala, Dist.- 24 Parganas(S), Pin-700 141
61.	The Divisional Hospital, South Eastern Railway ADRA, P.O.-Adra, P.S.- Kashipur, Dist.- Purulia. Pin-723 121
62.	M/s. Medicare Environmental Management Pvt. Ltd., 41, F Road, Belgachhia, P.S.- Liluah, Dist.- Howrah, Pin- 711 105
63.	M/s. Jaishree Steel Pvt. Ltd. (Unit-II), Vill.- Bamunara, P.S.- Kanksa, Dist.- Paschim Bardhaman, Pin – 713 212
64.	M/s. Alishan Steel (P) Ltd., Hetedoba, P.O. Ukhra, P.S. Faridpur, Dist. Paschim Bardhaman, Pin–713 363
65.	M/s. Metalik Fuel Pvt. Ltd., (previously M/s. GSA Commercials Pvt. Ltd.) Vill.- Gokulpur, P.O.- Samraipur, P.S.- Kharagpur (L), Dist.- Paschim Medinipur
66.	M/s. Calcutta Leather Complex Tanners' Association, CLC, Bantala, P.O.- Bhojerhat, Dist.- South 24 Pgs.
67.	M/s. Dilshad Ahmed & Co., Plot No. 73, Zone-1, CLC, P.O.- Bhojerhat, Dist.- 24 Parganas (S), Pin- 743 502
68.	M/s. Kohinoor Paper & Newsprint Pvt. Ltd., Falta Industrial Growth Centre, Sector-V, Phase-II, P.O.- Kalatalahat, P.S.- Ramnagar, Dist.- South 24 Pgs., Pin-743 504
69.	M/s IVL Dhunseri Petrochem Industries Pvt.Ltd., HPL Link Road, P.O. Khanjanchak, Basudevpur, Haldia, Dist.-Purba Midnapore, Pin-721602

Annexure-VI

Imposition of Bank Guarantee Status for the period from 01.04.2017 to 31.03.2018

Sl. No.	Name & Address of the Industry	Bank Guaranatee imposed (Rs.)
1.	M/s Skipper Ltd. (Unit-Uluberia), Vill. Madhabpur, P.O. Mahishrekha, P.S. Uluberia, Howrah – 711303	1000000
2.	M/s Shakambhari Ispat& Power Ltd., Vill. Madandih, P.O. Bartoria, P.S. Neturia, Dist. Purulia, Pin. 723121	1000000
3.	M/s Super Smelters Ltd. (Unit-III), Jamuria Industrial Estate, P.O.: Ikra, P.S.: Jamuria, Dist. Burdwan, Pin- 713362	1000000
4.	M/s. Zee Leather, Plot No.- 656, Zone-8, Calcutta Leather Complex, P.O.- Bhojerhat, Dist.- South 24 Parganas, Pin- 743 502	75000
5.	M/s. SheeSen Leather Pvt. Ltd., Plot no. 629, 629A, Zone-8, Calcutta Leather Complex, P.O.- Bhojerhat, Dist.- 24 Parganas (S), Pin-743 502	200000
6.	M/s. Standard Leather Pvt. Ltd. Plot No. 561, Zone-6, Calcutta Leather Complex, Bhangar, Dist.- 24 Parganas (S)	200000
7.	M/s Lakshman Chandra Hazra Galvanizing Works, 24/2, Noor Md. Munshi Lane, P.O. & P.S. Howrah, Pin. 711101	25000
8.	M/s. Fortis Hospitals Ltd. 730, Anandapur, P.O. & P.S.- Tiljala, Kolkata – 700 107	100000
9.	M/s. United Breweries Ltd., Plot No. 18, Vittal Mallya Road, Block-D, P.O. & P.S.- Kalyani, Dist.- Nadia, Pin – 741 235	500000
10.	M/s. Alpha Industries,Jalan Industrial Complex, Bipraannapara, P.O.- Begri, P.S.- Domjur, Dist.- Howrah, Pin-711 411	50000
11.	M/s. Quality Processing, Howrah Amta Road, Baltikuri, P.O.- Baltikuri, P.S.- Jagacha, Dist.- Howrah	25000
12.	M/s. Jaffs Leather Works, Plot No. 239, Zone-3, Calcutta Leather Complex, P.O.- Bhojerhat, Dist.- 24 Parganas (S), Pin- 743 502	200000
13.	M/s Maithan Steel & Power Ltd., Vill. & P.O. Bonra, P.S. Neturia, Dist. Purulia, Pin. 723121	300000

Sl. No.	Name & Address of the Industry	Bank Guaranatee imposed (Rs.)
14.	M/s. A. B. Mauri India Pvt. Ltd., Chandmari More, P.O. Gayeshpur, Kalyani, Dist. Nadia, Pin-741234	300000
15.	M/s. S.R. International Paper Mills Pvt. Ltd.,Bhatpukur, Vill.- Bijna, P.O.- Madarpur, P.S.- Bizpur, Dist.- 24 Parganas (N), Pin-743 166	1000000
16.	M/s. Leatherex Tanning Industries, Zone-3, Plot No. 215 & 216, Calcutta Leather Complex, P.O.- Bhojerhat, Dist.- 24 Parganas (S), Pin- 743 502	100000
17.	M/s. Legend Food Industries, Jessore Road, Duttapukur, Narasinghapur, P.O.- Chhotojagulia, Dist.- 24 Parganas (N), Pin-743 294	100000
18.	M/s. Patranabis Leather Industries, Plot No. 18, Zone-I, Calcutta Leather Complex, P.O.- Bhojerhat, Dist.- 24 Parganas (S), Pin- 743 502	100000
19.	M/s. M.S. Enterprise, Plot No. 429A, Zone-5, Calcutta Leather Complex, P.O. Bhojerhat, P.S. Kolkata Leather Complex, Dist. 24 Parganas (S), Pin- 743 502	200000
20.	M/s. Suniti Papers Private Limited, Vill. & P.O.- Orgram, P.S.- Bhatar, Dist.- Burdwan, Pin – 713 167	300000
21.	M/s. Hen Ley Tannery, Plot No. 354, Zone-5, CLC, P.O.- Bhojerhat, Dist.- 24 Parganas (S)	100000
22.	M/s. Chieh Shing Tannery, Plot No. 355, Zone-5, CLC, P.O.- Bhojerhat, Dist.- 24 Parganas (S)	100000
23.	M/s. Suchitra Industries,12Q, Paikpara Row, P.S.- Belgachia, Kolkata – 700 037	50000
24.	M/s. Manaksia Steels Ltd., Vill. & P.O.- Bhuniaraichak, P.S.- Durgachak, Dist.- Purba Medinipur, Pin - 721635	1000000
25.	M/s. Debjyoti Pulp & Paper Pvt. Ltd., Vill.- Melakola, P.O.- Sitarampur, P.S.- Salanpur, Dist.- Burdwan, Pin – 713 359	300000
26.	M/s. Gokul Refoils& Solvent Ltd., HPL Link Road, City Centre, P.O.- Debhog, P.S. Bhabanipur, Haldia, Dist.- Purba Medinipur, Pin – 721 657	1000000
27.	M/s. Shiv Shakti Iron Foundry, Mahishrekha, Tulsiberia Road, P.O. Kulgachia, P.S. Uluberia, Dist. Howrah, Pin-711303	75000
28.	M/s. Alishan Steel (P) Ltd., Hetedoba, P.O. Ukhra, P.S. Faridpur, Dist. Paschim Bardhaman, Pin. – 713363	200000
29.	M/s. Trans Rubber Industries, Plot No.- 152, Zone-2, Calcutta Leather Complex, P.O.- Bhojerhat, Dist.- South 24 Parganas, Pin- 743 502	100000

Sl. No.	Name & Address of the Industry	Bank Guaranatee imposed (Rs.)
30.	M/s. Sonic Thermal Ltd., Sitarampur, P.O.- Ghutghoria, P.S.- Barjora, Dist.- Bankura, Pin – 722 138	1000000
31.	M/s. GTZ (India) Pvt. Ltd., Diamond Harbour Road, Khariberia, P.O. & P.S. Bishnupur, Dist. 24 Paraganas (S), Pin- 743503	300000
32.	M/s. Shyam Ferro Alloys Ltd., Angadpur, Durgapur, Dist.- Paschim Bardhaman, Pin-713 215	1000000
33.	M/s. Tien Sheng Tannery, Plot No. 367, Zone-5, Calcutta Leather Complex, P.O.- Bhojerhat, Dist.- 24 Parganas (S), Pin – 743 502	100000
34.	M/s. Jai Balaji Industries (Unit – IV), Baskopa, P.O. Rajbandh, Durgapur - 713212	1000000
35.	M/s. La France,Plot No.- 644A, Zone-8, Calcutta Leather Complex, P.O.- Bhojerhat, Dist.- 24 Parganas (S), Pin – 743 502	200000
36.	M/s Skipper Ltd.(Unit-Uluberia), Vill. Madhabpur, P.O. Mahishrekha, P.S. Uluberia, Howrah – 711303	750000
37.	M/s.DivyaJyoti Sponge Iron Pvt. Ltd., Nandanpur, P.O. Ranipur, P.S. Mejia, Dist. Bankura, Pin. - 722133	1000000
38.	M/s. Bengal Shristi Infrastructure Development Ltd., Shristinagar, Garui, P.O.- Kanyapur, P.S.- Asansol(N), Dist.- Burdwan	200000
39.	M/s. M.K. Products,Plot No.- 452, Zone-7, Calcutta Leather Complex, P.O.- Bhojerhat, Dist.- 24 Parganas (S), Pin- 743 502	100000
40.	M/s. Laqua Overseas, Plot No. 180A, Zone-2, CLC, P.O.- Bhojerhat, Dist.- 24 Parganas (S), Pin – 743 502	100000
41.	M/s. Brindaban Prints,Vill.- Sahapur, P.O.- Parbatpur, P.S.- Jamalpur, Dist.- Purba Bardhaman, Pin- 713 408	75000
42.	M/s. Bengal Nestor's Industries Ltd., Somaipur Colony, Ausgram Road, P.O. & P.S.- Ausgram, Dist.- Purba Bardhaman, Pin – 713 156	200000
43.	M/s. Alishan Steel (P) Ltd., Hetedoba, P.O. Ukhra, P.S. Faridpur, Dist. Paschim Bardhaman, Pin. – 713363	200000
44.	M/s. Shree Ambey Ispat Pvt. Ltd., Vill.- Basudebpur, P.O. & P.S.- Barjora, Dist.- Bankura, Pin – 722 204	500000
45.	M/s. Durgapur Thermal Power Station (D.V.C.), P.O. & P.S.- Durgapur, Dist.- Burdwan, Pin – 713 307	1000000

Sl. No.	Name & Address of the Industry	Bank Guaranatee imposed (Rs.)
46.	M/s. Bengal Shristi Infrastructure Development Ltd., Shristinagar, Garui, P.O.- Kanyapur, P.S.- Asansol(N), Dist.- Burdwan	200000
47.	M/s. ARCL Organics Ltd., Rampur, Budge Budge Trunk Road, P.O.- Gobindapur, P.S.- Maheshtala, Dist.- South 24 Parganas, Pin-700 141	500000
48.	M/s. Medicare Environmental Management Pvt. Ltd., 41, F Road, Belgachhia, P.S.- Liluah, Dist.- Howrah, Pin 711 105	500000
49.	M/s. Alishan Steel (P) Ltd., Hetedoba, P.O. Ukhra, P.S. Faridpur, Dist. Paschim Bardhaman, Pin-713363	200000
50	M/s. Super Smelters Ltd., Jamuria Industrial Estate, P.O.- Ikrah, P.S.: Jamuria, Dist.-Paschim Bardhaman, Pin-713362	-100000
51.	M/s. Dilshad Ahmed & Co., Plot No.73, Zone-1, CLC, P.O.- Bhojerhat, Dist.- 24 Parganas (S), Pin- 743 502	200000

Annexure-VII

Closure orders issued by the Board for the period from 01.04.2017 to 31.03.2018

Sl. No.	Name & Address of the Industry
1.	M/s Sreema Dyeing & Bleaching Works, 28 B.T. Road, P.O. & P.S. Cossipore, Dist. Kolkata, Pin- 700002
2.	M/s. Global Tanning Industries,Plot No. 86A, Zone-II, Calcutta Leather Complex, Bhangar, Dist.- 24 Parganas (S), Pin – 743 502
3.	M/s. Suchitra Industries,12Q, Paikpara Row, P.O. & P.S.- Belgachhia, Kolkata – 700 037
4.	M/s. Sisir Electroplating Works,226 (258A), Motilal Gupta Road, P.O.- Barisha, Kolkata – 700 008
5.	M/s. S.R. International Paper Mills Pvt. Ltd.,Bhatpukur, P.O.- Kampa, P.S.- Bizpur, Dist.- 24 Parganas (N), Pin-743 166
6.	M/s. Suniti Papers Private Limited,Vill. & P.O.- Orgram, P.S.- Bhatar, Dist.- Burdwan, Pin – 713 167
7.	M/s. Debjyoti Pulp & Paper Pvt. Ltd.,Vill. -Melakola, P.O.- Sitarampur, P.S.- Salanpur, Dist.- Burdwan, Pin – 713 359
8.	M/s. Annapurna Plating,121, PramanickGhat Road, P.O. & P.S.- Baranagar, Kolkata-700036
9.	M/s. N.N. Galvanizing Works,Vill.- Gabberia, P.O.- Dosotina, P.S.- Bishnupur, Dist.- 24 Parganas (S), Pin-743 503
10.	M/s. Solux Galfab (P) Ltd., D.H. Road, Bagirhat, Kharibeira, P.O. & P.S. - Bishnupur, Dist. 24 PGS (S), Pin. – 743503
11.	M/s. Sree Gopal Bleaching & Dyeing Concern, 22A, Dum Dum Road, Kolkata – 700 002
12.	M/s. Shree Shyam Bleaching Co., 38A, Raja Manindra Road, P.O. Belgachia, P.S. Chitpur, Kolkata – 700 037
13.	M/s. Sterling Bolts Pvt.Ltd.,South Shanpur, P.O. Dasnagar, P.S. Dasnagar, Dist.- Howrah-711 105
14.	M/s. Rukmani Fab & Gal Pvt. Ltd., NH-6, Jalan Industrial Complex, P.O. Begri, P.S. Domjur, Dist. Howrah-711 411
15.	M/s. Ruby Electroplating Co.,North Ichapore Road, Sealdanga, P.O. Santragachi, P.S. Jagacha, Dist. Howrah-711 104
16.	M/s. Om Galvanizing Works,116/2, Makardah Road, Shanpur, P.O. Howrah, P.S. Bantra, Dist. Howrah-711 101
17.	M/s. New Orient Anodising Works, 27B, Lenin Sarani, P.O. Dharmatala, P.S. Taltala, Kolkata- 700 013
18.	M/s. Ma Manasha Enterprise,NH-6, Jalan Industrial Complex, Gate No.3, Jangalpur, P.O. Begri, P.S.-Domjur, Dist. Howrah-711 411
19.	M/s Akas Enterprise, NH-6, Jalan Industrial Complex, Gate No. 1, Jangalpur, P.O. Begri, P.S.-Domjur, Dist. Howrah-711 411

Sl. No.	Name & Address of the Industry
20.	M/s Arihant Engg & Galvanising Works, NH-6, Klipcon Industrial Estate, P.O. Jala Dhulagori, P.S.-Sankrail, Dist. Howrah-711401
21.	M/s. Hobb International Pvt. Ltd., 58, N.S.Road, P.O. & P.S. Liluah, Dist. Howrah-711 204
22.	M/s. Milly Electroplating (hereinafter referred to as the industry), 9, Gurusaday Dutta Road, P.O. Ballygunj, P.S. Karaya, Kolkata- 700 019
23.	M/s. New Bharat Industries (hereinafter referred to as the industry), Jalan Complex, Gate no.3, Vill: Biprannapara, P.O.: Begri, P.S.: Domjur, Dist-Howrah, Pin- 711411
24.	M/s. Super Fine Thread Co. (hereinafter referred to as the industry), Andul Road, Kestorampur, Ankurhati, P.O. Makardah, P.S. Domjur, Dist. Howrah-711 401
25.	M/s. A.N.Galvanising Work (hereinafter referred to as the industry),104/5, Noor Md. Munshi Lane, P.O. & P.S.: Howrah, District-Howrah, Pin- 711101
26.	M/s. Changia Textiles (hereinafter referred to as the industry), 98, "C" Road, Bamungachi, Belgachia, P.O. & P.S. Liluah, Dist. Howrah-711 105
27.	M/s. Mahavir Pumps Mfg. Pvt. Ltd.,21/1, "F" Road, Belgachia, P.O.: Dasnagar, P.S.- Liluah, Dist.-Howrah, Pin- 711101
28.	M/s. Jyoti Tar Products Pvt. Ltd., Jalan Industrial Park, Jaladhulagori, P.O.: Dhulagori, P.S.: Sankrail, District: Howrah. Pin – 711302
29.	M/s. Hindustan Tar Products, Alampur, NH-6, P.O.-New Korola, P.S.: Sankrail, Dist.-Howrah, Pin – 711302
30.	M/s BMW Industries Ltd.(Unit-I),NH-6, Vill. Argori, Jangalpur, P.O. Andul-Mouri, P.S.-Sankrail, Dist.Howrah-711302
31.	M/s. Universal Bituminous Industries Pvt. Ltd., Vill. & P.O.: Dhulagori, P.S.: Sankrail, District: Howrah. Pin – 711302
32.	M/s. Nirmal Dyeing & Printing Pvt. Ltd.,Vill. Chotobelu, Delhi Road, P.O. Sheoraphuly, P.S. Serampore, Dist. Hooghly, Pin-712 223
33.	M/s. Maraica Industries (Unit– II), N.H.6, Bombay Road, P.O.- Nibra, P.S.- Domjur, Howrah – 711403
34.	M/s. New Star Anodizing,Srimanipara, Panchanantala, P.O. Makardah, P.S. Domjur, Howrah – 711409
35.	M/s. D.N. Banerjee, Vill.-Joychanditala, P.O. & P.S. Domjur, Howrah – 711405
36.	M/s. Banerjee & Co., Vill.-Joychanditala, P.O. & P.S. Domjur, Howrah – 711405
37.	M/s. Dhara Brothers Jagadishpur Road, Vill.- & P.O. Uttar Jhapordah (Rathtala), P.S. Domjur, Howrah – 711405
38.	M/s. Das Anodizing, Dongaghata, Vill&P.O.Makardah, P.S.Domjur, Howrah - 711409
39.	M/s. Bibhuti BhusanJalui, Daspara, Vill.-& P.O. Makardah, P.S.Domjur, Howrah - 711409
40.	M/s. Tara Maa Cottage Industries, Daspara, Vill.&P.O.-Makardah, P.S.Domjur, Howrah – 711409
41.	M/s. Monoranjan Jalui, Choudhury Para, P.O.Makardah, P.S.Domjur, Howrah - 711409
42.	M/s. Bombay Anodizing Corporation, Amta-Howrah Road, Katlia, P.O. Nibra, P.S.Domjur, Howrah – 711409

Sl. No.	Name & Address of the Industry
43.	M/s. Onkar Parivahan Finance Pvt. Ltd. ,Vill.- & P.O.-Modhya Jhorehat, P.S.-Sankrail, Howrah – 711302
44.	M/s. Queen Electroplating Co. Ichapur Sealdanga, Santragachi, P.S. Jagacha, Howrah - 711104
45.	M/s. Bright Galvanizers, 14/21(New), 10 (old), Station Road, Liluah, Howrah – 711204
46.	M/s. Rajasthan Yarn Processing Mills Pvt. Ltd, 32, Kumarpara Lane, P.O. & P.S. Liluah, Howrah – 711204
47.	M/s. Biplab Processing located at Gopalpur, Chandigarh, P.O.– Ganganagar, P.S.–Barasat, Dist.–North 24 Parganas, Pin–700 132
48.	M/s. Canning Farms Pvt. Ltd. located at 1830, Chakgaria, Budherhat, P.O.: Kalikapur, P.S.: Purba Jadavpur, Kolkata – 700 094
49.	M/s. Primex Resin (India) Pvt. Ltd. located at Ashuti Main Road, Moynagrah, P.O.: Raipur, P.S.: Maheshtala, District: 24 Parganas (South). Pin- 700141
50.	M/s. Neha Enterprise located at Plot no. 133, Zone 2 , P.O.: Bojerhat, P.S.: Kolkata Leather Complex, South 24 Parganas. Pin- 743502
51.	M/s. Santra Electroplating located at 10, Chanditala Branch Road, P.O.: New Alipore, P.S.: Behala, District: South 24 Parganas, Pin- 700053
52.	M/s. Maa Electroplaters located at P-181 Upen Banerjee Road, P.O.: Parnasree, P.S.: Behala, District: South 24 Parganas, Pin- 700060
53.	M/s. Asianol Lubricants Pvt. Ltd. located at Biren Roy Road (W), P.O.: Raipur, P.S.: Maheshtala, District: South 24 Parganas. Pin- 700141