

Report on activities

(May 2011 to 22 November 2011)



West Bengal Pollution Control Board
(Department of Environment, Government of West Bengal)

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INTRODUCTION

The West Bengal Pollution Control Board has greatly revamped its activities and function since June this year. Besides its statutory regulatory activities, a large number of activities have been undertaken and implemented. Many of these activities are directed towards generation of environmental awareness and ensuring a clean environment to the people. The activities in this regard organized for three months – May to mid August was prepared and sent to the Department of Environment for information and record. The updated activities on various areas conducted for the last 200 days has been compiled as presented in this report.

A plan of action for the next few month has given at the end of this report.

1. Visit of Minister-in-Charge at Dumurjola, Howrah

The Dumurjola Sports Complex was the first place visited by the Hon'ble MIC, DoE, GoWB, Dr.



Hon'ble MICs Dr. Ghosh Dastidar and Sri A. Ray at Dumurjola

Sudarsan Ghosh Dastidar on 19th May 2011. The complex was found to be dumped with municipal and industrial solid waste almost all sides. The visit was attended by the District Magistrate, Officers of Howrah Municipal Corporation and Howrah Improvement Trust. Dr. Ghosh Dastidar gave on spot instructions to the District authority for cleaning up the entire place and arrange for appropriate disposal of the wastes scattered around the place.

2. Visit of Minister-in-Charge at Rabindra Sarobar

Rabindra Sarobar, the national is one of the prides of Kolkata. Like all other water bodies, this great water body also has it's own threats. Mainly from the dwellers around and the Club activities inside



Lake Rabindra Sarobar - The Pride of Kolkata

the garden surrounding the lake faces a constant pressure of littering of domestic garbage waste, plastics polybags and other packaging materials and liquid kitchen waste or washing/bathing detergents contributing BOD and therefore increasing the coliform count. Hon'ble MIC Dr. Sudarsan Ghosh Dastidar visited the lake on 20th May and instructed the corresponding

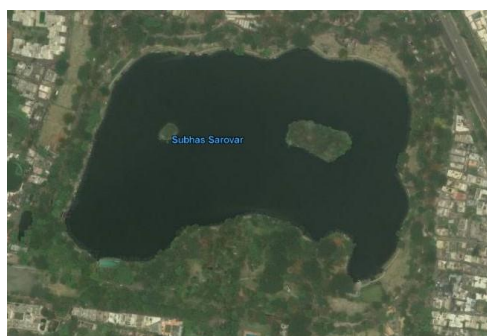
authorities for proper upkeepment of the lake and maintenance of the water quality. The Kolkata Municipal Corporation has recently shown immense interest in developing the environmental status of the lake and it's surroundings, and as per the advises of the State Board, actions in respect of containment of municipal sewage and kitchen wastes from the Clubs on the lake has been implemented.

Water Quality of Rabindra Sarobar in 2011

| Month of 2011 | DO (mg/l) [Std. > 4] | BOD (mg/l) [Std. < 3] | Faecal Coliform (MPN / 100 ml) [Std. < 500] |
|---------------|-------------------------|--------------------------|--|
| Jan | 10.6 | 7.55 | 170000 |
| Feb | 8.4 | 5.5 | 50000 |
| Mar | 7.5 | 3.5 | 13000 |
| Apr | 11.4 | 0.9 | 27000 |
| May | 8.3 | 7.0 | 8000 |
| Jun | 3.6 | 1.1 | 17000 |
| Jul | 7.9 | 6.6 | 7000 |

3. Visit of Minister-in-Charge at Subhas Sarobar

Although not yet declared as a national lake, the Subhas Sarobar is a wonderful lake surrounded by greeneries offering a breeding space for the densely populated Kolkata citizens. Environmental threat



The Subhas Sarobar

to this lake is predominantly from the construction activities of East West Metro Corridor Project (EWMCP). Considering the importance of the situation, Hon'ble MIC visited this lake also on 21st May. Inspections to this lake is made by the Board officials on continuous basis and it is found that the problem to the lake and the greeneries are at present form activities still progressing mainly along an extensive part of the Northern bank of the Lake (Sarobar) and construction activities related to a future food park along an extensive area parallel to the Eastern Bank.



Construction fences dumped in the woods

The latest observations made by the Board regarding the environmental health of the Sarobar are presented below.

- a) Marked improvement of water quality appearance and parameters of the lake has taken place.
- b) However the construction works along the Northern & Eastern banks still deserve some further adherence to corresponding guidelines of the Environmental norms as mentioned & discussed already to ensure curbing of dust dissipation into vulnerable neighborhoods among other required steps.
- c) More initiatives are required from the Metro authority in removing the construction shields lying and destroying the greeneries of the garden surrounding the lake.

A joint inspection with KMDA, KMC and Metro Rail authority has been made recently and cleaning operation has been initiated as per the guidelines provided by the State Board.

4. Acharya Prafulla Chandra Roy Botanical Garden, Shibpur

Unplanned urbanisation and spiraling population have resulted in severe environmental crisis in and around Kolkata. The National pride, **Acharya P.C. Roy Botanical Garden, Shibpur** is one of the



A hole in the boundary wall

latest such targets of such planlessness. Environmental threats on the garden ecology are quite old and are in forms of indiscriminate dumping of plastic waste, cutting and stealing of trees etc. Recently it was found that industrial waste water and municipal sewage both are made to enter the garden making holes to the fencing wall. Another major threat to the garden biodiversity was found in the form of unused

laboratory chemicals dumped indiscriminately within the garden. Extremely vulnerable chemical such as "Potassium Dichromate" could be found scattered in the dump.

Hon'ble MIC, Dr. Sudarsan Ghosh Dastidar visited the site on 24th June and found the blue and toxic Dye factory effluent to enter the garden through a fence hole. He himself instructed the Garden and the District authority to take immediate action to stop the nuisance. Closure order by the Board to the following industries:



Toxic chemical dump in the garden

- | | |
|---------------------------------------|--------------------------------------|
| 1. M/s. Shalimar Laundry | 2. M/s. Pratap Cold Storage |
| 3. M/s. Magnolia Ice Cream | 4. M/s. Sharma Sweets |
| 5. M/s. Pabitra Hindu Hotel | 6. M/s Bakultala Motor Stores |
| 7. M/s. Mantur Hindu Hotel | 8. M/s. Gupta Food Store |
| 9. M/s. Jathamosai Mistanna Bhandar | 10. M/s. Vijayshree Industries Ltd. |
| 11. M/s. Ashik Hussain & Grand Sons | 12. M/s. J. D. Jones & Co. Pvt. Ltd. |
| 13. M/s. Sign-In (Restaurant & Hotel) | 14. M/s. Garden Mistanna Bhandar |

Apart from the above actions, the State Board is in continuous connection and persuasion with the Howrah Municipal Authority and the Botanical Garden Authority to solve the problem of waste water, solid waste disposal within the Botanical garden premise.

5. Water Bodies at Howrah and Hooghly

The West Bengal Pollution Control Board, under the direction of Hon'ble High Court of Calcutta took inspected some important water bodies of Howrah and Hooghly district. All these water bodies are predominantly large water bodies and jheels with enormous ecological importance and located at the outskirts of the central city area of Howrah/Bally and Uttarpara/Hindmotors in Hooghly district. All the water bodies are facing enormous pressure of urbanization and are threatened with solid and liquid waste dumping. The water bodies inspected are Karunapukur, Thakuranpukur, Rani Jheel, Padmapukur Jheel and Santragachi Jheel in Howrah and Large water body adjacent to Hind Motors Factory, Pond at Bhadrakali, Palter Pukur and Debai Pukur in Hooghly district. The WBPCB made the following recommendations which were all accepted by the Hon'ble High Court, and instructed the Municipal Authorities to submit their action taken reports to the Hon'ble Court.

1. Waste water discharged by the Municipal Corporation/Municipality into the water bodies should be stopped forthwith and for this, alternate disposal arrangement should be arranged. The municipalities should construct treatment facilities for waste water/municipal sewage within three months so that untreated water may be treated to achieve the standards before their disposal.
2. Municipal authorities should arrange awareness programmes against disposal of plastic carry bags in and around the water bodies and also impose fines on the violators as per rules.
3. There should be proper disposal arrangement for all types of solid wastes. The disposal of solid wastes into the water bodies should be stopped immediately
4. Apart from the aforementioned suggestions Municipalities should also take action for beautification of water bodies including periodic cleaning of the water bodies and planting trees and flowering plants surrounding the water bodies.

The case is still being heard by the Hon'ble High Court and the Board has to keep close watch on the water bodies in this area and constantly keep in touch with the respective municipalities and other local bodies for the upkeepment of the precious water bodies.

6. Environmental and Water Quality Status of "Laldighi" the heritage pond located in Dalhousie Square area

Laldighi is one of the important heritage pond of Kolkata located in the Dalhousie Square area. It is said that its existence dates back to 18th century when it was dug by the British with an objective to provide clean and safe drinking water to the European community.

Officers of West Bengal Pollution Control Board carried out an inspection of the pond on 14.6.2011 to assess the present environmental and water quality status of the heritage pond. The inspecting officials could meet the representative of the B. B. D. Bag Anglers' Association (organization looking after maintenance of the pond) on 24.6.2011 to discuss about their views in the matter concerned.



7. Homage to a martyr on environmental cause

Tapan Dutta of Bally Jagacha Howrah had been a crusader against filling up of water bodies of Jagadishpur Baigachi Jaipurbil and Chamrail of Howrah District. He had also filed writ petition before the Hon'ble High Court Calcutta against such filling up of water bodies. Tapan Dutta was murdered on 16th May, 2011. It was alleged by the family members of late Tapan Dutta that the murdered was a sequel to his fighting against such filling up of water bodies. The Department of Environment decided to give Rs. 100000/- (Rupees one lakh) to her daughter Puja Dutta as a mark of respect for the victim. Accordingly Hon'ble Minister along with the Chairman of the State Board visited the house of late Tapan Dutta and handed over the cheque for the said tribute to his family members.

State Board further arranged a meeting on 12-07-2011 on the basis of the complaint lodged by Pratima Dutta wife of late Tapan Dutta against filling up of water bodies situated at Jagadishpur Baigachi Jaipurbil and Chamrail of Howrah District. In the said meeting it was decided that Fisheries Department, District Land and Land Reforms Officer Howrah and the complainant will submit their written submission in writing to the State Board within 13-07-2011 and thereafter the State Board will take further action in this matter.

8. Celebration of World Environment Day 2011

World Environment Day (WED) is an annual event that is aimed at being the biggest and most widely celebrated global day for positive environmental action. WED activities take place all year round but climax on 5 June every year, involving everyone from everywhere.

World Environment Day' 2011 theme- 'Forests: Nature at Your Service' underscores the intrinsic link between quality of life and the health of forests as well as forest ecosystems. The United Nations have declared the year 2011 as the International Year of forests and this year's theme supports and reinforces the global concern for forests and its ecosystem. Most importantly, this year India is hosting the celebrations of World Environment Day which expresses India's strong commitment to work with the global community for sustainable development.

Department of Environment, Government of West Bengal and West Bengal Pollution Control Board celebrated the auspicious day on 5th June in a very colorful and meaningful manner. As part of the celebration a Rally was organized and started from Deshapriya Park, passed through Sarat Bose Road and finally ended at Nazrul Mancha to mark as well as to give a great start to the occasion. It roped in school children, NGO members, environmental activists and other eminent people from various social sectors, who carried colorful banners, posters, tableau etc. to spread environmental awareness, importance of forest conservation to the common people.

The rally was followed by a cultural programme at Nazrul Manch. Dr. Sudarsan Ghosh Dastidar, Hon'ble Minister-in-charge, Department of Environment, Government of West Bengal graced the occasion as the chief guest. Shri RPS Kahlon, Principal Secretary, Department of Environment, Government of West Bengal inaugurated the programme with his welcoming speech. Hon'ble Minister-in-charge also gave a warm welcome to all the participants of the rally including all the dignitaries and other audiences present there. During his speech he stressed upon some relevant issues, like genetically modified food, necessity and significance of alternative energy source, i.e., solar, hydro and wind energy and control of environmental pollution (air, water and noise pollution).



Among the other dignitaries Shri Sandipan Mukherjee, Member Secretary, West Bengal Pollution Control Board, Shri Sunando Sanyal, Dr. Kalyan Rudra, Sri Sujat Bhadra, Sri Bhaskar Gupta, Smt. Chaitali Dutta, Sri Ashokendu Sengupta, Dr. Debopriyo Mullick remained present on dais and delivered their valuable speeches during the inaugural session of the programme.

After the Inaugural Session, a cultural programme was performed by the students of Vidya Bharati Girls' High School, Alipore and eminent vocalist Smt. Swagatalakshmi Dasgupta.

The programme ended with the vote of thanks from Shri Ashok Bhattacharya, Joint Secretary, Department of Environment, Government of West Bengal.

9. Awareness Campaign Programme on Restriction of Plastic Carry Bags in various market places in Kolkata and adjoining districts

Plastic waste has attracted widespread attention in India especially due to the indiscriminate littering on open land, drains, rivers, coasts, municipal trenching ground etc. Such littering hinders the natural aeration process of surface water bodies, block municipal sewer lines and storm water drains and also clog bar-screens of water pumping stations/sewage treatment plants. They also interfere with the various agricultural operations, prevent natural recharge of underground water. Municipalities also receive reports of death of cows and other animals from ingested plastic bags. Sometimes these wastes are also burnt openly posing a threat to the environment. Most plastic wastes (except very thin & soiled carry bags, multilayered packaging materials, laminated pouches/sachets etc.) can be recycled but the recycling industry is still not well developed in the country.

As per the Plastic Waste (Management and Handling) Rules, 2011 under the Environment (Protection) Act, 1986 in supersession of the 'Recycled Plastics Manufacture and Usage Rules, 2011 issued by the Ministry of Environment and Forest (MoEF), Government of India on February 4, 2011, manufacture, store, distribution, sale and use of plastic carry bags of thickness less than 40 microns are prohibited in the country. Use of plastic sachets for storing, packing or selling gutkha, tobacco and pan masala are also prohibited. But without proper awareness among the common people and active cooperation of all the stake holders effective implementation of such rules is not possible.

In view of this, on 1 July 2011 West Bengal Pollution Control Board launched campaign programmes to create awareness among the common people including both buyers and sellers regarding prohibition of using plastic carry bags. Since the very first day a number of renowned market places in and around Kolkota, Howrah, North and South 24 parganas district, selected in the first phase, during the month of July are as follows: –

1. Gariahat Market, Kolkata
2. Baithakkhana Bazar (Sealdah), Kolkata
3. Manicktala Market, Kolkata
4. Ultadanga Bazar, Kolkata
5. New Market (S.S. Hogg Market), Kolkata
6. Kalibabur Bazar, Howrah
7. Shibpur Bazar, Howrah
8. Kadamtala Bazar, Howrah
9. Salkia Harganj Bazar, Howrah
10. Batanagar Mullick Bazar, 24 Pgs(S)

11. Diamond Harbour Station Market and 12 Kasba Ramlal Bazar and Santoshpur & Kapat Hat Market, 24 Pgs(S)
 13. Madhyamgram Bazar, 24 Pgs(N)

a) Gariahat Market:

Dr. Sudarsan Ghosh Dastidar, Hon'ble Minister-in-charge, Department of Environment, Government of West Bengal inaugurated the programme at Gariahat Market on 1 July 2011 at 9:30 a.m. Dr. Binay Kanti Dutta, Chairman, Sri Sandipan Mukherjee, Member Secretary, other senior officials and staffs of West Bengal Pollution Control Board were present in the programme. Apart from the Board officials, Shri Rajiv Deb, local Councilor of Gariahat Market area, representatives of Kolkata Municipal Corporation, police officials of local police station, various NGOs, like, Poets' Foundation, The Scientific Association of Bengal, members of Bazar Samity and eminent personalities, like Dr. Kalyan Rudra, Shri Ashokendu Sengupta participated in the programme.



Campaign programme at Gariahat Market

Hon'ble Minister-in-charge along with the whole gathering entered the markets and cordially requested all the buyers and sellers to give up the habit of using plastic carry bags to avoid possible health and environmental hazards caused by the plastic wastes. As an alternative, cloth bags were distributed among the common people in those markets. Leaflets stating such restrictions were also distributed among them to generate awareness.



Campaign programme at Gariahat Market

b) Baithakkhana Bazar :

Hon'ble Minister-in-charge led the team of Board officials, NGO members, eminent persons including Smt. Aparajita Dasgupta, local Councilor of the area, bazar samity etc. to Baithakkhana Bazar area at Sealdah on 1 July 2011 at 10:30 a.m to spread awareness among the shop-owners, other sellers, traders, buyers etc. through displaying posters, banners, distributing leaflets and cloth bags. Another NGO, namely, Man Nature and Sports joined the team for the purpose.



Campaign programme at Baithakkhana Bazar

c) Manicktala Market:

A meeting was organized on 1 July 2011 at 11:30 a.m in which representatives of Manicktala Bazar Byabsayee Samity, Kolkata Municipal Corporation (Ward No.- 27), local councilor, Board officials etc. were present. Manicktala Bazar Byabsayee Samity while welcoming such initiative by the State Board, assured their cooperation in this regard and requested Board Officials to take necessary steps to prohibit use of plastic carry bags by the sellers outside the market also. On behalf of the State Board, Chairman and the Member Secretary assured them all possible help from their end.



Campaign programme at Manicktala Market

d) Ultadanga Bazar :

The State Board organized such type of campaign cum awareness programme in association with the NGO, namely, Man, Nature and Adventure Sports at Ultadanga Market on 13 July 2011 at 10:30 a.m. Board officials including Head Office and Salt Lake Regional Office were present in the programme. Apart from the Board officials, Shri Amol Chakraborty, local Councilor of ward no. 14 in Ultadanga area joined the programme. Besides, NGO representatives and about 25 students of Deshbandhu Vidyalay participated in the programme.

The whole gathering entered the markets with placards and banners and cordially requested all the buyers and sellers to give up the habit of using plastic carry bags to avoid possible health and environmental hazards caused by the plastic wastes. Leaflets stating such restrictions were also distributed among them to generate awareness.



e) New Market (S.S.Hogg Market) :

A campaign programme was held on 14 July 2011 (10:30 a.m.) at New Market (S. S. Hogg Market) to spread awareness among the shop-owners, other sellers, traders, buyers etc. through displaying posters, banners and announcing by microphone. 14 members from NGO, namely, Trinita Society for Social & Health Research, 6 officials of Kolkata Municipal Corporation including Mr. Arup Mandal, Sr. Superintendent, Mr. Gourkrishna Ghosh, Superintendent, Mr. Intab Hassain, Superintendent from Kolkata Municipal Corporation, Mr. Ashok Pati, Surgant, New Market Police Station and Board Officials joined the programme.



f) Kasba Ramlal Bazar and Santoshpur & Jadavgaoh Market:

The State Board conducted an awareness campaign programme in association with the Kolkata Municipal Corporation and NGO, namely, Trinita Society for Social & Health Research at Kasba Ramlal Bazar on 15. July 2011 at 11:00 a.m. The campaign team consisting 6 officials from Kolkata Municipal Corporation including Mr. Rathin Banerjee, Superintendent (Market), Board



officials and 16 members from above mentioned NGO took effective effort to spread among the shop-owners, other sellers, traders, buyers etc. through displaying posters and banners.

g) Shibpur Bazar

On 19 July 2011 at 9:00 a.m. a campaign programme was held at Shibpur Bazar, Howrah to spread awareness among the shop-owners, other sellers, traders, buyers etc. through displaying posters, banners and announcing by mike. About 8 members from NGO, namely, Protect Environment and Nature (PEN), and Board officials joined the programme.



h) Kalibabur Bazar



On the same day i.e. 19 July 2011 the campaign team visited Kalibabur Bazar, Howrah at 10:30 a.m. to spread awareness regarding restriction on using plastic carry bags of thickness below 40 microns among the shop-owners, other sellers, traders, buyers etc. through displaying posters, banners and also announcing by microphone. Apart from the Board officials, Assistant Health Officer along with members from Howrah Municipal Corporation, about 8 members from the NGO, namely, Protect Environment and Nature (PEN)

participated in the programme.

i) Salkia Harganj Bazar

After visiting Kalibabu Bazar the campaign team proceeded to Salkia Harganj Bazar, Howrah on that day at 11:30 a.m. The participants of the campaign team carried posters, banners, placards etc. with them and also announced by mike to make aware shop-owners, other sellers, traders, buyers etc. regarding the restrictions and also the ill effects of using plastic carry bags of thickness below 40 microns.



j) Kadamtala Bazar

From Salkia Harganj Bazar the campaign team proceeded towards the day's next destination—Kadamtala Bazar, Howrah at 11:30 a.m. The campaign team made an effective effort to spread awareness among the shop-owners, other sellers, traders, buyers etc. through displaying posters, banners and also announcing by mike requested them not to use plastic carry bags of thickness below 40 microns.



k) Madhyamgram Bazar

The State Board conducted a campaign programme on restrictions and ill effects of using plastic carry bags of thickness below 40 microns among the buyer and the sellers in association with the NGO namely Eco-friendly Human and Natural Resource Development Foundation at Madhyamgram Bazar on 20. July 2011 at 10.30 a.m. Officials from Madhyamgram Municipality also participated in that programme.



l) Batanagar Mullick Bazar, Mahestala :

Board officials along with the representatives of the NGO namely Santoshpur Prof. Satyendranath Bose Science Circle, officials of Mahestala Municipality and the councilors of Ward no. 31, 33, 34 visited Batanagar Mullick Bazar, Mahestala, 24 Pgs.(S) on 22 July 2011 at 11:00a.m. The campaign team spread awareness regarding the restriction and ill effects of using plastic carry bag below 40 micron among the buyers, sellers, etc. through displaying posters and banners.



m) Diamond Harbour Station Market and Kapat Hat Market:

On the same day another campaign programme was held at Diamond Harbour Station Market and Kapat Hat Market regarding restrictions and ill effects of plastic carry bag below 40 micron among the shop-owners, other sellers, buyers etc. through displaying posters and banners. Sri Panna Lal Halder, Chairman and Executive Engineer of Diamond Harbour Municipality, Councilors of different ward of Diamond Harbour, State Board Officials, members from NGO namely Sundarban Rural Development and Training Centre and about 15 numbers of school students participated in the programme.



The Department of Environment and the State Board have decided to conduct a number of such type of awareness programmes at different market places and also monitor the conditions of those market places in respect of proper implementation of restrictions regarding use of plastic carry bags of thickness of below 40 microns on a regular basis.

10. Heritage/Tourist site inspection in connection with plastic ban

Plastic waste is one of the major problem of present time. Being a non biodegradable substance, plastic pollutes earth and results degradation of the environment in numerous ways. Plastic products create litter, hurt marine life, and threaten the basis of life on earth. All of us can take some steps that you can take to reverse the tide of toxic, non-biodegradable pollution so that it will not overtake our planet.

“Stop the Plastic Pollution, Be Part of the Solution”.

To save the environment inside the premises of the important Heritage or tourist sites of West Bengal the State Board has announced to make such sites totally plastic free zone as per the order No.3401-46L/WPB-2003 (Part-I), dated: 7.3.2006. To implement the order properly the Board instructed the concerned authorities of all those heritage sites to place Notice Boards as prescribed by the Board at the entrance and inside the premises of the sites and impose restriction on the visitors while entering the inside the area with any kind of plastic carry bags.

To inspect and review the conditions of some of the heritage/tourist sites the Board officials made surprise visits to Science City, Nicco Park, Nalban, Swabhumi, Belur Math, Gandhi Ghat, New Digha Paryatan Kendra, Chhuti Amusement Park Bandel Church etc.

During the visits the Board officials inspected above-mentioned sites and observed that the respective authorities except Nalban, Belur Math and Gandhi Ghat, New Digha Paryatan Kendra, Chhuti Amusement Park and Bandel Church are maintaining their premises plastic free by erecting notice board as prescribed by the State Board and imposing restrictions regarding carrying plastic carry bags on every visitors while entering the premises.

11. Workshop on Management of Plastic Waste

The Workshop related to the implementation of the Plastic (Management & Handling) Rules, 2011 was organized by the West Bengal Pollution Control Board on 09.08.2011 with participation of the Urban Local Bodies, District Magistrate's Office, Industry Associations, NGOs and the Press. The workshop was organized for threadbare discussion on implementation of the Plastic (Management & Handling) Rules, 2011.



The Chairman, WBPCB welcomed the participants and spoke of the rising menace of plastic waste. The problems encountered by civic bodies because of the indiscriminate disposal of plastic is a known fact and he hoped that the municipal authorities will realize that reduction in plastic use is the most effective control measure to curb plastic waste generation. He reiterated the provisions of the Plastic Wastes (M & H) Rules, 2011 related to the specific responsibilities of the State Pollution Control Board and the Urban Local Bodies (ULBs) and requested the ULBs to start taking penal measures to reduce usage of plastic carry bags of less than 40 micron thickness. He further stated that plastic use has been successfully stopped in certain small areas like Bangur Avenue but there are only few such examples. He informed that the WBPCB has already started taking action against defaulting plastic carry bag manufacturing units and Closure Orders have been issued to 15 units

Mr. Alapan Bandyopadhyay, Principal Secretary, Municipal Affairs Deptt. Govt. of W.B. delivered his speech as special guest and mentioned that some awareness has already been generated among the citizen of the society and civic bodies are now aware of the growing plastic menace and can also



undertake raids to curb use of banned plastics but the existing municipal Acts lack enough teeth to nail the offenders. The ULBs may not be aware whether fines can be imposed on the spot or on prosecution. He opined that as the ULBs are not enabled suitably to do this work, the Police Authorities should be involved for effective implementation of the rules and suggested that in some areas like the Kolkata Municipal Corporation area, Bidhan Nagar Municipality etc., the Civic Police may be entrusted with this responsibility. He further stated that the production and distribution points should be controlled more stringently.

Dr. Sudarsan Ghosh Dastidar, Hon'ble MIC, Deptt. of Env. Govt. of W.B. in his speech stressed on strict enforcement of the rules. He further stated that the awareness campaign may be an important tool but without taking punitive action against the violator the Plastic rules cannot be implemented. Accordingly, he requested the ULBs to start raids immediately and to penalize the offenders with widespread publicity. He requested the Chairman, WBPCB to organize another meeting involving Police Authorities of all the districts and start raids after allowing a notice period of one month. He also requested the Chairman to brief him within 7 days on the legal modalities of issuing a ban order on the use of plastic cups and plates. He desired that low cost jute or paper bags should be developed to replace the plastic carry bags of thickness less than 40 micron.

Others interacted during the discussion and put forward their valuable experiences and suggestion were Sri Anup Bannerjee, Joint Secretary, Urban Development Department, Govt. of W.B., Ms. Mamata Jaiswal, Mayor, Howrah Municipal Corporation, Mr. R. D. Mukhopadhyay, ADG & IG of Police, Pollution Control, WBPCB and Mr. Dilip Yadav, Member Chairperson-in-Council, Uttarpara-Kotrang Municipality. On the query of imposing fines the Chairman, WBPCB clarified that the development authorities, e.g., DSDA, ADDA etc. may impose fine in areas not covered by the municipalities or panchayets and the amount collected may be used for the purpose of environment up gradation in their area.

12. Training Programme on preparation of paper carry bags

West Bengal Pollution Control Board organized a training cum workshop on preparation of paper carry bags as an alternative of plastic carry bags, which are harmful for the environment as well as human health on 5 August, 2011. The programme was organized in association with the NGO, namely, Change Initiative, Salt Lake City, Kolkata and Hooghly-Chinsura Municipality at Hooghly-Chinsura Municipality office, Pipulpati in Hooghly district.

The main objective of the program was to spread awareness among the local people of Hooghly-Chinsura Municipal area about the probable hazards of plastic on the environment in order to curb the menace caused by the plastic waste and hence encouraging them to use paper carry bags, which are biodegradable in nature.



On behalf of the said NGO, three resource persons, namely, Smt. Shikha Ghosh, Smt. Pampa Saha and Smt. Juthika Debnath were present there to give handson training to the participants and guide them properly. About 14 women, who are the members of various self-help groups (SHG), NGOs and other organizations under Ward Number 1, 4, 9, 10, 13, 16, 19, 23, 27 and 29 of Hooghly-Chinsura Municipality participated in the program enthusiastically.

13. Report on raid of plastic carry bags / film manufacturing units

According to the action plan for the implementation of Plastic Waste (Management & Handling) Rules, 2011 various Regional Offices of WBPCB namely, Salt Lake Regional Office, Camac Street Regional Office, Alipore Regional Office and Kankinara Regional Office started inspection and raids on plastic carry bag / film manufacturing units situated in Kolkata and surrounding areas from 06.07.2011. The raids were conducted at these industries located at Dum Dum, Cossipore, Behala and Belgharia area. Total 30 nos. units were inspected and during the inspection it was found that most of the units were engaged in manufacturing plastic roll / film and the thickness of which vary from 10 micron to 80 micron. Some of the units were found manufacturing ball pen and other plastic items (not carry bags). Out of 30 nos., 20 nos. units were called for hearing on 19.07.2011. After necessary observation of the technical report received from the Regional Offices and subsequent submission of the industries during the hearing, 15 nos. unit were found as defaulter not complying with the environmental rules. Accordingly the Board issued closure order on 01.08.2011 against these 15 nos. non-complying plastic manufacturing units.

These 15 nos. units either do not possess valid permission of the Board or not complying with the Plastic Waste (Management & Handling) Rules, 2011 and its amendments thereafter.

14. Report on plantation of sapling

The Env. Department, Govt. of W.B. and West Bengal Pollution Control Board in association with Forest Department, Govt. of W.B. observed Forest Week through plantation programme on 16.07.2011 (Saturday) at R. G. Kar Medical College & Hospital and S.S.K.M. Medical College & Hospital, Kolkata. The plantation programme was executed by the Deptt. of Forests, Govt. of W.B. The Hon'ble MIC, Env. Department, Govt. of W.B. inaugurated the plantation programme at R. G. Kar Medical College & Hospital. The Chairman, Member Secretary & other officials of WBPCB and the Principal, Medical Superintendent cum Vice Principal, Dy. Super and other senior doctors and officials of the hospitals and Mrs. Mala Saha, MLA remained present during the inauguration programme. The plantation programme took place at the new garden near academic buildings. The Chairman, WBPCB and Ms. Mala Saha, MLA and other dignitaries, as mentioned earlier, had also participated in the plantation programme. Total 44 nos. samplings including *Debdaru*, *Kanchan*, *Bakul*, *Champa* etc were given to the R.G. Kar Medical College & Hospital for plantation.

After the R.G. Kar Medical College & Hospital, the tree plantation programme at S.S.K.M. Hospital was started by the Chairman, WBPCB. The Member Secretary & other officials of WBPCB and the Principal, Medical Superintendent cum Vice Principal, Dy. Super and other senior doctors and officials of the hospitals remained present during the plantation programme. The saplings were planted at the boundary line of play ground located near Wood Burn Ward. Apart from the Chairman, WBPCB, Member Secretary, WBPCB and other dignitaries, as mentioned earlier, had also participated in the plantation programme. Total 17 nos. saplings namely *Karanj*, *Askoke*, *Kath Badam*, *Bakso Badam*, *Neem*, *Putranjiva*, *Swet Simul*, *Kanchan(Red)*, *Bakul*, *Chatim* etc. were given to the S.S.K.M. Medical College & Hospital for plantation. Both the press and electronics media covered the plantation programme. Photographs taken during plantation programme at the above mentioned two hospitals are annexed.



**Tree Plantation by Hon'ble MIC Env. Deptt. GoWB
at R. G. Kar Medical College & Hospital**



**Tree Plantation by Ms. Mala Saha MLA
at R. G. Kar Medical College & Hospital**

On 01.08.2011, Member Secretary, WBPCB, Shri S. K. Adhikari, Sr. Env. Engineer, Waste Management Cell, WBPCB, Shri Arindam Ghosh, Sr. Horticultural Officer, Forest Department, Govt. of W.B. and Shri Anjan Mukherjee, Asst. Divisional Forest Officer, Forest Department, Govt. of W.B. met the Principal, Medical Superintendent cum Vice Principal, Dy. Superintendent and other senior officers including Nursing Super, P.W.D. officers of N.R.S. Medical College & Hospitals and made a discussion about the plantation programme. Finally, after site verification it has been decided that near about 90 nos. of various saplings like *Debdaru*, *Champa*, *Bakul*, *Jarul* etc will be planted and tree plantation work will start from 5th August, 2011. Similarly, it has been finalized that 18 nos. of saplings namely *Areca Palm*, *Jarul*, *Tecoma* etc will be planted at Kolkata Medical College & Hospitals, the work will start from 9th August, 2011. It has also been decided that landscaping work for the above mentioned 4 nos. medical college & hospitals and also Chittaranjan Medical College & Hospital will start later on after preparation of landscaping plan by the Forest Department, Govt. of W.B. It is to be mentioned that there is no scope of plantation at Chittaranjan Medical College & Hospital due to non availability of open space, as stated by the Medical Superintendent cum Vice Principal of the hospital.



**Tree Plantation by the Chairman, WBPCB at
S.S.K.M. Medical College & Hospital**



**Tree Plantation by the Member Secretary, WBPCB
at S.S.K.M. Medical College & Hospital**

On 20/07/2011, the Minister-in-Charge, Chairman and Principal Secretary took part in tree plantation programme in Jamuria Industrial Complex, Burdwan District. Photographs of the same are placed below:



Plantation Programme at Jamuria Industrial Complex by Hon'ble Minister_in-Charge, Deptt. of Environment, GoWB



Plantation Programme at Jamuria Industrial Complex by Hon'ble Chairman of the Board

Plantation Programme at Jamuria Industrial Complex by Principal Secretary, Deptt. of Environment, GoWB

The Dept. of Environment, Govt. of W. B. and the State Board have been organizing sapling plantation programme in the premises of the State Government Hospitals as a part of Forest Week. To replicate such programmes, Hon'ble Member Secretary had directed the regional offices of the State Board to plant saplings in the premise of the State Government Hospitals & health centres [vide memo no.MS/S2(1-8)/2011 dated 05.08.2011].

The Durgapur Regional Office (DRO) of the State Board had procured 150 nos. of saplings of miscellaneous varieties from the Divisional Forest Office, Durgapur. The DRO had arranged to distribute these saplings in equal nos. in the three districts viz. Bankura, Birbhum and Burdwan, under its jurisdiction.

Under the specific directions of EE, DRO, Sri Avijit Sarkar (Jr. Env. Engg.) carted 50 nos. of saplings to Amarkan BPHC, Ganjalghati, Bankura on 11.08.2011. Alongwith the Dr. D. C. Santra, CMOH (II) and Dr. Debasis Paramanik, BHOM planted saplings in the premise of Amarkan BPHC.

Plantation by CMOH(II), Bnkura Plantation by Jr. Env. Engg., WBPCB

On 12.08.2011, Sri Avijit Sarkar (Jr. Env. Engg.) carted 50 nos. of saplings to Md. Bazar BPHC, Birbhum. Alongwith the Dr. Prasan Goswami, BHOM planted saplings in the premise of Md. Bazar BPHC.

15. Celebration of Independence Day

The 65th Independence Day was celebrated with great enthusiasm at Board's Head Office at Paribesh Bhawan on 15.08.2011. Dr. Sudarshan Ghosh Dastidar, Hon'ble MIC, Department of Environment, Government of West Bengal hoisted the National Flag inside the Paribesh Bhawan premises. The programme was attended by Prof. Binay K. Dutta, Chairman, WBPCB and Board's officials and staff members. The National Anthem was sung by the staff members along with all dignitaries.



Hon'ble Minister-in-Charge explained the significance of Independence Day.

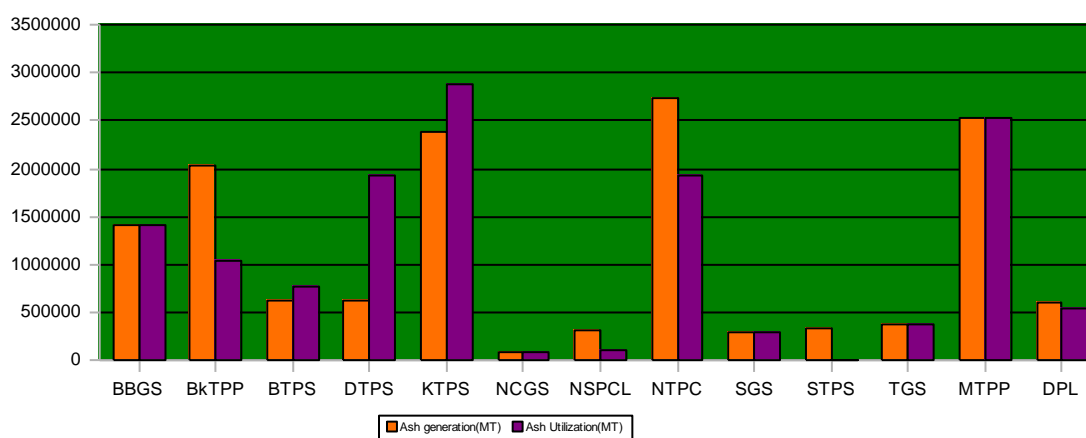


He remembered the great personalities who fought against the British and sacrificed their lives for an independent India. Hon'ble MIC emphasized that the Department of Environment and the State Board should work together for providing a cleaner and greener environment to the people of the state. He suggested that improvement is necessary for both physical environment and also cultural environment. He mentioned the futuristic approach to be evolved by the Board to justify our freedom.

16. Initiatives of WBPCB for better utilization of Fly Ash in West Bengal

MoEF has published a notification on Utilization of fly ash generated from the coal based TPPs on 14th Sept,1999 which has been modified and amended several times looking at the trends on fly ash utilization. The Objectives of the notification are - protection of environment, Conservation of top soil, prevent dumping of fly ash on land, promoting utilization of fly ash as building material and construction activities.

Fig 1. Fly Ash generation vis-a-vis utilisation scenario in West Bengal



During the year 2010 around 14 million tons of fly ash generated from 16 nos. of coal based TPPs operating in West Bengal .The management of such large volume of fly ash and mitigation of its

likely impact on environment is a great challenge. Keeping this problem of ash disposal in view, WBPCB has been giving thrust to the area of fly ash utilization in West Bengal.

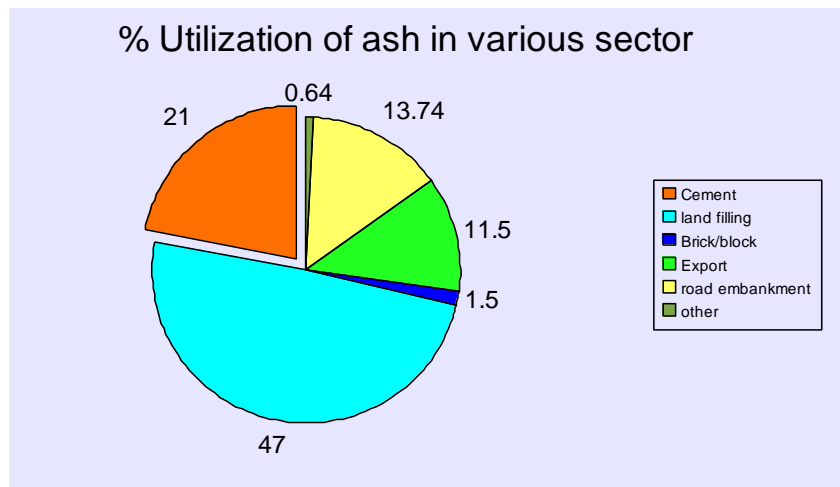
State Fly Ash Management Committee has been constituted under the Chairmanship of the Principal Secretary, Dept. of Environment, GoWB for implementation of the provisions of the Fly Ash Notification. Dept. of Environment, GoWB has recently constituted a committee to formulate the road map generate demand of Fly Ash bricks, preparation of the strategy for generation of awareness amongst the public and different authorities on utilisation of Fly Ash, etc.

West Bengal Pollution Control Board had submitted a project proposal on “Capacity Building for Efficient Utilization of Coal based Thermal Power Plants ash in the State of West Bengal “ to the Fly ash Unit, Department of Science & Technology, Government of India. The project has been sanctioned by the FAU,DST, GoI for three years with total project cost of ` 35.09 lakhs including 25% contribution from the State Board. The project was headed by Dr. T.K Gupta, Chief Engineer as P.I with Shri. D. Sarkar, Sr. Env. Engineer (Planning) as co-investigator. Assistant Environmental Engineer (Planning) and one project fellow are also associated with this project.

Objective of this project is to transfer the Knowhow for effective utilization of fly ash among the target groups including faculty members, prospective engineers/scientists of different academic institutions and the capacity building of various stake holders to adopt fly ash utilization programme which would eventually solve the environmental crisis resulting from generation of huge quantity of fly ash and indiscriminate dumping. As per scope of the project, State Board has organized a number of technical seminars on different aspects and current trend of fly ash utilization for promoting utilization of fly ash and to create the awareness about the gainful utilization of fly ash in construction & concrete sector and to develop confidence in the fly ash based technologies through successful project demonstrations during the first year(2010-11). Programmes/Seminars organized under the project are as follows:

- One day Technical Seminar was organized on “Utilization of Fly Ash in Concrete and Construction Sector” by C-FARM with support from WBPCB at Science City, Kolkata on 31st January, 2011.
- Another Technical Seminar was held regarding “Utilization of Fly Ash based bricks/blocks in Construction Sector” by Fly Ash Brick/Block Manufacturers Associations (FABMAS) with support from WBPCB at Paribesh Bhawan on 16th March, 2011.
- The State Board has also organized two separate awareness programme at Durgapur & Kolaghat, the major power generating hub of the State in association with Centre for Environment Education, Kolkata and West Bengal State Council of Vocational Training.
- Annual workshop on “Application of coal ash in agriculture & forestry” was organized by the Coal Ash Institute of India (CAII) in association with the WBPCB.
- Two Day annual conference on “Efficient utilization of coal based thermal power plant ash in the State of West Bengal” has been organized on 25-26th March,2011 in collaboration with Jadavpur University.

It has been emphasized on these seminars that farmers are need to be educated for Agricultural applications of fly ash, there is a vast scope of fly ash utilization in wasteland area development, promotion on utilization of high volume of fly ash from low value lo high value added area, changing over at the earliest from wet ash handling system to dry ash handling including storages system as because it saves consumptive power, water and ash pond area, develop fly ash-based industry in the vicinity of the thermal power stations. For these initiatives taken by the State Board, resulting in establishment of many nos. of fly ash brick/block manufacturing unit in our state. The State Board while issuing Consent to Establish also stipulated the conditions of use of fly ash based products as per the Fly Ash Notification to all Construction projects. Preparation of final report of these programs are at final stage and will be sent shortly in the FAU,DST,GoI . The Board shall continue such programs in future also.



In West Bengal, it has been observed approximately 77% of fly ash generated are being used for land filling & export , 21% of fly ash used in cement industries and 1.5 % in brick manufacturing industries with total ash utilization of 97% during the year 2010.

17. Workshop at Government Art and Craft College, Kolkata

Department of Environment and West Bengal Pollution Control Board organized a workshop on preparation and designing of posters on different environmental aspects in the campus of Government College of Arts and Crafts, Kolkata. The students of the college participated in the workshop, which was held on **30 August 2011**. Dr. Sudarsan Ghosh dastidar, Hon'ble Minister-In-Charge, Department of Environment, Government of West Bengal inaugurated the programme at the college and expressed that the selected posters prepared by the students will be utilized for environmental campaign programmes during the upcoming festive season. He also distributed paints, brushes, papers etc. to the participating students.



A prize distribution ceremony was organized at the same venue on 14 September 2011 to recognize the selected posters prepared by the students. Hon'ble Minister-In-Charge, Department of Environment, Government of West Bengal graced the occasion and awarded the winners for designing posters displaying different environmental issues along with relevant messages.

18. Training cum Awareness Program for in-service Police personnel of Kolkata Police and West Bengal Police Authority

The State Board has planned to organize a number of Training-cum-Awareness programme for in service police personnel of both Kolkata and West Bengal Police Authority during the year 2011-12. The first such programme was conducted for in service police personnel of Kolkata Police on 18 August 2011 at the Training Hall of Paribesh Bhawan, Bidhannagar. There were three such consecutive programmes in the row. The details are as follows:

| Date | Participants | No. of participants |
|------------------|--------------------|---------------------|
| 18 August 2011 | Kolkata Police | 25 |
| 25 August 2011 | West Bengal Police | 22 |
| 1 September 2011 | Kolkata Police | 23 |
| 8 September 2011 | West Bengal Police | Adjourned |

The main objective of the programme is to give the participants an idea regarding various pollution related problems as well as various legal provisions to control such problems.

Dr. B.K. Dutta, Chairman, WBPCB inaugurated the programme by his introductory speech. Sri R.D. Mukhopadhyay, ADG & IG of Police (Pollution Control) explained the participants the role of police



authority about pollution control. Subsequently, Board officials discussed the issues on 'Elements of Vehicular Air Pollution', 'Noise Pollution Monitoring and Control', 'Environmental Laws- Legal provisions on pollution control' and 'Plastic and Bio-medical Waste Management'. About 25 numbers of Police personnel from different Police Stations of Kolkata attended the programme.

At the end, Shri S. Mukherjee, Member Secretary of the State Board awarded certificates to all the participants.

19. Training Program for Operators and Managers of Auto Emission Testing Centres in Kolkata

West Bengal Pollution Control Board organized two training programmes for operators and Managers of Auto Emission Testing Centres in Kolkata on **15 September 2011** and **22 September 2011** at Paribesh Bhawan, Bidhannagar, Kolkata.

During the inaugural session, officials of Transport Department, Public Vehicle Department, Environment Department and West Bengal Pollution Control Board were present. Officials of Environment Department and West Bengal Pollution Control Board gave lectures on various aspects of automobile pollution and measurement techniques of auto emission testing for in-use vehicles. The officials also gave practical demonstration on auto emission testing procedures during the technical session. At the end of the programme certificates were conferred to all the participants.



20 Mobile Tower Radiation Hazards

A committee was formed by the DoE, GoWB in June 2011 to inspect mobile-phone towers across the city, to measure radiation intensities and to submit a report

Current Scenario

A substantial amount of work has been done and also being undertaken in the various countries of the world in the field of electromagnetic radiation hazards from the mobile towers and cell phones.

Current norms and guidelines followed in India is based on WHO supported ICNIRP (International commission on Non-Ionising Radiation Protection). According to the guidelines the Power density should be 4.7-9.2 Watt/sq meter. Very recently based on the various studies the recommended power density has been made stricter to 0.47 to 0.92 Watt/sq meter. Ministry of Environment and Forest , Govt. of India has constituted a committee on Aug 30th 2010 to assess the level of possible impact of growth of Mobile towers in urban and rural India on the populations of Birds and bees and to suggest measures to mitigate them.

Assessment by Technical Advisory Committee

A meeting was held on 19th June in Paribesh Bhavan in the presence of Hon'ble MIC, Environment Dr. Sudarsan Ghosh Dastidar and the Principal Secretary, Mr. Raj Pal Singh Kahlon and other officers of the WBPCB. The meeting was also attended by Prof. Girish Kumar of IIT Bombay, Prof. Sujoy K Guha and Prof. Sudarsan Neogi of IIT Kharagpur.

The action plan that was decided in the meeting is as follows:

The WB environment ministry, has formed the committee who will undertake the assessment of the scientific findings and will try to put forward recommendations that will be scientifically oriented and will be more protective against electromagnetic radiation by the Cell phone Towers.

technical advisory committee will study the current scenario and will submit a report. Based on that recommendations will be issued. The norms of the limits of the power radiated by the cell phone towers currently in force may need to be reconsidered and revised to lower limits as has been done in the rest of the world.

The technical advisory committee in its 1st meeting on June 19th, 2011 in Paribesh Bhavan has deliberated the matter in details and come out with the following work plans at the outset.

Action Plans

1. The existing Cell Phone providers having installed the towers have been asked to provide the following technical details in regard to the operating parameters of the installed towers for scientific evaluation.
 - a. Peak power/frequency from each Antenna
 - b. RF amplifier Model and its specification
 - c. Type of Antenna and its radiation pattern
 - d. Land clearance requirement around a tower
2. Actual mapping of the power radiated from the tower

Mapping of the Electromagnetic radiation emerging from the cell phone towers at various locations in Kolkata.

Tower No. – 1

Top Floor of Dhakuria Sri Ram Roy Institution

Date – 14.07.2011

Height of Tower – 48 feet

| Sl. No | Frequency | Distance | Power Level (dBm) | $\mu\text{W}/\text{m}^2$ |
|--------|-----------|---|-------------------|--------------------------|
| 1. | 950 MHz | 25 meter | -28 | 66.44 |
| 2. | 980 MHz | 25 meter | -20 | 527.96 |
| 3. | 951 MHz | 20 meter (out door) | -22 | 264.62 |
| 4. | 951 MHz | 20 meter (inside room) | -30 | 41.94 |
| 5. | 951 MHz | School Building Top Floor | -30 | 41.94 |
| 6. | 876 MHz | „ | -33 | 21.71 |
| 7. | 951 MHz | 8.5 meter Ground Floor of School building | -18.6 | 578.93 |

Tower No. – 2

Back side of R.G.Kar Hospital (20B, Nilmoni Mitra Lane)

Date – 14.07.2011

Height of Tower – 60 feet

| Sl. No | Frequency | Distance | Power Level (dBm) | $\mu\text{W}/\text{m}^2$ |
|--------|-----------|---|-------------------|--------------------------|
| 1. | 937.2 MHz | 45 meter (N/W of Top Floor) | -7.74 | 7057.14 |
| 2. | 937.2 MHz | 45 meter (N/E of Top Floor) | -13 | 2101.98 |
| 3. | 937.2 MHz | 50 meter (S/W of Top Floor) | -20 | 527.99 |
| 4. | 937.2 MHz | 50 meter (S/E of Top Floor) | -33 | 26.46 |
| 5. | 937.2 MHz | 45 meter (North side of 2 nd Floor) | -18.77 | 700.86 |
| 6. | 937.5 MHz | 45 meter (North window of 1 st Fl.) | -22.84 | 274.55 |
| 7. | 1.875 GHz | „ | -28.75 | 280.30 |
| 8. | 937.4 MHz | 45 meter (Ground Floor North side) | -44.14 | 2.04 |
| 9. | 941 MHz | Tower Building bottom | -33 | 26.46 |
| 10. | 941 MHz | 15 meter from tower building bottom | -25 | 166.97 |

Tower No. – 2

Back side of R.G.Kar Hospital, (20B, Nilmoni Mitra Lane)

Date – 15.07.2011

Height of Tower – 60 feet

| Sl. No | Frequency | Distance | Power Level (dBm) | $\mu\text{W}/\text{m}^2$ |
|--------|-----------|-----------------------------|-------------------|--------------------------|
| 1. | 937 MHz | 45 meter (N/W of Top Floor) | -7.85 | 8662.2 |

Tower No. – 3

Asirbad Apartment, 10 no. Jessore Road

Date – 14.07.2011

Height of Tower – 25 feet from Top Floor

| Sl. No | Frequency | Distance | Power Level (dBm) | $\mu\text{W}/\text{m}^2$ |
|--------|-----------|-----------------------------------|-------------------|--------------------------|
| 1. | 937.5 MHz | 4 meter (South side of Top Floor) | -8.78 | 6992.44 |
| 2. | 885.2 MHz | 4 meter (S/E of Top Floor) | -15.97 | 842.61 |
| 3. | 937 MHz | 3 meter (N/E of Top Floor) | -7.5 | 9389.20 |
| 4. | 937 MHz | 3 meter (North side of Top Floor) | -4.85 | 17,283.38 |

Tower No. – 4

8/2a Bosepara Lane

Date – 15.07.2011

Height of Tower – 50 feet

| Sl. No | Frequency | Distance | Power Level (dBm) | $\mu\text{W}/\text{m}^2$ |
|--------|-----------|------------------------------|-------------------|--------------------------|
| 1. | 942.5 MHz | 10 meter | -15.52 | 1481.25 |
| 2. | 945 MHz | 20 meter (32A, Giris Avenue) | -23.16 | 255.05 |
| 3. | 915 MHz | 20 meter | -31.27 | 31.31 |
| 4. | 885 MHz | 20 meter | -30.14 | 32.26 |

Tower No. – 2

Back side of R.G. Kar Hospital

Reading taken from Nurse Hostel of R.G. Kar Hospital

Date – 15.07.2011

Height of Tower – 60 feet

| Sl. No | Frequency | Distance | Power Level (dBm) | $\mu\text{W}/\text{m}^2$ |
|--------|-----------|--|-------------------|--------------------------|
| 1. | 937.5 MHz | 30 meter (East side of G Floor) | -17.0 | 1053.49 |
| 2. | 945 MHz | 17 meter (W/N wing of 5 th Floor) | -1.13 | 40703.20 ** |
| 3. | 945 MHz | 17 meter (W/N inside balcony of 5th Floor) | -3.95 | 21263.20 |
| 4. | 945 MHz | 16 meter (Top Floor near water tank) | -1.52 | 37207.34 |

** This power intensity is typically at a distance of 25m from antenna.

21. Programme on Eco-tourism

A decision has been taken to organize study tours for school children for making them aware on various aspects of ecology and environment. The programme will take the students for site visits at important locations and to start with the programme will be implemented for Kolkata and its surrounding areas.

22. A Report on inspection/raid at the sale and storage places of banned air horn and multi-toned horn

Road traffic noise is the main source of environmental noise pollution in the urban area. The noise of road vehicles is mainly generated from the engine and blowing of horn. The sound pressure level from traffic can be predicted from the traffic flow rate, the speed of the vehicles, the proportion of heavy vehicles, and the nature of the road surface. Special problems can arise in areas where the traffic movements involve a change in engine speed and power, such e.g. at traffic signal and, intersecting roads.

In the recent past, WBPCB has been receiving serious complaints regarding rising level of noise pollution in Kolkata city and the adjoining districts. The sources of noise pollution are mainly from vehicles, loudspeaker etc.

The legal provisions in regard to vehicular horns are as follows:

- CMVR 119(1) On and after expiry of one year from the date of commencement of the Central Motor Vehicles (Amendment) Rules, 1999, [every motor vehicle, agricultural tractor, power tiller and construction equipment vehicle] manufactured shall be fitted such an electric horn or other devices conforming to the requirements of IS:1884-1992 specified by the Bureau of Indian Standards] for use by the driver of the vehicle and capable of giving audible and sufficient warning of the approach or position of the vehicle.
- CMVR 119(1) No [motor vehicle including agricultural tractor] shall be fitted with any multi-toned horn giving a succession of different notes or with any other sound-producing device giving an unduly harsh, shrill, loud or alarming noise.
- Hon'ble Calcutta High Court Order dated 22.12.1997 in C.O. No. 4303 (W) of 1995, prohibits the sale and store of air horn in the State of West Bengal.
- The rule of 5A of the noise pollution (Regulation and Control) Rules 2000 no horn shall be used in silence zone or during night time in residential area except during public emergency .
- Rule 114 of the Bengal Motor Vehicles Rules, 1940, is as follows :-
 - A. No motor vehicle shall be fitted with any multi-toned horn giving a succession of different notes or with any other sound producing device giving any unruly harsh, shrill, loud or alarming noise.
 - B. Nothing contained in sub-rule (b) shall prevent the use on vehicles, use as ambulances or for fire fighting or salvage purpose or on vehicle used by police officers in the course of their duties, or on other similar vehicles, of such sound signals as may be approved by the Registering Authority.
 - C. Every transport vehicle shall be fitted with bulb horn: In exercise of powers conferred by section 111 of the Motor Vehicles Act, 1988 (59 of 1988) read with Rule 258(4) (c) of the West Bengal Motor Vehicles Rules, 1989 as amended, and in compliance with order of the Hon'ble High Court, Calcutta dated 22.12.97 in C.O. No. 4303(W) of 1995, the sale and store of air horns is prohibited in the state of West Bengal.

In view of the above, State Board had conducted joint inspection/raid involving Kolkata Police and Public Vehicles Department (PVD) at the sale & storage places of banned air horn and multi-toned horn in Kolkata city in the month of July 2011.

A: Date : 05.07.2011

Place : Mullick Bazar

Police Station : Park Street

| Sl. No. | Name & Address of Auto Shop | Action / Remarks |
|---------|--|--|
| 1. | Mallick Bazar Motor Parts Dealers Association, Shri Hari Prakash Gupta, Secretary, 37A, Acharya Jagadish Chandra Bose Road, Kolkata – 700 017. | Hearing conducted at West Bengal Pollution Control Board office on 06.07.2011 and direction issued not to sell, stock and repair banned air horn and multi-toned horn. |
| 2. | M/s Prakash Motor Stores, 37A, Acharya Jagadish Chandra Bose Road, Kolkata – 700 017 | |
| 3. | M/s Horn House, 38/2, Acharya Jagadish Chandra Bose Road, Kolkata – 17. | |
| 4. | M/s Redcor Automobile, 38/2, Acharya Jagadish Chandra Bose Road, Kolkata – 700 017. | |
| 5. | M/s Goutam Motor, 38/2, Acharya Jagadish Chandra Bose Road, Kolkata – 700 017. | |
| 6. | M/s J.M.D. Motor, Acharya Jagadish Chandra Bose Road, Kolkata – 700 017. | |

| Sl. No. | Name & Address of Auto Shop | Action / Remarks |
|---------|---|------------------|
| 7. | M/s K.D. Motor, Acharya Jagadish Chandra Bose Road, Kolkata – 700 017. | |
| 8. | M/s Popular Motor Shop, Acharya Jagadish Chandra Bose Road, Kolkata – 700 017. | |
| 9. | M/s Surender Prasad, Acharya Jagadish Chandra Bose Road, Kolkata – 700 017. | |
| 10. | M/s J.D. Motors, Acharya Jagadish Chandra Bose Road, Kolkata – 700 017. | |
| 11. | M/s Mollah Shaw, 37A, Acharya Jagadish Chandra Bose Road, Kolkata – 700 017. | |
| 12. | M/s Sukh Motor, 37A, Acharya Jagadish Chandra Bose Road, Kolkata – 700 017. | |
| 13. | M/s Shyama Horn House, (Proprietor – Shyamsundar Singh), 38, Acharya Jagadish Chandra Bose Road, Kolkata – 700 017. | |
| 14. | M/s Munna Shaw, 37B, Acharya Jagadish Chandra Bose Road, Kolkata – 700 017. | |
| 15. | M/s Abdul Haque, 37B, Acharya Jagadish Chandra Bose Road, Kolkata – 700 017. | |
| 16. | M/s Anil Kumar Gupta, 37B, Acharya Jagadish Chandra Bose Road, Kolkata – 700 017. | |

| Sl. No. | Name & Address of Auto Shop | Action / Remarks |
|---------|-----------------------------|------------------|
|---------|-----------------------------|------------------|

17. M/s Dinesh Jaiswal, 37B, Acharya Jagadish Chandra Bose Road, Kolkata – 700 017.

B: Date : 28.07.2011

Place : Princep Street, Bentinck Street and New Market

Police Station : Hare Street and Bowbazar

| Sl. No. | Name & Address of Auto Shop | Action / Remarks |
|---------|-----------------------------|------------------|
|---------|-----------------------------|------------------|

| | | |
|----|--|--|
| 1. | Rastriya Automobiles, 3, Princep Street, Kolkata - 72 | No banned air-horns found during the raid. |
| 2. | Baisakhi Auto Center, 4, Princep Street, Kolkata - 72 | |
| 3. | Bharat Auto Store, 9, Princep Street, Kolkata - 72 | |
| 4. | Atul Automobiles, P-27, Princep Street, Kolkata - 72 | |
| 5. | Radiant Motors, P-41, Princep Street, Kolkata - 72 | |
| 6. | Auto Wing, 15, Princep Street, Kolkata - 72 | |
| 7. | Ambika Automobiles, P-40, Princep Street, Kolkata - 72 | |
| 8. | Tempo House, P-27, Princep Street, Kolkata - 72 | |
| 9. | Bharat Auto Agency, P-27, Princep St., Kolkata - 72 | |

| Sl. No. | Name & Address of Auto Shop | Action / Remarks |
|---------|-----------------------------|------------------|
|---------|-----------------------------|------------------|

| | | |
|-----|---|--|
| 10. | Jain Motors, P-27, Princep Street, Kolkata - 72 | |
| 11. | Goel Tractor Pvt. Ltd., P-27, Princep Street, Kolkata - 72 | |
| 12. | Khere Motors, 66, Bentinck St., Kolkata - 69 | |
| 13. | Meghdoot Motors, 67, Bentick St., Kolkata - 69 | |
| 14. | S.D.M. Auto, 25, G.C. Avenue, Kolkata - 72 | |
| 15. | Kunja Behari Auto, P-41, Princep Street, Kolkata - 72 | |
| 16. | N.K. Auto Parts, 6, Princep Street, Kolkata - 72 | |
| 17. | Khera Automobiles, 17, Princep Street, Kolkata - 72 | |
| 18. | Krishna Automobiles, 5/2, Rafi Ahmed Kidwai Road, Kolkata - 13 | |
| 19. | Gupta Automobiles, 4, Rafi Ahmed Kidwai Road, Kolkata - 13 | |
| 20. | Auto Safe, Motilal Saha Road, Kolkata - 13 | |
| 21. | Sree Balaji Auto Distribution Pvt. Ltd., 49, Lenin Sarani, Kolkata - 13 | |

C: Date : 29.07.2011

Place : Phool Bagan in B.T. Road area

Police Station : Cossipore

| Sl. No. | Name & Address of Auto Shop | Action / Remarks |
|---------|--|--|
| 22. | Chopata Motors, 31A, B.T. Road, Kolkata – 700 002 | No banned air horn and multi-toned horn found during the raid. |
| 23. | Bhowmic Motor Parts & Electric Co., 32 A/1, B.T. Road, Kolkata – 700 002 | |
| 24. | Shaw Auto Centre, 34 C/1A, B.T. Road, Kolkata – 700 002 | |

23 Meetings on various environmental matters

Meeting on implementation of rules and directions regarding control of noise pollution due to vehicular horns (air-horns and multi-toned horns)

The State Board organized a meeting on **28 June 2011** to discuss about banning the use of air horns and multi-toned horns to control noise pollution effectively. Senior Board Officials, Police Officials, taxi associations, representatives of the NGO, namely, PUBLIC etc. were present in the meeting.

Meeting with eminent personalities regarding 'Clean Environment during Festive season 2011'

The State Board organized a meeting with various eminent personalities of the society in respect of “**Clean Environment in the Festive Season**” on **24 August 2011**, in the Conference room of Paribesh Bhawan, Bidhannagar, Kolkata. Dr. B.K. Dutta, Chairman of the State Board welcomed the eminent personalities present and narrated the purpose of the meeting and also explained the various guidelines in respect of control of pollution during festive season in the State of West Bengal.

Meeting with Board's enlisted NGOs

Like previous years, the State Board organized a meeting with the Board's enlisted NGOs on **23 September 2011** at Paribesh Bhawan, Bidhannagar, Kolkata. Dr. B.K. Dutta, Chairman of the Board chaired the meeting and welcomed all the representatives of various NGOs in and around Kolkata present there. Dr. Dutta and other senior Board officials discussed about the awareness campaign programmes during upcoming festive season. At the end of the meeting posters on various environmental issues were distributed among the NGOs for displaying during the campaign programmes organized by them.

Meeting with various school authorities

Dr. B.K. Dutta, Chairman of the State Board chaired the meeting with various school authorities held on **23 September 2011** regarding conducting of environmental awareness campaign programmes involving school students. About eight representatives from various eminent schools in Kolkata attended the meeting.

24. Meeting on control of noise and other pollution during ensuing major festivals in West Bengal

A meeting was held in the Conference Room of Paribesh Bhawan, Head Office of West Bengal Pollution Control Board on 12.08.2011 at 3.00 p.m. to chalk out plans and programmes to control noise pollution caused by indiscriminate use of loud speakers, firecrackers etc. and cleanliness of water bodies after idol immersion during the forthcoming major festivals in West Bengal slated in October-November 2011. Prof Binay K Dutta, Chairman, West Bengal Pollution Control Board chaired the meeting. The meeting was attended by Shri R. D. Mukhopadhyay, ADG & IG of Police

(Pollution Control), Shri Sandipan Mukherjee, Member Secretary and other officers of the Board. Shri M. K. Singh, IG (Law & Order), West Bengal Police and Shri Ahindra Nath Bagchi, Asst. Commissioner of Police, Kolkata Police also attended the meeting. Representatives of Webel Mediatronics Limited attended the meeting.

The Chairman, WBPCB mentioned the need for effective coordination between the Police Department and the State Board particularly during major festival time for tackling the noise menace in the State. He also explained the State Board's orders on mandatory use of Sound Limiter whenever the loudspeakers/public address system used in open air and guidelines on maintaining cleanliness of river and water bodies after idol immersion. The ADG (Pollution Control) emphasized that there is total ban regarding sale, storage and use of firecrackers generating noise more than 90 dB(AI) at 5m from the point of bursting in the State of West Bengal. It was decided that like previous years, the Central Control Room at WBPCB's Headquarters at Paribesh Bhawan, Bighnanagar would be functioning in all the festive days during Durga Puja and Kali Puja & Diwali. The Control Room Toll Free No. is 1800 345 3390. The complaint received at the State Board's Control Room would be forwarded to the respective Police Control Room as well as mobile noise monitoring team of State Board for necessary action.



The official of Webel explained their inability to provide sufficient number of 'Sound Limiter' in the market. However, he assured that sufficient number of 'Sound Limiter' would be available if an estimated demands could be generated well before festive season. It was informed that the new model of the gadget would cost about Rs. 3500/- per unit inclusive all.

The major decisions taken in the meeting are as follows:

- All the Police Stations should stress on the implementation of State Board's order on mandatory use of Sound Limiters with amplifiers and banned fireworks as well as cleanliness of water bodies after idol immersion during their pre-puja meetings with the organisers of the local Puja Committees and the local loudspeaker dealers/ hiring agencies would be directed to follow the norms on fixation of sound limiter with amplifier. Further, an undertaking prepared by the WBPCB should be handed over to all the puja organizers for complying them about all the statutory norms during the festivals.
- Thana level meetings with the manufacturers/dealers/ stockists of fireworks should be arranged prior to raids at the fireworks manufacturing units against banned fireworks to spread the message to all the stakeholders about the stringent action of the authority against banned firecrackers.
- Regarding the maintenance of cleanliness of the water after immersion of idols in the rivers and other water bodies respective municipalities and panchayats should take initiatives with the help of local Police authority following the guidelines given by the WBPCB. This issue would be discussed with the major municipalities in the forthcoming meeting at the WBPCB in early September 2011.

25. Distribution of Lead-free color

Department of Environment, Government of West Bengal and West Bengal Pollution Control Board organized a workshop cum awareness programme regarding use of lead free paint by the idol-makers on **23 August 2011**. Like previous year, the main objective of the programme was to promote use of lead and cadmium-free colors by the artisans for coloring of idols during Durga Puja and other such festivals to prevent contamination of water after immersion of idols in the rivers. The artisans were also made aware about the possible health effects due to the toxic metals present in the conventional paints previously in use.



Representatives of the NGO, namely, EnGIO and some paint manufacturing industries, namely, M/s Burger Paints, M/s Snowcem Paints and M/s Austin Paints were present along with the Board officials.

On this occasion artisans of three locations such as Baishnabghata Patuli, Naktala and Ramgarh were given free samples of lead free paint which they applied on the idols and obtained result to their satisfaction.

The artisans were also assured to be provided with paints free of cost or at subsidized rate by the participating paint manufacturing industries.

Another two such programmes were organized at Canal East Road Mritsilpi Samity, 23/3 Canal East Road (Khalldhar), Kolkata-700067 and Kumartuli area in association with the NGO, namely, ENGIO and some prominent colour manufacturing companies on **2 September 2011**.

26. Mobile awareness van on restriction of Plastic Carry Bags

On 01.08.2011 the Hon'ble Minister-in-Charge, Environment Department flagged off a tablo containing awareness and campaign material to make users of plastic carry bags aware on environmental problems of it and also the legal provisions in case of a default. This tablo is set to travel initially within Kolkata city on regular basis for a couple of weeks after which similar campaign programmes will be extended to district towns followed by strict implementation of the penal provisions of the corresponding rule.



27. Mobile awareness Van on Noise Pollution during Durjapuja and Kali Puja

On **26 September 2011** Hon'ble Minister-in-Charge, Department of Environment, Govt. of West Bengal flagged off the tableau, that traveled in and around Kolkata to spread environmental awareness through various messages on the eve of Durga Puja festival.

On **19 October 2011** Hon'ble Minister-in-Charge, Department of Environment, Govt. of West Bengal flagged off the tableau, that traveled in and around Kolkata to spread environmental awareness through various messages on the eve of Kali Puja and Diwali festivals. In addition, the similar tableaus disseminating environmental messages have been touring various places in Haldia, Asansol-Durgapur and Siliguri during seven days prior to Kali puja & Diwali festivals for controlling of noise and other kinds of pollution.



28. Awareness programme with NGOs during festive season

State Board organized Awareness programme with the following NGOs. during Durga Puja & Kali Puja Festivals.

- a) Shatamukhee Paribesh Kalyan Kendra, Sishunandan, Keshinagar, P.S. Raidighi, Sundarban.
- b) Durgapur Nirjher Recitation & Cultural Resesearch Society – 5A, Ramkrishna Avenue, Kolkata-713204.
- c) Environment Governed Integrated Organization, 20/1, Ramesh Mitra Road, Kolkata-700025.
- d) Unique Organization for Human Awareness & Welfare, 171A, Rash Behari Avenue, Ramani Bhawan (4th. Floor), Kolkata-700009.

29. Awareness Campaign during Festivals 2011

This year the State Board conducted awareness campaign programme prior to the commencement of Durga Puja. As part of this programme, Board officials visited various Durga puja pandals in Kolkata for three days, i.e., 29 September 2011 (Tritiya), 30 September 2011 (Choturthi) and 1 October 2011 (Panchami). During those visits the campaign team distributed posters on various environmental issues to 27 nos. of the puja committee for displaying the same at the respective puja pandal.

- WBPCB made an appeal by sending letters through courier to about 1500 no of Housing Societies in and around Kolkata to follow the restriction on noisy firecrackers and celebrate the forthcoming festivals as '**Festival of lights**'.
- Banners, posters, leaflets etc. carrying various environmental campaign messages were distributed to NGOs as well as educational institutions to generate awareness among students and general public.
- Scroll messages on restriction of prohibited firecrackers advertised in various TV channels.
- Short films on awareness about noisy prohibited firecrackers telecast during the prime time in various TV channels.

- Restrictions on prohibited firecrackers advertised in various Newspapers for public awareness.
- Organising rallies with tableau and street plays on awareness generation among general public in Kolkata city jointly with Kolkata Police and an NGO.

30. Action taken against prohibited fireworks

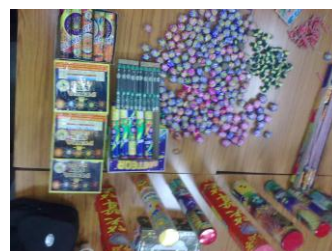
Meeting with Fireworks Manufacturers and Dealers Associations

The state board organized a meeting with different fireworks manufacturers and dealers association on 19 October 2011 at Paribesh Bhawan, Kolkata. In the meeting the following decisions were taken :

- a) All the fireworks and Manufacturers and Dealers Association proposed that the Central government could introduce an uniform maximum permissible noise level of fire crackers across the country that should be 90 dB(AI) at 5 meters from the point of bursting as prevailed in the State of West Bengal.
- b) The School Education Department might think of introduction of till effects of air and noise pollution due to bursting of fireworks of in the school curriculum for effective awareness generation amongst the school children.

Raids at fireworks manufacturing units as well as storing and selling places in the State prior to Kali Puja and Diwali festivals 2011

The joint raids involving board officials and police authorities organized at various manufacturing and storing places of firecrackers as well as selling shops in Kolkata and other districts prior to Kali Puja and Diwali till the end of these festivals. A large quantities of prohibited firecrackers seized by the police authority during these raids.



31. Noise Monitoring Programs during festivals

As in the previous year, this year also the Board conducted noise monitoring surveys during Durga Puja, Kali Puja and Diwali festivals . A Special Control Room was functioning during the festive days at WBPCB head Office and during Kalipuja & Diwali days control room was functioning from 4 PM to 4 AM (next day) . Besides, 25 nos. of monitoring team has been deployed for noise monitoring programme in Kolkata, Bidhannagar, parts of North 24 Pgas & South 24 Pgs during Kalipuja & Diwali festivals throughout the night. The Board along with the Police authorities has conducted raids in the different areas against storing and selling of banned crackers.

WBPCB gave a wide publicity on the specific norms related to loud speakers and fire crackers through electronic and print media. Banners, leaflets, posters on various pollution norms were distributed to enlisted NGOs . Activities such as mobile tableaus, rallies, meetings etc. involving common people as well as students for generation of environmental awareness has been organized.

Numbers of complaints received during Festival days in 2010 and 2011

| Year | Durga Puja | | | | | Kali puja | Diwali | Total |
|------|------------|----|----|----|----|-----------|--------|-------|
| 2010 | 08 | 08 | 09 | 06 | 31 | 75 | 25 | 100 |
| 2011 | 11 | 06 | 04 | 04 | 25 | 102 | 45 | 147 |

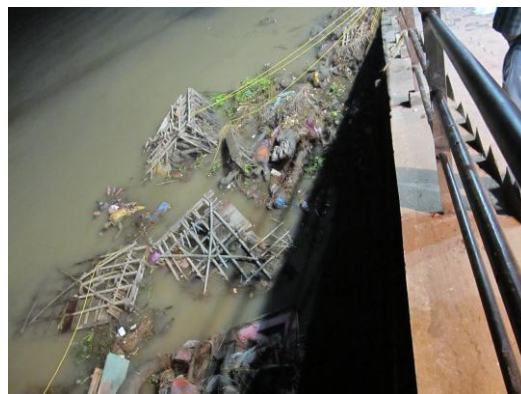
32. Green Puja Award 2011

This is for the 1st time, the Department of Environment, GoWB instituted an award to invigorate the environmental campaign during the biggest festival of the State. A team of judges comprising of eminent Professors of IIT and Calcutta University, officials from the Fire Service and WBPCB visited the pandals of enrolled Puja organisers. 5 nos. of Puja pandals were nominated for the Green Puja Award, 2011. Bhawanipur Swadhin Sangha won the 1st Prize and Raipur Club, Ramgarh won the 2nd Prize. Hatibagan Nabin Pally Sarbajanin was nominated for the 3rd Prize. Apart from that Maniktala Chaltabagan and Maniktala Tikiapara were awarded additional prizes for their efforts on environmental awareness.



33. Idol Immersion Monitoring and Hooghly River water sampling during festivals 2011

The state board monitored cleanliness of river Hooghly after idol immersion at 12 nos. ghats in Kolkata and Howrah namely Babughat, Gowalior Ghat, Nimtala Ghat, Ahiritola ghat, Sovabazar Ghat, Kumartuli Ghat, Baghbazar Ghat, Saradamayer Ghat, Ratnababur Ghat, Sibpore Ghat, Ramkrishnapore Ghat and Telkal Ghat as well as water quality monitoring Hooghly river during pre and post immersion period in Durgapuja and Kalipuja festivals.



Similar monitoring programme was conducted in Chandannagar during jagadhatri Puja festivals 2011.



34. Regulatory action:

The West Bengal Pollution Control Board has been a pioneer in the field of conflict resolution and has developed an innovative approach in introducing techno-legal hearings. Regulatory actions comprising of penal provisions and economic instruments like Bank Guarantee and Pollution Cost are imposed on the errant units to ensure time bound environmental compliance through its technical cell.

Activities of the technical cell of the Board

| <i>Month</i> | <i>Closure</i> | <i>Suspension</i> | <i>Direction issued</i> |
|----------------|----------------|-------------------|-------------------------|
| May,2011 | 16 | 04 | 23 |
| June,2011 | 13 | 03 | 14 |
| July,2011 | 10 | 05 | 05 |
| August,2011 | 36 | 11 | 11 |
| September,2011 | 13 | 29 | 10 |
| October, 2011 | 04 | 03 | 04 |

- Public Hearing conducted for setting up of new industries: 10 Nos.
- Technical Hearing of industries conducted for non-complying various pollution norms: 126 Nos.

35 National Ganga River Basin Authority

Government of India has developed a detailed plan and programme, the NGRBA project, which by year 2020, is supposed to clean Ganga and ensure that no untreated sewage reaches the river. The West Bengal Pollution Control Board needs to develop a programme of water quality monitoring to justify the legal and scientific mandate on itself.

The following programme has been developed and submitted to the GoWB for integration into the State Action Plan for the NGRBA project :-

- (a) **Component One:** Institutional development ;
- (b) Component Two: **Infrastructure development and training.**

Recently, MoEF, GoI has principally accepted the project and the Board has submitted DPR to the MoEF. Cost summery of the project has given below:-

| <i>Item</i> | <i>Amount (` in lakhs)</i> |
|--|-----------------------------|
| Equipment and Accessories | 6125.4 |
| Operating costs | 1503 |
| Training | 112 |
| Civil Works: Additional space and other facilities | 46 |
| Consultancy | 46 |
| Total | 7832.4 |
| Grand total(Rounded off) | 7832 |

36. Actions taken against non-complying industries

In the past one year, the State Board issued 98 numbers of Closure Orders including Orders for Disconnection of Electricity, issued 586 numbers of Directions from the observations made during regular inspections carried out by Board Officials.

The State Board also receives a number of public complaints and subsequently issues Directions/ Closure Orders for redressal of those complaints. This is routine practice carried out as part of regulatory function of the Board.

M/s S.K.G. Pulp and Paper Mills was visited by the Chairman, Member Secretary and other Senior Officials of the State Board on 26/06/2011, the industry has no effluent treatment plant and was polluting the irrigation canals. The Hon'ble Chairman personally interacted with the villagers, took a patient hearing of their grievances and the industry was issued Spot Closure Order. Ultimately, the industry was compelled to erect the pollution control system within a minimum time frame and closure order was suspended on 01/08/2011. This is an achievement of the State Board.



Pollution caused by M/s SKG Pulp and Paper Mills in the water body

The pollution caused by the Sponge Iron units is a common phenomenon during night time by carrying out their operations bypassing the Air Pollution Control System-ESPs, thereby adversely affecting the local villagers. These units are causing serious threat to the environment by emitting huge amount of particulate matter with improper functioning of air pollution control systems and indiscriminate disposal of solid waste (dolochar) and depletion of ground water resources causing acute scarcity of water in neighbouring areas. Therefore Hon'ble Minister-in-Charge, Department of Environment, GoWB desired to inspect these units to assess the current status and pollution caused by these units.

On 19/07/2011, the Hon'ble MIC, Hon'ble Chairman, Principal Secretary, Department of Environment, GoWB and other officials of the Board visited the following industries situated at Barjora (Dist. Bankura) and Angadpur (Durgapur Dist Burdwan) during the late evening hours

1. M/s Govinda Impex Limited, Barjora
2. M/s Rishabh Sponge Iron Ltd. Barjora
3. M/s Haldia Steels Ltd. (Unit – II), Angadpur
4. M/s Bhaskar Shrachi Alloys Ltd. Angadpur
5. M/s Adhunik Corporation Ltd. Angadpur

For M/s Govind Impex Limited & M/s Rishabh Sponge Iron Ltd. Both situated at Barjora, no responsible management representative was available during the visit of the team, the over all housekeeping was observed to be very poor and unit was negligent about over all safety aspects. The industry, M/s Rishabh Sponge Iron Ltd. Was found to store huge amount of coal in open premises which is a gross violation of the six point directives earlier issued to Sponge Iron Industries.

During inspection of M/s Haldia Steels Ltd. (Unit – II), Angadpur, the working area was found to be covered throughout with concrete road resulting in less fugitive emission. This unit has also installed WHRB leading to improvement in emission aspects visually. During inspection of M/s Bhaskar Shrachi Alloys Ltd. Angadpur, huge fugitive emission was noted. The pollution control devices were not functioning properly and the process activities were stopped, the Hon'ble Minister-in-Charge took a serious note of such attitude of the industry, house keeping of the industry was also found to be poor.

M/s Adhunik Corporation Ltd. Angadpur none of the APCD attached to induction furnace were in working condition. Safety issues were not being addressed properly since workers were found removing molten slag from the surface of induction furnace without wearing any sort of safety devices.

As a follow-up mechanism, all the sponge iron industries of the State have been called for a meeting to discuss about the compliance status of this industrial sector.

Another paper industry located at Howrah M/s Krishna Tissues Pvt. Ltd. is engaged in production of Coated Duplex Board of installed production capacity 200M.T. per day was personally inspected on 20/07/2011 by the Member Secretary, the Chief Engineer (O & E Cell) and other Board officials with reference to a complaint from Krishna Tissue Dushan Pratirodh Committee lodged before Hon'ble Minister-in-Charge, Deptt. of Environment, GoWB.

The following inputs were given by the technical officers:

- Disposal system of fly ash may be mechanized further with installation of SILO and pug well.
- Industry was advised to install automatic ash disposal system facilitated with pneumatically controlled with silo & pug mill so that the disposal could be made directly by dumper resulting in minimum fugitive dust emission as well as minimum exposure of workmen to dust.
- Industry was also advised to install appropriate dust control system in coal crusher section.



Aeration Tank (Biological Reactor)



Sludge thickener and decanter

Apart from the regulatory function of the Board, industries are also provided assistance with technical inputs for achieving better compliance with environmental norms.

37. Municipal Solid Waste Management Status in West Bengal

The Ministry of Environment & Forests (MoEF), Govt. of India notified the Municipal Solid Waste (Management & Handling) Rules in 2000 under the Environment (Protection) Act, 1986. The various provisions of the rules has clearly specified the management of municipal solid waste.

Responsibilities of concerned stakeholders as per the provisions of the Municipal Solid Waste(Management & Handling) Rules, 2000

Responsibilities of the State Govt.

- The Secretary, Dept. of Urban Development of the State shall have the overall responsibility for the enforcement of the provisions of the MSW Rules for the metropolitan cities.
- The Dist. Magistrate or Dy. Commissioner of concerned district of the State shall have the overall responsibility for the enforcement of the provisions of the MSW Rules within the territorial limits of their jurisdiction

Responsibilities of the Municipal bodies

- Municipal Authority shall make an application in Form-1 to the State Pollution Control Board (SPCB) for grant of authorisation for setting up waste processing and disposal facility including landfill
- Municipal Authority will develop infrastructures for collection, storage, transportation, processing and disposal of municipal solid waste.

- Municipal Authority shall furnish the Annual Report in Form-II to
 - a) The Secretary of the Department (in case of Metropolitan City)
 - b) The District Magistrate or Dy. Commissioner concerned (other than Metropolitan cities) With a copy to the State Board by 30th June every year.

Responsibilities of the State Board

- The State Board shall grant authorisation to the municipal authorities or the operator for setting up waste processing and disposal facilities including landfills.
- Before granting authorisation, the State Board shall examine the proposal of the municipality or the operator for setting up waste processing and disposal facilities including landfill. The State Board shall also take the views of other agencies like State Urban Development Department, Town & Country Planning Department, State Ground Water Board etc. during examination of the proposal.
- The State Board shall monitor the compliance of the standard of ground water, ambient air, leachate quality and compost quality including incineration standards as specified in the Rules.
- The State Board shall prepare and submit to the Central Pollution Control Board the annual report (in Form-IV) with regard to the implementation of the MSW Rules by the 15th September year.

There are 127 nos. urban local bodies in West Bengal. Out of which 42 nos. are situated within KMA and 85 nos. are situated in non-KMA areas. The Kolkata Metropolitan Development Authority (KMDA) and Municipal Engineering Directorate (MED) are the nodal agencies working as Technical Consultants for preparing the Detailed Project Report on management of Municipal Solid Wastes on behalf of the local bodies situated within KMA and Non-KMA areas respectively. Among 42 nos. urban local bodies within KMA there are 3 (three) nos. Municipal Corporations, namely Kolkata Municipal Corporation, Howrah Municipal Corporation & Chandernagore Municipal Corporation. Whereas Durgapur Municipal Corporation, Asansol Municipal Corporation and Siliguri Municipal Corporation are among 85 nos. urban local bodies situated in Non-KMA area.

Within KMA

MSW management in KMC

There are 141 wards within KMC area. Presently mixed wastes (bio-degradable and non bio-degradable including recyclable wastes) are collected from residential, commercial and market areas and brought to secondary collection points (4.5 m³ and 7 m³ capacity bulk container or open vat). More than 95% of total wastes generated in KMC area are disposed at Dhapa dumping ground and rest at Garden Reach dumping ground. The total landfill area at Dhapa is 21.5 ha. and Garden Reach area 8 ha. The Dhapa landfill site is divided into two parts (8.2 ha. and 13.3 ha.) Disposal of MSW at Dhapa was started in the year 1986.



The landfill site of 8.2 ha. was exhausted in the year 2009 and this site has been considered for remediation under Capacity Building for Industrial Pollution Management Project(CBIPMP) of

World Bank. Presently the disposal of MSW is done on two adjacent sites of 13.3 ha and 10 ha. Remediation project of 8.2 ha. landfill site was considered with the condition that KMC would develop an engineered landfill site on the 10 ha. site but the KMC has started dumping MSW at 10 ha. area without developing an engineered landfill facility. The existing dumping site of 13.3 ha at Dhapa and the site of 10 ha. situated near Dhapa will be exhausted within two years with present generation of MSW amounting to 4000 MT per day.

In the year 2000, a mechanical compost plant (windrow composting) of capacity 700 MT/day was developed by a private operator namely M/s Eastern Organic Fertilizer within the existing MSW disposal site at Dhapa. This unit is mainly processing the market wastes. Presently the said compost plant is operating in lower capacity of 500 MT/day. But, the KMC is considering to upgrade the capacity of the existing Compost Plant.

A land of 113 ha. was identified by KMC just beside the existing Dhapa landfill site for the development of MSW management facility. As this newly identified land falls within East Calcutta Wetlands, identified as a Ramsar site under the Ramsar Convention on Wetlands, the permission of East Kolkata Wetland Management Authority(EKWMA) was required. Apart from this, another site of area 210 ha. at Mouza Beonta under Kolkata Leather Complex PS. has also been identified by the KMC for the development of integrated municipal solid waste management facilities. In this connection the Urban Development Department, Govt. of W.B. convened a meeting on 15.12.2010 involving KMC, WBPCB, EKWMA etc. In the said meeting it is decided that the KMC would prepare a Project Report for developing an engineered landfill facility and compost plant on 50 ha. area located within the site of 113 ha., as the acquisition of land at Beonta site would take time. Recently, the East Kolkata Wetland Management Authority has given conditional clearance for the development of engineered landfill site & compost plant at 52 ha. areas. Accordingly, the Board has given authorisation for the said engineered landfill facility and augmentation of the existing mechanical compost plant.

Model MSW project at North Dum Dum and New Barrackpore Municipality District North 24 Parganas

With the financial assistance from CPCB and KMDA (50:50 cost share basis) ,a MSW model facility was developed at Fatullahpur, PS. Nimta for two nos. municipal bodies namely North Dum Dum and New Barrackpore Municipality. The total project cost was Rs. 565.30 lakhs. Both the municipal authority introduced door-to-door waste collection system of segregated MSW (two bin system for segregation of biodegradable & non-biodegradable materials at source). Common Compost Plant (Vermi Compost) and Sanitary Landfill facility(Cell-I) was also developed. After formal inauguration in February, 2009, the facility was taken into operation, but it was stopped due to local resentment against the functioning of the same. The Board expected that the local resentment would be settled and facility would restart again. But the situation did not improve and the plant became non-functional. Recently, the Board came to know from KMDA that the said facility is presently idle and the top structure of Vermi Compost Pits and the HDPE liner of 1.5 mm thickness laid for the development of engineered landfill facility has been demolished. The CPCB has sent reminder letters along with audit query of CAG to intimate about the present status of the facility.

From the last inspection conducted on 04.01.2011, the Board Official also observed the miserable situation of the facility as mentioned above and accordingly the CPCB has been informed.

Bhadreswar Municipality in Hooghly District

Bhadreswar Municipality developed MSW management facility under State fund Project. Total project cost was Rs. 199.3 lakhs. Introduced door-to-door collection system for segregated MSW (two bin system for segregation of biodegradable & non-biodegradable materials at source). The Compost Plant (Vermi Compost) and sanitary landfill facility is in operation. But the quality of compost being produced has been analyzed by the Board and the presence of lead & other toxic metals has been found.



Chandernagore Municipal Corporation in Hooghly District

Chandernagore Municipal Corporation developed a MSW management facility under the Megacity Project. Total project cost was Rs. 345.76 lakhs. Introduced door-to-door collection system for segregated MSW (two bin system for segregation of biodegradable & non-biodegradable materials at source). The Compost Plant (Vermi Compost) and sanitary landfill facility was commissioned in the year 2007. But the quality of compost being produced has been analyzed by the Board and the presence of lead & other toxic metals has been found.

Dum Dum, South Dum Dum & Baranagar Municipality District North 24 Parganas

It is a common MSW management facility for three municipalities developed under Megacity Project. Total project cost was Rs. 547.98 lakhs. The construction work for the Integrated Compost Plant (windrow composting) of capacity 200 MT and common sanitary landfill facility has been completed and it is ready for use. But none of the municipalities have introduced collection of segregated waste.

Panihati Municipality

Panihati Municipality developed a MSW management facility under the Megacity Project. Total project cost was Rs. 232.27 lakhs. Introduced door-to-door collection system for segregated MSW (two bin system for segregation of biodegradable & non-biodegradable materials at source). The Compost Plant (Vermi Compost) became non-functional in the last few years and landfill facility is totally filled up with mixed MSW. Recently they are sending their biodegradable MSW to Kamarhati Municipality for vermi composting. Vermicomposting is done by a private operator.

JNNURM Project

With the financial assistance from the Governments (Govt. of India 35% & State Govt. 65%) the KMDA has developed MSW management facilities like Vermicompost Plants and Landfill Facilities for 8 nos. municipal bodies (Barrackpore, North Barrackpore, Garulia, Kamarhati, Bansberia, Bally, Hooghly-Chinsurah and Budge Budge municipality) within the KMA. The development of Compost plants and sanitary landfill facilities are in progress for the in Rajpur-Sonarpur and Rajarhat-Gopalpur.

Another 13 nos. municipalities (Kalyani, Naihati, Uluberia, Maheshtala, Baruipur, Gayeshpur, Bhatpara, Pujali, Halisahar, Khardah, Kanchrapara, Madhyamgram and Barasat) have also been approved by JNNURM for financial assistance for development of MSW management facilities.

Kolkata Solid Waste Management Improvement Project (KSWMIP) with financial assistance of Japan International Cooperation Agency(JICA)

It is a Common/ Regional Facility of MSW for 6(six) nos. municipalities in Hooghly District. (Uttarpara-Kotrang, Konnagar, Rishra, Serampore, Chapdani Baidyabati). For the development of Common sanitary landfill facility, a land of 52 acres has already been acquired by the District Authority at Dirghangi in Hooghly District. Individual waste compost plant and waste transfer station will be developed in each municipal area. The total project cost is Rs 170 crores.

The construction work for the development of Common Landfill Facility and Individual waste compost plant and waste transfer station are in progress.

Waste to Energy Project in Howrah

The Howrah Municipal Corporation has initiated a project along with M/s Selco International Pvt. Limited, Hyderabad for Waste to Energy plant of municipal solid waste. The 6 MW power plant is proposed to be run with RDF (Refuse Derived Fuel) pellets derived from 500 MT/day of municipal solid waste. The project for the RDF plant, to be developed near the MSW dumping ground at Belgachia, Howrah, has already obtained the permission of the Board. Howrah Municipal Corporation has leased out 10 acres of land for 30 years to M/s Selco International Limited for development of RDF plant. The project cost for the RDF plant is Rs. 16 crores. The progress of work for development of RDF plant has been delayed as the HMC started dumping MSW at the land given to M/s Selco International Pvt. Limited. Presently the HMC has stopped dumping MSW at the said site.

For the development of Waste to Energy plant, M/s Selco International Pvt. Limited has formed a joint venture company with M/s KRL Infratech (India) Ltd. under the name & style M/s KRL-SIL Green Energy Pvt. Ltd. The project cost of the power plant will be Rs. 54 crores and it will be developed at Amta, Howrah. The company has already acquired 7.5 acres of land for the development of the waste to energy plant.

However, further developments on this issue are yet to be intimated to the State Board.

Outside KMA

Common Facility in Asansol- Durgapur Area

The Asansol Durgapur Development Authority (ADDA) has developed shared / regional MSW facilities for five ULBs namely Asansol Municipal Corporation, Durgapur Municipal Corporation, Kulti Municipality, Ranganj Municipality and Jamuria Municipality under the JNNURM project. As part of this project, a centralized secured landfill facility has been developed by M/s Gujarat Enviro Protection & Infrastructure Ltd.(GEPIL) at Mangalpur over 167 acres and became operational.

Two nos. compost plants, a 300 TPD unit at Shankarpur for Durgapur Municipal Corporation and a 150 TPD unit at Mangalpur for Raniganj and Jamuria municipalities have started operations. Another 500 TPD plant at Kalipahari, Asansol for Asansol and Kulti municipal areas is under consideration. The waste processing plants have been developed and are being operated by M/s Hanjer Biotech

Energies Pvt. Ltd. The residues of the compost plants are also sending to the centralized secured landfill facility.

Major constraints for implementing proper MSW management system

Land availability - One of the main constraints in developing proper waste processing and disposal facilities, is the land scarcity, especially in the urban areas. To overcome this issue, development of the regional facilities involving a number of municipal authorities is gradually emerging as the preferred option for sustainable solid waste management.

Non-utilization of the MSW Facilities: Some MSW management facilities (Compost Plant & Engineered Landfill) have already been set up in the state under the JNNURM Project, but these are not being utilized by the concerned municipalities due to the following issues :

- Who will operate the plant i.e. PPP model or individual municipality
- What will be the tripping fees in case it is operated by a private entrepreneur
- Door to Door collection system for segregated wastes has not yet been developed.
- Local problem (Example: Model Facility at North Dum Dum and New Barrackpore)

Market of compost - The selling of the compost is a matter of concern as the farmers as well as the concerned Government authorities are not in a position to accept this for agricultural use. The Government needs to frame a policy on this issue. Moreover, it is also found that in some areas the quality of compost is not acceptable due to presence of some toxic metals, which is mainly due to improper source segregation. It is further to be mentioned that because of such problems, the Government is now considering the alternative option of setting up waste to energy plants which will greatly reduce the land requirement for waste disposal and will also generate electricity. Such plants may be the only option in thickly populated urban areas where it is extremely difficult to find land for development of landfill and compost plants. However, technical feasibility and environmental aspects of such projects should be properly addressed before considering the same.

User charges - An important issue regarding sustainable waste management is the imposition of charges for the waste collection, transportation, treatment and disposal. According to internationally accepted "Polluter Pay Principles", the generator of wastes must be financially accountable to the municipalities for proper management of municipal solid waste. Though most of the municipal bodies are reluctant to introduce the user charges for collection, treatment and disposal for various reasons, it is felt that this system will have to be introduced for sustainable waste management.

Waste (Management & Handling) Rules in West Bengal

1. Total no. of Urban Local Bodies(ULBs) in the State : 127

2. Number of Towns in the State :

| | | |
|------|--|---|
| i) | Nos. of Class-I Towns (more than 1,00,000 Population) | 58 (including two Metro Cities, namely Kolkata & Howrah) |
| ii) | Nos. of Class-II Towns (50,000–99,000 Population) | 28 |
| iii) | Nos. of Class-III Towns (20,000–49,000 Population) | 32 |
| iv) | Nos. of Class-IV Towns (10,000–19,000 Population) | 8 |
| v) | Nos. of Class-V Towns (5,000–9,999 Population) | 1 |
| vi) | Nos. of Class-VI Towns (< 5,000 Population) | 0 |
| | TOTAL : | 127 |

3. Authorisation status of ULBs :

| | | |
|------|--|------------------------|
| i) | Total Nos. of ULBs applied for MSW authorisation | 108 (<i>List- A</i>) |
| ii) | Total Nos. of ULBs not applied for MSW authorisation | 19 (<i>List- B</i>) |
| iii) | Authorisation Granted to ULBs | 69 (<i>List- C</i>) |

* MSW authorization issued only to the ULBs on the basis of submission of Detailed Project Report(DPR) and availability of land

4. Nos. of Waste processing plants (i.e. Treatment Facilities i.e. compost plant) :

| | | |
|------|---|-----------------------|
| i) | Nos. of Plants operational | 11 (<i>List- D</i>) |
| ii) | Nos. of Plants set up and ready for operation | 7 (<i>List- E</i>) |
| iii) | Nos. of Plants under construction | 55 (<i>List- F</i>) |

5. Nos. of Landfill sites :

| | | |
|------|--|----------------------|
| i) | Nos. of Sanitary Landfill operational | 13 (<i>List-G</i>) |
| ii) | Nos. of Landfill developed and ready for use | 10 (<i>List-H</i>) |
| iii) | Nos. of Landfill under construction | 50 (<i>List-I</i>) |

LIST- A

Name of Local Bodies applied for MSW authorization

| Sl. No. | District | Name of the ULBs |
|---------|-----------|------------------------------------|
| 1. | 24 Pgs(N) | Ashoknagar-Kalyangarh Municipality |
| 2. | 24 Pgs(N) | Baranagar Municipality |
| 3. | 24 Pgs(N) | Barasat Municipality |
| 4. | 24 Pgs(N) | Barrackpore Municipality |
| 5. | 24 Pgs(N) | Basirhat Municipality |
| 6. | 24 Pgs(N) | Bidhan Nagar Municipality |
| 7. | 24 Pgs(N) | Bhatpara Municipality |
| 8. | 24 Pgs(N) | Bongaon Municipality |
| 9. | 24 Pgs(N) | Dum Dum Municipality |
| 10. | 24 Pgs(N) | Garulia Municipality |
| 11. | 24 Pgs(N) | Gobardanga Municipality |
| 12. | 24 Pgs(N) | Habra Municipality |
| 13. | 24 Pgs(N) | Halisahar Municipality |
| 14. | 24 Pgs(N) | Kamarhati Municipality |
| 15. | 24 Pgs(N) | Kanchrapara Municipality |
| 16. | 24 Pgs(N) | Khardaha Municipality |
| 17. | 24 Pgs(N) | Madhyamgram Municipality |
| 18. | 24 Pgs(N) | Naihati Municipality |
| 19. | 24 Pgs(N) | New Barrackpore Municipality |
| 20. | 24 Pgs(N) | North Barrackpore Municipality |
| 21. | 24 Pgs(N) | North Dum Dum Municipality |
| 22. | 24 Pgs(N) | Panihati Municipality |
| 23. | 24 Pgs(N) | South Dum Dum Municipality |
| 24. | 24 Pgs(N) | Taki Municipality |
| 25. | 24 Pgs(N) | Titagarh Municipality |
| 26. | 24 Pgs(S) | Baruipur Municipality |
| 27. | 24 Pgs(S) | Budge-Budge Municipality |
| 28. | 24 Pgs(S) | Diamond Harbour Municipality |
| 29. | 24 Pgs(S) | Joynagar-Majilpur Municipality |

| Sl. No. | District | Name of the ULBs |
|---------|-----------------|-------------------------------------|
| 30. | 24 Pgs(S) | Maheshkala Municipality |
| 31. | 24 Pgs(S) | Pujali Municipality |
| 32. | 24 Pgs(S) | Rajpur-Sonarpur Municipality |
| 33. | Bankura | Bankura Municipality |
| 34. | Bankura | Sonamukhi Municipality |
| 35. | Bardhaman | Asansol Municipal Corporation |
| 36. | Bardhaman | Bardhaman Municipality |
| 37. | Bardhaman | Dainhat Municipality |
| 38. | Bardhaman | Durgapur Municipal Corporation |
| 39. | Bardhaman | Jamuraia Municipality |
| 40. | Bardhaman | Kalna Municipality |
| 41. | Bardhaman | Katwa Municipality |
| 42. | Bardhaman | Memari Municipality |
| 43. | Bardhaman | Raniganj Municipality |
| 44. | Birbhum | Bolpur Municipality |
| 45. | Birbhum | Dubrajpur Municipality |
| 46. | Birbhum | Rampurhat Municipality |
| 47. | Cooch Behar | Cooch Behar Municipality |
| 48. | Cooch Behar | Dinhata Municipality |
| 49. | Cooch Behar | Haldibari Municipality |
| 50. | Cooch Behar | Mathabhanga Municipality |
| 51. | Cooch Behar | Mekhliganj Municipality |
| 52. | Cooch Behar | Tufanganj Municipality |
| 53. | Darjeeling | Darjeeling Municipality |
| 54. | Darjeeling | Kalimpong Municipality |
| 55. | Darjeeling | Kurseong Municipality |
| 56. | Darjeeling | Mirik Municipality |
| 57. | Darjeeling | Siliguri Municipal Corporation |
| 58. | Hooghly | Arambagh Municipality |
| 59. | Hooghly | Bansberia Municipality |
| 60. | Hooghly | Bhadreswar Municipality |
| 61. | Hooghly | Chamdpdani Municipality |
| 62. | Hooghly | Chandernagore Municipal Corporation |
| 63. | Hooghly | Hooghly-Chinsurah Municipality |
| 64. | Hooghly | Konnagar Municipality |
| 65. | Hooghly | Rishra Municipality |
| 66. | Hooghly | Serampore Municipality |
| 67. | Hooghly | Tarakeswar Municipality |
| 68. | Hooghly | Uttarpara-Kotrang Municipality |
| 69. | Howrah | Bally Municipality |
| 70. | Howrah | Howrah Municipal Corporation |
| 71. | Howrah | Uluberia Municipality |
| 72. | Jalpaiguri | Alipurduar Municipality |
| 73. | Jalpaiguri | Dhupguri Municipality |
| 74. | Jalpaiguri | Jalpaiguri Municipality |
| 75. | Jalpaiguri | Mal Municipality |
| 76. | Kolkata | Kolkata Municipal Corporation |
| 77. | Maldah | English Bazar Municipality |
| 78. | Maldah | Old Malda Municipality |
| 79. | Midnapore(East) | Egra Municipality |
| 80. | Midnapore(East) | Haldia Municipality |

| Sl. No. | District | Name of the ULBs |
|---------|-----------------|----------------------------------|
| 81. | Midnapore(East) | Panskura Municipality |
| 82. | Midnapore(East) | Tamluk Municipality |
| 83. | Midnapore(West) | Ghatal Municipality |
| 84. | Midnapore(West) | Jhargram Municipality |
| 85. | Midnapore(West) | Medinipur Municipality |
| 86. | Murshidabad | Beldanga Municipality |
| 87. | Murshidabad | Berhampore Municipality |
| 88. | Murshidabad | Jangipur Municipality |
| 89. | Murshidabad | Jiaganj-Azimganj Municipality |
| 90. | Murshidabad | Kandi Municipality |
| 91. | Murshidabad | Murshidabad Municipality |
| 92. | Nadia | Birnagar Municipality |
| 93. | Nadia | Chakdaha Municipality |
| 94. | Nadia | Gayeshpur Municipality |
| 95. | Nadia | Kalyani Municipality |
| 96. | Nadia | Krishnanagar Municipality |
| 97. | Nadia | Nabadwip Municipality |
| 98. | Nadia | Ranaghat Municipality |
| 99. | Nadia | Santipur Municipality |
| 100. | Nadia | Taherpur Notified Area Authority |
| 101. | North Dinajpur | Dalkhola Municipality |
| 102. | North Dinajpur | Islampur Municipality |
| 103. | North Dinajpur | Kaliaganj Municipality |
| 104. | North Dinajpur | Raiganj Municipality |
| 105. | Purulia | Jhalda Municipality |
| 106. | Purulia | Raghunathpur Municipality |
| 107. | South Dinajpur | Balurghat Municipality |
| 108. | South Dinajpur | Gangarampur Municipality |

LIST- B

Name of Local Bodies which not applied for MSW authorization

| Sl. No. | District | Name of the ULBs |
|---------|-----------------|--------------------------------|
| 1. | 24 Pgs(N) | Baduria Municipality |
| 2. | 24 Pgs(N) | Rajarhat-Gopalpur Municipality |
| 3. | Bankura | Bishnupur Municipality |
| 4. | Barddhaman | Guskara Municipality |
| 5. | Barddhaman | Kulti Municipality |
| 6. | Birbhum | Nalhati Municipality |
| 7. | Birbhum | Sainthia Municipality |
| 8. | Birbhum | Suri Municipality |
| 9. | Hooghly | Baidyabati Municipality |
| 10. | Hooghly | Dankuni Municipality |
| 11. | Midnapore(East) | Contai Municipality |
| 12. | Midnapore(West) | Chandrakona Municipality |
| 13. | Midnapore(West) | Kharagpur Municipality |
| 14. | Midnapore(West) | Kharar Municipality |
| 15. | Midnapore(West) | Kshirpai Municipality |
| 16. | Midnapore(West) | Ramjibanpur Municipality |

| Sl. No. | District | Name of the ULBs |
|---------|-------------|---------------------------------------|
| 17. | Murshidabad | Dhuliyān Municipality |
| 18. | Nadia | Cooper's Camp Notified Area Authority |
| 19. | Purulia | Purulia Municipality |

List-C

Names of ULBs for which MSW Authorisation granted

| Sl. No. | District | Name of the ULBs |
|---------|-------------|------------------------------------|
| | 24 Pgs(N) | Ashoknagar-Kalyangarh Municipality |
| | 24 Pgs(N) | Baranagar Municipality |
| | 24 Pgs(N) | Barasat Municipality |
| | 24 Pgs(N) | Barrackpore Municipality |
| | 24 Pgs(N) | Bhatpara Municipality |
| | 24 Pgs(N) | Dum Dum Municipality |
| | 24 Pgs(N) | Garulia Municipality |
| | 24 Pgs(N) | Gobardanga Municipality |
| | 24 Pgs(N) | Habra Municipality |
| | 24 Pgs(N) | Halisahar Municipality |
| | 24 Pgs(N) | Kamarhati Municipality |
| | 24 Pgs(N) | Kanchrapara Municipality |
| | 24 Pgs(N) | Madhyamgram Municipality |
| | 24 Pgs(N) | New Barrackpore Municipality |
| | 24 Pgs(N) | North Barrackpore Municipality |
| | 24 Pgs(N) | North Dum Dum Municipality |
| | 24 Pgs(N) | Panihati Municipality |
| | 24 Pgs(N) | South Dum Dum Municipality |
| | 24 Pgs(N) | Taki Municipality |
| | 24 Pgs(S) | Budge-Budge Municipality |
| | 24 Pgs(S) | Maheshtala Municipality |
| | 24 Pgs(S) | Rajpur-Sonarapur Municipality |
| | Bankura | Bankura Municipality |
| | Bardhaman | Asansol Municipal Corporation |
| | Bardhaman | Bardhaman Municipality |
| | Bardhaman | Durgapur Municipal Corporation |
| | Bardhaman | Kalna Municipality |
| | Bardhaman | Raniganj Municipality |
| | Cooch Behar | Cooch Behar Municipality |
| | Cooch Behar | Haldibari Municipality |
| | Cooch Behar | Mekhliganj Municipality |
| | Cooch Behar | Tufanganj Municipality |
| | Darjeeling | Darjeeling Municipality |
| | Darjeeling | Kalimpong Municipality |
| | Darjeeling | Kurseong Municipality |
| | Darjeeling | Mirik Municipality |
| | Darjeeling | Siliguri Municipal Corporation |
| | Hooghly | Arambagh Municipality |
| | Hooghly | Bansberia Municipality |
| | Hooghly | Bhadreswar Municipality |
| | Hooghly | Champdani Municipality |

| Sl. No. | District | Name of the ULBs |
|---------|-----------------|-------------------------------------|
| | Hooghly | Chandernagore Municipal Corporation |
| | Hooghly | Hooghly-Chinsurah Municipality |
| | Hooghly | Konnagar Municipality |
| | Hooghly | Rishra Municipality |
| | Hooghly | Serampore Municipality |
| | Hooghly | Tarakeswar Municipality |
| | Hooghly | Uttarpara-Kotrang Municipality |
| | Howrah | Bally Municipality |
| | Howrah | Howrah Municipal Corporation |
| | Jalpaiguri | Alipurduar Municipality |
| | Jalpaiguri | Jalpaiguri Municipality |
| | Jalpaiguri | Mal Municipality |
| | Kolkata | Kolkata Municipal Corporation |
| | Maldah | English Bazar Municipality |
| | Maldah | Old Malda Municipality |
| | Midnapore(East) | Haldia Municipality |
| | Midnapore(East) | Panskura Municipality |
| | Murshidabad | Berhampore Municipality |
| | Nadia | Chakdaha Municipality |
| | Nadia | Gayeshpur Municipality |
| | Nadia | Kalyani Municipality |
| | Nadia | Nabadwip Municipality |
| | Nadia | Ranaghat Municipality |
| | Nadia | Santipur Municipality |
| | North Dinajpur | Kaliaganj Municipality |
| | North Dinajpur | Raiganj Municipality |
| | South Dinajpur | Balurghat Municipality |
| | South Dinajpur | Gangarampur Municipality |

List-D

Name of the ULBs where the Compost Plants are in operation

| Sl. No. | District | Name of the ULBs |
|---------|----------------|---|
| 1. | Hooghly | Bhadreswar Municipality |
| 2. | Hooghly | Chandernagore Municipal Corporation |
| 3. | Hooghly | Bansberia Municipality |
| 4. | Kolkata | Kolkata Municipal Corporation |
| 5. | 24 Parganas(N) | Kamarhati Municipality |
| 6. | 24 Parganas(N) | Garulia Municipality |
| 7. | 24 Parganas(N) | North Barrackpore Municipality (Common Compost Plant at Garulia, Dist. North 24 Parganas) |
| 8. | Nadia | Kalyani Municipality (this is a small plant for green waste only) |
| 9. | Burdwan | Durgapur Municipal Corporation |
| 10. | Burdwan | Jamuria Municipality |
| 11. | Burdwan | Raniganj Municipality (Common Compost Plant at Mangalpur, Dist. Burdwan) |

List-E

Name of the ULBs where the Compost Plant is complete and ready for operation

| Sl. No. | District | Name of the ULBs |
|----------------|-----------------|--|
| | 24 Parganas(N) | North Dum Dum Municipality |
| | 24 Parganas(N) | New Barrackpore Municipality * (Common Compost Plant at Fatullahpur, Dist. North 24 Parganas) |
| | 24 Parganas(N) | Barrackpore Municipality |
| | 24 Parganas(S) | Budge Budge Municipality |
| | Hooghly | Hooghly-Chinsurah Municipality |
| | Howrah | Bally Municipality |
| | South Dinajpur | Balurghat Municipality |

* The development of the facility (vermi-compost plant and first cell of secured landfill) was completed in time and the facility was formally inaugurated by the Hon'ble MIC, UD &MA, GoWB on 19.03.09. However, because of a local agitation, the use of the facility had to be discontinued soon after the inauguration. The Board constantly pursued the Chairpersons of the two municipalities for resuming the facility operation but they failed to do so. Recently, the KMDA, which developed the facility and also shared 50% of the development cost, informed the Board that the facility has been vandalized and completely ruined. The North Dum Dum Municipality had also filed F.I.R. to the local police station. Immediately the Board conducted an inspection of the said facility and found that it has been destroyed beyond repair.

List-F

Name of the ULBs proposed for Compost Plants

| Sl. No. | District | Name of the ULBs |
|----------------|-----------------|------------------------------------|
| 1. | 24 Parganas(N) | Ashoknagar-Kalyangarh Municipality |
| 2. | 24 Parganas(N) | Bhatpara Municipality |
| 3. | 24 Parganas(N) | Barasat Municipality |
| 4. | 24 Parganas(N) | Bidhan Nagar Municipality |
| 5. | 24 Parganas(N) | Habra Municipality |
| 6. | 24 Parganas(N) | Halisahar Municipality |
| 7. | 24 Parganas(N) | Gobardanga Municipality |
| 8. | 24 Parganas(N) | Kanchrapara Municipality |
| 9. | 24 Parganas(N) | Khardaha Municipality |
| 10. | 24 Parganas(N) | Madhyamgram Municipality |
| 11. | 24 Parganas(N) | Naihati Municipality |
| 12. | 24 Parganas(N) | Rajarhat-Gopalpur Municipality |
| 13. | 24 Parganas(N) | Taki Municipality |
| 14. | 24 Parganas(N) | Dum Dum Municipality |
| 15. | 24 Parganas(N) | South Dum Dum Municipality |
| 16. | 24 Parganas(N) | Baranagar Municipality |
| 17. | 24 Parganas(S) | Baruipur Municipality |
| 18. | 24 Parganas(S) | Pujali Municipality |
| 19. | 24 Parganas(S) | Rajpur-Sonarpur Municipality |
| 20. | 24 Parganas(S) | Maheshtala Municipality |
| 21. | Bardhaman | Asansol Municipal Corporation |

| Sl. No. | District | Name of the ULBs |
|---------|----------------|--|
| 22. | Bardhaman | Kulti Municipality (Common Compost Plant at Asansol, Dist. Burdwan) |
| 23. | Bardhaman | Kalna Municipality |
| 24. | Bardhaman | Katwa Municipality |
| 25. | Bardhaman | Bardhaman Municipality |
| 26. | Cooch Behar | Cooch Behar Municipality |
| 27. | Cooch Behar | Mekhligunj Municipality |
| 28. | Cooch Behar | Tufanganj Municipality |
| 29. | Cooch Behar | Mathabhanga Municipality |
| 30. | Cooch Behar | Haldibari Municipality |
| 31. | Cooch Behar | Dinhata Municipality |
| 32. | Darjeeling | Siliguri Municipal Corporation |
| 33. | Darjeeling | Darjeeling Municipality |
| 34. | Darjeeling | Mirik Municipality |
| 35. | Darjeeling | Kurseong Municipality |
| 36. | Darjeeling | Kalimpong Municipality |
| 37. | Hooghly | Arambagh Municipality |
| 38. | Hooghly | Serampore Municipality |
| 39. | Hooghly | Uttarpara-Kotrang Municipality |
| 40. | Hooghly | Rishra Municipality |
| 41. | Hooghly | Konnagar Municipality |
| 42. | Hooghly | Baidyabati Municipality |
| 43. | Hooghly | Champdani Municipality |
| 44. | Hooghly | Tarakeswar Municipality |
| 45. | Howrah | Uluberia Municipality |
| 46. | Jalpaiguri | Alipurduar Municipality |
| 47. | Jalpaiguri | Jalpaiguri Municipality |
| 48. | Jalpaiguri | Mal Municipality |
| 49. | Malda | English Bazar Municipality |
| 50. | Malda | Old Malda Municipality |
| 51. | Murshidabad | Berhampore Municipality |
| 52. | Nadia | Gayeshpur Municipality |
| 53. | Nadia | Nabadwip Municipality |
| 54. | North Dinajpur | Raiganj Municipality |
| 55. | North Dinajpur | Kaliaganj Municipality |

List-G

Name of the ULBs where the Sanitary Landfill facilities are operational

| Sl. No. | District | Name of the Municipality |
|---------|----------|--|
| 1. | Hooghly | Bhadreswar Municipality |
| 2. | Hooghly | Chandernagore Municipal Corporation |
| 3. | Hooghly | Hooghly-Chinsurah Municipality |
| 4. | Howrah | Bally Municipality |
| 5. | Burdwan | Durgapur Municipal Corporation |
| 6. | Burdwan | Asansol Municipal Corporation |
| 7. | Burdwan | Raniganj Municipality |
| 8. | Burdwan | Jamuraia Municipality |
| 9. | Burdwan | Kulti Municipality (Common Landfill Facility at Mangalpur, Dist. Burdwan) |

| Sl. No. | District | Name of the Municipality |
|---------|----------------|---|
| 10. | 24 Parganas(N) | Garulia Municipality |
| 11. | 24 Parganas(N) | North Barrackpore Municipality (Common Landfill Facility at Garulia, Dist. North 24 Parganas) |
| 12. | 24 Parganas(N) | Kamarhati Municipality |
| 13. | 24 Parganas(S) | Maheshtala Municipality |

Sanitary Landfill is designated only for disposal of non-biodegradable inert municipal wastes, but all the above mentioned sanitary landfill facilities are used for disposal of mixed municipal waste

List-H

Name of the ULBs where the work for setting up of landfill facility is complete and ready for use

| Sl. No. | District | Name of the Municipality |
|---------|----------------|---|
| 1. | 24 Parganas(N) | North Dum Dum Municipality |
| 2. | 24 Parganas(N) | New Barrackpore Municipality * (Common Landfill Facility at Fatullahpur, Dist. North 24 Parganas) |
| 3. | 24 Parganas(N) | Dum Dum Municipality |
| 4. | 24 Parganas(N) | South Dum Dum Municipality |
| 5. | 24 Parganas(N) | Baranagar Municipality (Common Landfill Facility at Goroi Mathkal, Dist. North 24 Parganas) |
| 6. | 24 Parganas(N) | Barrackpore Municipality |
| 7. | 24 Parganas(S) | Budge Budge Municipality |
| 8. | Hooghly | Bansberia Municipality |
| 9. | Hooghly | Hooghly-Chinsurah Municipality |
| 10. | Howrah | Bally Municipality |

Name of the ULBs proposed for Sanitary Landfill Facility

| Sl. No. | District | Name of the Municipality |
|---------|----------------|------------------------------------|
| 1. | 24 Parganas(N) | Ashoknagar-Kalyangarh Municipality |
| 2. | 24 Parganas(N) | Bhatpara Municipality |
| 3. | 24 Parganas(N) | Barasat Municipality |
| 4. | 24 Parganas(N) | Bidhan Nagar Municipality |
| 5. | 24 Parganas(N) | Habra Municipality |
| 6. | 24 Parganas(N) | Halisahar Municipality |
| 7. | 24 Parganas(N) | Gobardanga Municipality |
| 8. | 24 Parganas(N) | Khardah Municipality |
| 9. | 24 Parganas(N) | Madhyamgram Municipality |
| 10. | 24 Parganas(N) | Naihati Municipality |
| 11. | 24 Parganas(N) | Rajarhat-Gopalpur Municipality |
| 12. | 24 Parganas(N) | Taki Municipality |
| 13. | 24 Parganas(S) | Baruipur Municipality |
| 14. | 24 Parganas(S) | Rajpur-Sonarapur Municipality |
| 15. | 24 Parganas(S) | Pujali Municipality |
| 16. | Bardhaman | Kalna Municipality |
| 17. | Bardhaman | Katwa Municipality |
| 18. | Bardhaman | Bardhaman Municipality |
| 19. | Cooch Behar | Cooch Behar Municipality |

| Sl. No. | District | Name of the Municipality |
|---------|----------------|---|
| 20. | Cooch Behar | Mekhligunj Municipality |
| 21. | Cooch Behar | Tufanganj Municipality |
| 22. | Cooch Behar | Mathabhanga Municipality |
| 23. | Cooch Behar | Haldibari Municipality |
| 24. | Cooch Behar | Dinhata Municipality |
| 25. | Darjeeling | Kurseong Municipality |
| 26. | Darjeeling | Siliguri Municipal Corporation |
| 27. | Darjeeling | Darjeeling Municipality |
| 28. | Darjeeling | Mirik Municipality |
| 29. | Darjeeling | Kalimpong Municipality |
| 30. | Kolkata | Kolkata Municipal Corporation |
| 31. | Hooghly | Arambagh Municipality |
| 32. | Hooghly | Tarakeswar Municipality |
| 33. | Hooghly | Uttarpara-Kotrang Municipality |
| 34. | Hooghly | Serampore Municipality |
| 35. | Hooghly | Konnagar Municipality |
| 36. | Hooghly | Rishra Municipality |
| 37. | Hooghly | Chamdpani Municipality |
| 38. | Hooghly | Baidyabati Municipality (Common Landfill Facility at Dirghangi, Dist. Hooghly) |
| 39. | Howrah | Uluberia Municipality |
| 40. | Jalpaiguri | Alipurduar Municipality |
| 41. | Jalpaiguri | Jalpaiguri Municipality |
| 42. | Jalpaiguri | Mal Municipality |
| 43. | Malda | English Bazar Municipality |
| 44. | Malda | Old Malda Municipality |
| 45. | Murshidabad | Berhampore Municipality |
| 46. | Nadia | Nabadwip Municipality |
| 47. | Nadia | Gayshpur Municipality |
| 48. | North Dinajpur | Raiganj Municipality |
| 49. | North Dinajpur | Kaliaganj Municipality |
| 50. | South Dinajpur | Balurghat Municipality |

38. Bio-Medical Waste Management in West Bengal

The Ministry of Environment & Forests (MoEF), Govt. of India notified the Bio-medical Waste (Management & Handling) Rules in 1998 under the Environment (Protection) Act, 1986 and later it was amended twice in the year 2000. The responsibilities of the State Board as per the provisions of the Bio-medical Waste (Management & Handling) Rules, 1998 and its amendments made thereafter are to grant Authorization to the health care units and the operators of common bio-medical waste treatment facilities(CBWTF), to inspect health care units and CBWTFs to verify their bio-medical waste management status, to act as a facilitator in between the health care units and the operators of the common facilities and also to prepare and send the annual report in regard to the implementation of the Bio-Medical Waste (M & H) Rules in the State to the Central Pollution Control Board by 31st March every year.

The responsibilities of the Occupier of a Health Care Unit are to obtain authorization from the State Board, to segregate BMW at the point of generation and store safely in colour-coded bags or puncture proof containers, labeled with Bio-hazard symbol, to mutilate the disposable syringes by needle-cutter/ electrical destroyer, to ensure proper treatment of their bio-medical waste either through own treatment facility or by joining an authorised common BMW treatment facility, not to store untreated bio-medical waste within the unit beyond 24 hrs. and to maintain records related to the generation, storage, treatment and disposal of BMW and submit an annual report in Form-II by 31st January every year to the State Board.

Inventorisation of the Health care units in West Bengal

The WBPCB completed the inventory of the bio-medical waste in the state of West Bengal in 2005 through a project awarded by the Ministry of Environment & Forests, Govt. of India. The Board had also completed another project, partly funded by CPCB, in the year 2010 to update the inventory of HCUs in the State and also to quantify the BMW.

- Total No. of units – 4747
 - Bedded – 2521 (within KMC – 421, outside KMC- 2100)
 - Non-bedded- 2226 (within KMC- 746, outside KMC- 1480)
- Total bed strength – 92950
- Obtained authorization – 2213
 - Bedded – 1961
 - Non-bedded - 252
- Total waste generation – 23.57 MT/d
 - from bedded units – 23.237 MT/d
 - from non-bedded – 0.34 MT/d

Common Bio-medical Waste Treatment, Storage and Disposal Facilities (CBWTF)

The BMW generated by different HCUs is either treated by the Common Bio-medical Waste Treatment Facilities (CBWTF) or through their own treatment facility. Presently there are five(5) nos privately owned CBWTFs and two(2)nos Government owned CBWTFs operating in West Bengal which are as follows:-

Existing Common Bio-Medical Waste Treatment and Disposal Facility run by Private Operator

- 1) **Howrah** : M/s SembRamky Environmental Management Pvt. Ltd. (capacity 30,000 beds/day)
Covering Districts – Howrah, Kolkata, South 24 Parganas, part of North 24 Parganas and part of Hooghly District
- 2) **Kalyani** : M/s SembRamky Environmental Management Pvt. Ltd. (capacity 30,000 beds/day)
Covering Districts – Nadia, Murshidabad, part of North 24 Parganas and part of Hooghly District
- 3) **Haldia** : M/s West Bengal Waste Management Ltd. (capacity 20,000 beds/day).
Covering Districts – East Midnapore and West Midnapore
- 4) **Asansol** : M/s SembRamky Environmental Management Pvt. Ltd. (capacity 30,000 beds/day).
Covering Districts – Burdwan, Bankura, Birbhum and Purulia
- 5) **Siliguri** : M/s Greenzen Bio Pvt. Ltd. (capacity 15,000 beds/day).
Covering Districts – Darjeeling, Jalpaiguri, Coochbehar, Uttar Dinajpur, Dakshin Dinajpur and Malda

All the facilities have double chambered incinerators and autoclaves for the treatment of anatomical and non-anatomical bio-medical wastes, respectively. Only the Haldia facility has no incinerator – the anatomical wastes are incinerated in the Hazardous waste incinerator of the Common Treatment, Storage & Disposal (TSDF) for Hazardous Waste of M/s West Bengal Waste Management Ltd. located within the same premises at Haldia, Dist Purba Medinipur.

Health Deptt., Govt. of West Bengal

- 1) **Kalyani** : J.N.M. Hospital, Kalyani (Autoclave: capacity 50 kgs./cycle)
covering 998 beds within Kalyani Municipal areas
- 2) **Diamond Harbour** : Diamond Harbour Sub Divisional Hospital (Microwave)
covering 200 beds within Diamond Harbour Municipal areas

Almost all HCUs, both Govt. and private, have ensured treatment of BMWs by joining one of the above mentioned facilities. The Govt. of W.B. has made a budgetary provision for bearing the treatment cost of BMW generated from all the State Govt. Health Care Establishments. The Department of Health & Family Welfare, Govt. of W.B. has issued an order in this regard on 28.05.2009.

Review of service charges for Common bio-medical waste collection, treatment and disposal facilities operating in West Bengal

The Environment Department constituted a Committee for the revision of rates of bio-medical waste collection, treatment and disposal vide order No. EN/3112/T-IV-3/006/2003 dated 09.11.2010. Three nos. meeting of the Committee were held on 20.01.2011, 30.06.2011 and 19.08.2011. In the first meeting there was elaborate discussion among the members of the Committee regarding the issue on revision of existing charges for bio-medical waste collection, treatment & disposal. In the second meeting, the facility operators made power point presentations before the members of the Committee on their existing transportation route, proposed revised rate for Bio-medical Waste treatment & disposal etc. and finally in the third meeting held on 19.08.2011, the Committee recommended the following revised rates that may be charged by operators of the Common Bio-medical Waste Treatment Facilities operating in the state from the various categories of their member health care units :-

| No. | Service | Revised rate | |
|---|---|----------------------------|---------------------------|
| 1 | Units with Beds – Govt. & Pvt. (based on sanctioned beds) | For North Bengal districts | Rs 5/- per bed per day |
| | | For rest of the state | Rs 4.50/- per bed per day |
| 2 | Clinics & Laboratories | Small | Rs 800/- per month |
| | | Medium | Rs 1,400/- per month |
| | | Big | Rs 2,800/- per month |
| | | Research Laboratories | Rs 2,800/- per month |
| 3 | Dental Clinics– Govt. & Pvt. (based on sanctioned chair nos.) | Rs 12/- per chair per day | |
| 3 | Stand alone Blood Banks | Rs 8,000/- per month | |
| Note: An annual increment @ 4% per year based on the previous year's charges may be charged on all of above rates. | | | |

- The Committee has further recommended that the rates may be reviewed every three years.

- The recommendation of the Committee has already been approved by the Chairman of the Board.



BMW management at CBWTF



Waste collection van



Effluent Treatment Plant



Howrah Facility

Compliance status of major health care units in West Bengal w.r.t. Bio-Medical Waste Management

The Ministry of Environment & Forests(MoEF), Govt. of India notified the Bio-medical Waste (Management & Handling) Rules in 1998 under the Environment (Protection) Act, 1986 and later it was amended twice in the year 2000.

Responsibilities of the Occupier of a Health Care Unit as specified in the Rules

- to obtain authorization from the State Board
- to mutilate the disposable syringes by needle-cutter/ electrical destroyer.
- to keep the segregated BMW in colour-coded bag, labeled with Bio-hazard symbol, at the point of generation.
- The untreated bio-medical waste should not be stored beyond 48 hrs in common storage room.
- to keep the sharp wastes in hard container in order to prevent prick injuries.
- to ensure proper treatment of the bio-medical waste.
- to maintain records related to the generation, collection, storage, transportation, treatment and disposal of BMW.
- to submit the annual report in Form-II by 31st January every year to the State Board.

Inspection:

- 4 nos. Govt. Health Care Units namely i. National Institute for Cholera and Enteric Disease, Kolkata, ii. ICMR, Kolkata, iii. ID & BG Hospital- Belehata, Kolkata, iv. Barasat SD Hospital, Dist. North 24 Parganas
- 2 nos. private Health Care Units namely Kothari Medical Centre, Kolkata and Apex Clinic Pvt. Ltd., Kolkata.
- Regional offices of the Board are also carried out inspection of the Health Care Units
- Stack monitoring of incinerator of M/s SembRamky Environmental Management Pvt. Ltd., Common Bio-medical Waste Treatment Facility, situated in the district Howrah was conducted by the Board in the month of July, 2011. All the CBWTFs are monitored on regular basis.

Legal action against the defaulting Health Care Units :

The West Bengal Pollution Control Board regularly monitors the health care units and arranges hearings of the defaulting units. Notices for closure and disconnection of electricity have been issued to several HCUs including Govt. hospitals for non-submission of BMW Authorisation application and for not ensuring adequate in-house waste management and treatment of their BMWs. Pollution costs have also been imposed on defaulting units, both in the private and Govt. sectors. The Board is also conducting inspections jointly with the H & FW Department, GoWB for more effective regulation.

Prominent Govt. units like i) SSKM Medical College & Hospital, ii) R. G. Kar Medical College & Hospital iii) Kolkata Medical College & Hospital iv) Calcutta National Medical College & Hospital and v) Burdwan Medical College & Hospital, vi) Nilratan Sarkar Medical College & Hospital, vii) North Bengal Medical College and viii) Bankura Sammilani Medical College & Hospital and have also been inspected and called for hearings several times. The in-house management of BMW (segregation, mutilation of the disposable syringes, saline bottles, I.V. fluid bottles etc.) of the health care units is gradually improving but is still far from satisfactory.

The status of compliance of private HCUs is comparatively better owing to the good housekeeping practices but waste segregation, record keeping, storage etc are largely unsatisfactory due to a general lack of awareness and motivation. Some prominent private HCUs like Apollo, Bellevue, Kothari, CMRI etc have been called for hearing on account of the non-compliance observed during inspection.

5 nos. Govt. Health Care Units namely i. NICED, Kolkata, ii. ICMR, Kolkata, iii. ID & BG Hospital- Belehata, Kolkata, iv. Kharagpur S.D. Hospital, W. Midnapore, v. Diamond Harbour S.D. Hospital, South 24 Parganas and Kothari Medical Centre, Kolkata, a private Health Care Unit, were called for hearing and directed to take action for compliance of the Bio-medical Waste (M & H) Rules.

Notice for Closure Order issued against 2 nos. private Health Care Units namely Arogya Niketan (Maternity cum Nursing Home), Siliguri, and Good Hope Nursing Home, Kolkata and 1 no. Govt. Health Care Unit namely Divisional Hospital- South Eastern Railway, Adra, Purulia.

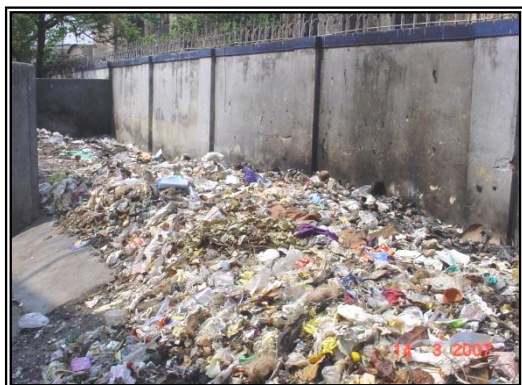
Monitoring of Common Biomedical Wastes Treatment, Storage and Disposal Facilities

The Board is regularly monitoring the incinerator stack and the liquid effluent treatment plant of the CBMWTSDFs. Bank Guarantees were imposed on the two private facilities in Howrah and Kalyani to ensure better performance of their incinerators and air pollution control devices and for up gradation of their effluent treatment plants. Later part of the B.G. of the Howrah facility, amounting to Rs 50000/-, was forfeited.

Other initiatives taken by the WBPCB for improving the compliance status

- The WBPCB regularly pursued individual health care units under the Health & Family Welfare Department (H & FW), Govt. of WB. for submission of application for 'Bio-medical Waste Authorization', 'Consent to Operate' and 'Annual Report'.
- A monitoring committee to oversee the implementation of the Bio-medical Waste Management & Handling Rules in the State Govt. Hospitals was constituted in 2007 involving the Joint Director (PH & CD), H&FW Deptt., Govt. of WB, representatives of WBPCB, Kolkata Municipal Corporation & Environment Deptt., Govt. of WB.
- A number of meetings have been conducted by the Board with the H&FW Deptt., Govt. of WB and CMOHs of various districts to improve the compliance status w.r.t. the Rules vis-à-vis the submission of the BMW Authorisation application, source segregation and ensuring treatment of BMW.
- Meeting of the Monitoring Committee for Oversee the implementation of the Bio-medical Waste (M & H) Rules in the State Government Health Care Units in West Bengal was held on 14.07.2011.
- With the active support and help of the H&FW Deptt., Govt. of WB and District CMOHs, the WBPCB has developed a mechanism wherein the private HCUs (Bedded or non-bedded) will not get their health license from the CMOHs until and unless the said HCUs obtain valid authorisation of the WBPCB and ensure the treatment of its bio-medical wastes.
- The Board officials regularly attend awareness programmes organized by various health care units
- Raids were conducted at some illegal BMW recycling areas around Kolkata in 2010 and FIRs were lodged at local police stations; finally the matter was referred to the CID in January 2011.

Non-compliance observed during inspection of health care units



Illegal recycling of BMW



39. E-Waste Management in West Bengal

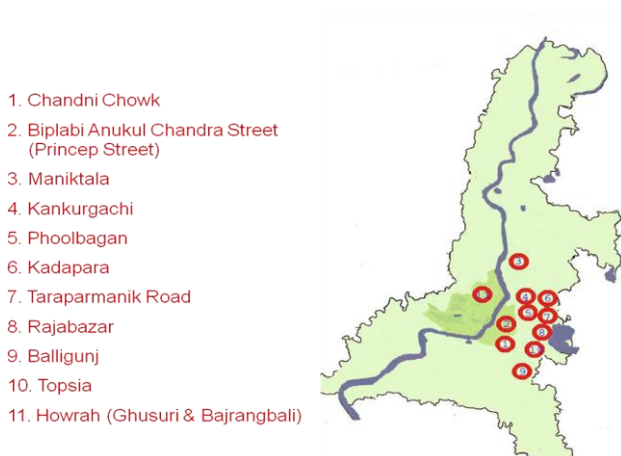
E-Waste is simply defined as discarded and end-of-life electronic & electrical products like Computer, CD/DVD, Mobile Phone, TV, Refrigerator, Washing Machine, CFL & Fluorescent Lamps and other electronics & electrical products. The e-wastes contain both valuable as well as harmful components. Valuable components include precious metals and base metals namely gold, silver, copper, palladium, platinum, aluminum, nickel, zinc, steel, tin whereas harmful substances are lead, mercury, chromium, cadmium, CFC, Poly-chlorinated biphenyl (PCB), brominated flame retardant, PVC etc.



Scrap dealers and rag-pickers gather e-wastes generated from households and other commercial / business establishments in their area of operation and employ crude and highly unsafe process of dismantling and recycling of the same, causing significant environmental damage. This crude and unsafe process includes dismantling the equipments using hammer, chisel, screw driver etc, open burning of wires to extract metal like copper, soaking of circuit boards in open acid bath, burning of circuit boards in stoves, manual scrapping etc. The remaining waste invariably ends up in the Municipal dumps and drains with toxic substances leaching into the groundwater. The open burning results in the emission of highly toxic air pollutants which has a severe and deleterious effect on human health & environment.

The Central Pollution Control Board (CPCB) published guidelines for Environmentally Sound Management of E-waste in March, 2008 with a view to provide guidance for identification of various sources of E-Waste and prescribe procedures for handling E-Waste in an environmentally sound manner.

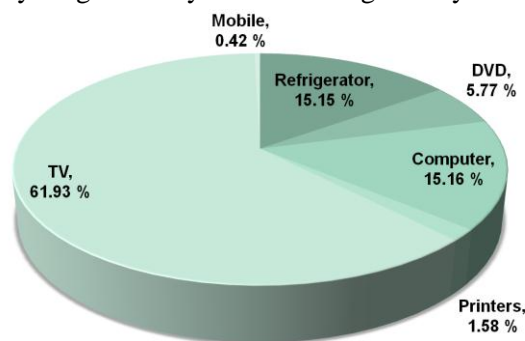
In September, 2008, the Hazardous Waste (Management, Handling & Transboundary Movement) Rules were notified which included E-wastes in Schedule IV of the Rules making registration of all e-wastes recyclers mandatory. The MoEF, Govt. of India has also notified the E-Waste (Management & Handling) Rules, 2011 in May 2011 which will be effective from 1st May 2012.



In the year 2009, the State Board conducted an E-waste inventerisation study in the Kolkata Metropolitan Area (KMA) in association with the Indian Chamber of Commerce (ICC) and GTZ. The Business and Industrial Research Division (BIRD) of IMRB International was assigned to do the research and survey work. The areas studied were- Kolkata, Howrah, Salt Lake City, Kalyani, Barasat, South Dum Dum and Uluberia and the Product Categories considered were – Computers (Desktops and Laptops), Printers, UPS, Televisions, Refrigerators, DVD/VCD Players and

Mobile Phones.

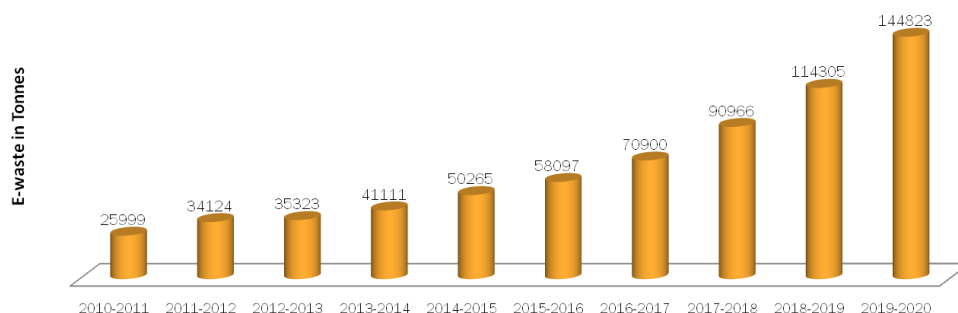
The study found that Kolkata Metropolitan Area (KMA) generates around 26000 tonnes of potential e-waste annually, of which 9290 tonnes is available for recycling and only 2000 tonnes gets recycled. The average obsolescence ages of the products by household users and business establishments were also calculated. It was estimated that 1,44,823 tonnes of E Waste will be generated in 2019-2020. Selling in second hand market and exchanging for new products were identified as the most commonly adopted methods of disposal among users of KMA and the major consideration of users at the time of disposal of old electronic or IT products is the monetary benefit.



The study revealed that unorganized e-waste recycling industry (dismantling/recycling activities) is existent in scattered areas of Kolkata and Howrah and identifies the areas. The flow of E-Waste originating from Households and Business Establishments was found to be from the Scrap collectors to Scrap Traders/dismantlers to Scrap Recyclers and finally to Redistributors.

After the completion of inventerisation study, it was decided that WBPCB may act as a facilitator to develop common e-waste management facility in the State of West Bengal as the state has no registered e-waste reprocessing unit. Accordingly the matter was placed in the 146th Board meeting held on 11.05.2010 and with the approval of the Board, the State Board invited the Expression of Interests (EoI) in the month of September 2010 for the development of e-waste management facility in the State of West Bengal. Involving IT sector, industry association, CPCB, GIZ and other senior officers of the Board, an Evaluation Committee was constituted by the Board in November 2010 for selection of facility operator for e-waste management in the State of West Bengal. Initially the Board received 10 nos. applications against the EoI advertisement and out of these, 5 nos. applications were

shortlisted in the 1st meeting of the said committee. After reviewing the presentations on proposed projects given by 5 nos. units in the 2nd meeting held on 11.03.2011, 3 units were selected to submit detailed project proposals (both technical and financial). Out of three, two nos. namely M/s West Bengal Waste Management Ltd. and M/s Gujarat Enviro Protection and Infrastructure Ltd.(GEPIL) have submitted their proposals, which will be placed in the 3rd meeting to be held on 28.06.2011.



In this connection it may be mentioned that the MoEF, Govt. of India has already declared financial assistance package (upto 25% of the total project costs with equal matching grant from the State Govt.) for the development of integrated e-waste recycling and treatment facility. The ceiling for Central subsidy would be Rs. 12.5 crores.

40. Proposal to ensure use of Compressed Natural Gas (CNG) and Coal Bed Methane (CBM) as clean fuel in public transport vehicles in Kolkata

One of the major sources of air pollution of Kolkata city has been the emission from on-road vehicles, particularly the diesel driven vehicles like buses, taxis, and other transport vehicles and also the 3-wheeled autorickshaws operating on the city streets. Following the order of the Hon'ble Calcutta High Court the autorickshaws of the city have been converted to single mode LPG driven ones. But to improve the emission quality from the transport vehicles, it has become essential to convert these vehicles into clean fuel mode (CNG or CBM). In this regard a meeting was held on 19.07.2011 between WBPCB and Shri S. P. Yadav, Executive Director, WBIDC and Shri Atanu Chatterjee, Advisor, WBIDC regarding the availability of CNG/CBM in Kolkata and on 20.07.2011 another meeting was held between WBPCB and Dr. A. K. Saha, Zonal Head, GAIL (India) Limited to discuss about the availability of CNG/CBM in West Bengal and preparedness of M/s. GAIL (India) Ltd. in providing such fuel in adequate quantity.

Subsequently, the Transport Department, GoWB held a meeting on 25.07.2011 in presence of Hon'ble Minister-in-Charge, Transport Department and Hon'ble Minister-in-Charge, Environment Department. Prof. Binay K. Dutta, Chairman, WBPCB along with Shri S. Mukherjee, Member Secretary, WBPCB and the undersigned attended the meeting. The Chairman, WBPCB made a presentation before the members attending the meeting regarding the availability of CNG & CBM in Kolkata and the preparedness of various gas supplying agencies to provide gas in Kolkata. In the said meeting it was decided that the the State Government will convert a few State Government buses from diesel engine to CNG engine. The gas supplying agencies will provide the CBM for running those buses. The oil companies (IOCL, BPCL, HPCL) will install the CBM dispensing station at the State Garages in Kasba or Salt Lake. It was also decided that the Chairman, WBPCB will organize meeting with the gas supplying agencies and the oil companies to ensure adequate quantity of gas in Kolkata.

A meeting has already been held on 01.08.2011 with Ms. Vineeta Prasad, M/s. Great Eastern Energy India Ltd. at Paribesh Bhawan, one of the companies who are at present producing CBM at Raniganj area. Ms. Prasad informed that they are provided CBM to about 1000 autorickshaws operating the region and about 20 industries. She was requested to provide some information regarding the production capacity of M/s. GEEIL and the time required to lay the pipeline from Raniganj to Kolkata for supplying CBM.

Now after getting some more information regarding the production and availability of CBM for transport sector in Kolkata, a meeting will be organized involving Transport Department, Environment Department, WBPCB, M/s. GAIL, M/s. GEEIL, M/s. Essar Exploration & Production India Ltd., M/s. IOCL, M/s. BPCL and M/s. HPCL to ensure supply and dispensation of CBM for the proposed CNG driven State Government buses. The target date of such availability has been initially fixed as December 2011.

41. Meeting with the Sponge Iron Industries

Sponge iron industries being the prominent air and water polluters, were paid special heed by the Government and Pollution Control Board. The Hon'ble Minister-in-Charge, Environment Department met with the leading Sponge Iron Industries' proprietors and the association heads on 03.08.2011 at the Paribesh Bhavan. The meeting discussed possible problems of Sponge Iron Industries including the issues of coal quality, availability of water for industrial purpose etc. picked up by the industry representatives. The message forwarded by the Hon'ble Minister-in-Charge, the Principal Secretary of the Department of Environment and the Chairman of the State Board was that the industry should operate with environmental compliance and all required for this has to be arranged by the industry themselves. That the industries should take 'common sense decisions' for protecting the environment and it should come voluntarily from the part of the industries was specifically mentioned by Prof. Dr. Sudarshan Neogi, Professor of Chemical Engineering, IIT-Kharagpur. The meeting also specifically discussed the prospect of employing Coal Bed Methane (CBM) and the proposal of having a pilot plant was also put forward.

The Hon'ble Minister-in-charge in his speech emphasized that considering the inherent polluting trend of this industrial sector, with available technology, it is mandatory for all Sponge Iron units to comply with the basic environmental norms. From his recent experience in connection with his visit to Sponge Iron Industries in Barjora and Raturia, he gathered that some industries are willfully violating environmental norms. He specifically pointed out that in future such industries will be not be allowed to operate in such a manner. He further mentioned that real incentives will be provided to those industries who will be abiding by all the environmental norms and a letter of appreciation may be given to the industry which was found to be operating in an environment friendly manner during his recent industry visit and such kind of encouragement will be carried forward in future. The Hon'ble MIC emphasized to institute a study to assess the health impacts of Sponge Iron units on local people, and requested the industries to undertake rainwater conservation programme and massive green belt development programme covering at least one third area of the factory premises and announced the formation of a committee to look after the environmental issues of sponge iron industries which will submit their findings shortly for further improvement of environmental compliance in this sector with the following members.

-
1. Principal Secretary, Deptt. of Environment, GoWB - Chairman
 2. Two External Experts (to be named later by the DoE, GoWB)
 3. Prof Dr. Sudarshan Neogi, IIT Kharagpur
 4. Two representatives of Sponge Iron Industry
 5. Two representatives of local people
 6. One Environmental Activist
 7. Sri Shouvik Ganguly, AEE, WBPCB
 8. Sri P K Roy, Sr. Environment Officer, Deptt. of Environment, GoWB – Convenor

42. Study on Toxic metal contamination in fishes and vegetables

The East Kolkata Wetlands (EKW), a Ramsar site, is an extremely bio-diversity rich, highly complex eco-system on the eastern side of Kolkata. This wetland provides not only a serene beauty but it treats city's wastewater and also produce wealth and provides livelihood to about 1,00,000 people living in 46 villages covering an area about 12,500 hectares. This multiple-use wetland includes a garbage dump known as Dhapa Square Mile, a mosaic of vegetable fields, a series of 300-odd fishponds connected by major and secondary canals, rice paddies, wholesale markets, a few roads, and the people. About 4,000 tons of municipal wastes and 700 million liters of raw sewage enter the wetland system every day. Still, only 30% of the total wastewater is used for aquaculture or irrigation, while the remaining 70% flows directly, gets treated during its run into the Bay of Bengal. The EKWs extend almost equally on both sides of a Dry Weather Flow Channel, which discharges into the Kulti Gong (the wastewater outfall of Kolkata 28 square kilometers to the east).

The area is divided into eleven zones and includes four major sub-regions: freshwater fishponds, brackish fishponds (both of which are known as bheris), garbage farms, and paddy lands. About thirty kilometers eastward, the river Kulti-Bidyadhari drains into the Bay of Bengal. Underneath the city lies the most precious supply of groundwater, recharged from the marshy land of Barasat-Kalyani area and equilibrated with the flowing river system dominated by the river Ganga. The sewage-fed fishponds produce approximately 14,000 tons of fish annually, whose yield at 2-4 times higher than average fish ponds, is among the best of any freshwater pisciculture in the country. About 175 tons of vegetables per day are harvested from small-scale plots irrigated with wastewater.

When garbage was first brought to the area, the fertility of the soil began to improve (because the garbage had a much higher proportion of biodegradable waste in contrast to the higher percentage of synthetic and nonbiodegradable content today). The soil then became ideal for farming. At the same time, the drying up of the Bidyadhari spill channel caused the delta to deteriorate into a derelict, brackish swamp. In the 1930s, the Bidyadhari only carried city sewage and in the process became choked further because of the high silt content of the sewage. When a Dry Weather Flow channel was constructed in 1943-44 to carry city sewage to the Kulti Gong (another river in the area), more wastewater was brought there, which increased its freshwater content. A large fish producer began growing fish in a large water area using city sewage. Local farmers stocked some of the ponds and dug new ones as well. Landlords, many of them absentee, leased most of the ponds to commercial managers, while others were managed by the government, and still others were given to fishermen's groups and co-operatives. These sewage-fed fisheries spread quickly, and were innovated, developed, and upgraded by local fish producers and farmers.

At the eastern edge of the city lies the fields which grow vegetables on the waste from Dhapa, the garbage dump. The vegetable production is a household activity, with people renting small plots or subletting smaller plots for household sustenance and income. These are designed with alternate bands of garbage-filled lands and long trench-like ponds known as “jheels,” where sewage is detained for some time, and then used to irrigate vegetable fields. The wastewater enters the wetlands through a network of drainage channels which flow into the canals and feed the fish ponds. On the way, the sunlight acts as a purifying agent on the sewage, which triggers biochemical reactions. For example, BOD (biochemical oxygen demand) is reduced through a symbiosis between algae and bacteria, where energy is drawn from algal photosynthesis. The effluent from the fishponds is then made to drain further southeast where the paddy fields have been strategically located to benefit from the use of the effluent. Most of the fishponds range in size between two and ten hectares, but some individual ponds is over 70 hectares. Three types of ponds are needed according to the stage of production: the nursery pond, the rearing pond and the stocking pond. Each needs a proper inlet-outlet management of sewage. The main requirement for a productive fish pond is the proper supply and quality of wastewater. Poor quality sewage reduces quality of nutrients, a higher toxic load on fish, and requires external inputs of nutrients. Countering this situation is done by allowing fish to grow bigger, but then this leads to a conflict of interests with unions, because this means a reduced number of harvesting days (and therefore days of work). The flow of water is mostly directed by gravity but in some areas diesel-powered pumps are used.

The current threat is the contamination of fishes and vegetables grown in this area with toxic heavy metals. A number of studies have been done on the toxic metal contamination of the vegetables and fishes from the EKWs, the most notable of them being the ones in year 2002 and 2005. These studies captured in detail the uptakes of the toxic metals by the vegetables and fishes respectively. The area under reference being highly productive, the chance of bio-accumulation of the toxics referred is also the maximum for the products. Considering all other studies the toxic metals that could be identified as contaminant in the vegetables and fishes are Cadmium (Cd), Chromium (Cr), Lead (Pb) and Mercury (Hg) and Arsenic (As). Arsenic is of special importance since in a recent multi institute study it has been found that large concentration of Arsenic exists in stream water especially in rivers that flow in West Bengal from Bangladesh.

The WBPCB studied the toxic metal concentrations in vegetables and fishes obtained from the East Kolkata Wetlands. The results of the determination are provided below.

| Sl. | Fish Type | Lead Conc. (mg/kg) dry weight | Chromium Conc. (mg/kg) dry weight | Cadmium Conc. (mg/kg) dry weight | Mercury Conc. (mg/kg) dry weight | Arsenic Conc. (mg/kg) dry weight |
|-----|-------------|-------------------------------|-----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 1. | Katla | 7.96 | Not Traceable | Not Traceable | 0.084 | Not Traceable |
| 2. | Mrigel | 6.66 | Not Traceable | Not Traceable | 0.145 | Not Traceable |
| 3. | Nilotika | 6.79 | Not Traceable | Not Traceable | 0.121 | Not Traceable |
| 4. | Prawn | 6.77 | Not Traceable | Not Traceable | 0.110 | Not Traceable |
| 5. | Silver Carp | 3.95 | Not Traceable | Not Traceable | 0.209 | Not Traceable |

| Sl. | Regional Name of vegetables | Lead Conc (mg/kg) dry weight | Chromium Conc (mg/kg) dry weight | Cadmium Conc (mg/kg) dry weight | Mercury Conc (mg/kg) dry weight | Arsenic Conc (mg/kg) dry weight |
|-----|-----------------------------|------------------------------|----------------------------------|---------------------------------|---------------------------------|---------------------------------|
| 1. | Begun | 8.961 | Not Traceable | 4.083 | 2.382 | Not Traceable |
| 2. | Bhutta seeds | Not Traceable | Not Traceable | 3.323 | 1.985 | Not Traceable |
| 3. | Data-shak | 13.297 | Not Traceable | Not Traceable | Not Traceable | Not Traceable |
| 4. | Jhinge | 4.243 | Not Traceable | Not Traceable | 2.049 | Not Traceable |
| 5. | Kalmi-shak | 10.261 | 3.059 | 3.380 | 1.023 | Not Traceable |
| 6. | Kumro-shak | 27.481 | 3.755 | 4.592 | 1.938 | Not Traceable |
| 7. | Lau-shak | 3.688 | Not Traceable | Not Traceable | Not Traceable | Not Traceable |
| 8. | Mulo | 18.717 | 8.664 | 4.160 | 1.451 | Not Traceable |
| 9. | Mulo-shak | 3.287 | Not Traceable | Not Traceable | 0.726 | Not Traceable |
| 10. | Note-shak | 14.261 | Not Traceable | 5.033 | 4.763 | Not Traceable |
| 11. | Pat-shak | 3.551 | Not Traceable | 4.768 | 0.493 | Not Traceable |
| 12. | Pepe | 11.547 | Not Traceable | 3.341 | 0.848 | Not Traceable |
| 13. | Pui-shak | 10.321 | Not Traceable | 4.771 | 0.529 | Not Traceable |

The study revealed that the concentration of mercury in both the vegetables and fishes are of concern. Arsenic however could not be detected in any sample tested, with some presence of lead and cadmium in the vegetable samples. More fish samples, collected from different streams and ponds of the state are being analyzed right now at the Central Laboratory of the Board. Analysis of the results will be made with availability of the results from those experiments.

43. Checking of Vehicular Pollution in Kolkata during night hours

As per the direction of Hon'ble High Court Kolkata, in W.P. No. 4183 (W) of 2005 Kolkata Police jointly with Public Vehicles Department and West Bengal Pollution Control Board have been checking vehicular pollution during night hours on regular basis in different locations at Kolkata city since September 2008. In this drive mainly the Auto Emission of goods vehicles entering / leaving Kolkata city at night hours have been checked on every Wednesday and Saturday by Anti Pollution Cell, Kolkata Police with the active assistance of State Board.

Operation of Continuous Automatic Air Monitoring mobile van

Immission monitoring was conducted during the festivals with the continuous Ambient Air Quality Monitoring Mobile Laboratory of the state board at the following places in Kolkata.

| Festival | Place | Duration of monitoring |
|-----------|-----------------------------|--|
| Duga Puja | Beliaghata I.D. Hospital | 1 st Oct to 6 th Oct, 2011 |
| Kali Puja | Dr. B.C. Roy Child Hospital | 20 th to 31 st Oct, 2011 |

44. Capacity Building for Industrial Pollution Management Project

The West Bengal Pollution Control Board is implementing a crucial World Bank supported project of the Government of India titled “Capacity Building for Industrial Pollution Management Project (CBIPMP)”. The development objective of the project is to build capacity in selected state agencies for undertaking environmentally sound remediation of polluted sites and support the Government of India in the development of a National Program for Rehabilitation of Polluted Sites (NPRPS). The states of West Bengal and Andhra Pradesh have been chosen for executing pilot site remediation programmes and conducting some related studies with the respective State Pollution Controls Boards (SPCBs) being the state level implementing agencies. The Ministry of Environment & Forests, Government of India (MoEF) is the implementing agency at the Central level. In addition to the site assessment and remediation activities, technical assistance will be provided for strengthening the planning, monitoring and enforcement capacity of selected SPCBs on waste management with special emphasis on contaminated site management.

The total project cost for CBIPMP-West Bengal component is Rs. 130 crores of which 15% is to be borne by the State Government. The project which will be executed over five years, became effective on 13th October 2010. A State Level Steering Committee, chaired by the Principal Secretary, DoE, is monitoring the project and a Project Implementation Unit is functioning as the secretariat to the Steering Committee. A project office has been set up at Salt Lake and eight persons have been engaged in the Project Implementation Unit. The status of project components are as follows:-

Establishment of Environmental Compliance Assistance Center (ECAC)

The ECAC has been established and is actively assisting industries in West Bengal to gradually comply with environmental norms by providing information on regulatory laws, standards and best practices for industrial pollution management etc. particularly targeting small and medium enterprises in priority sectors. The industries can now contact the ECAC either by visiting the centre located at CG - 76, Sector – II, Salt Lake, Kolkata - 700 091 or through its Website (www.ecacwb.org). The ECAC has already organized four stakeholder workshops (Sponge Iron, Lead Acid Battery, Dyeing & Bleaching and Tannery & Chrome Chemicals) and publishing its Newsletter regularly.

Inventorisation and characterisation of hazardous wastes

This activity will identify all hazardous waste generating and recycling units, estimate the quantity of hazardous waste generated in the state and generate process specific waste generation factors for some industry sectors. The selection of Consultants for this component is in process and the work is expected to commence from April 2012.

Assessment and preparation of remediation plan for identified contaminated areas in Dankuni (Hooghly district), Belda (West Midnapore district), Khardah (North 24 Parganas district) and 2 sites in Durgapur (Burdwan district)

The proposed activity will assess the extent of contamination of soil, surface water and ground water and propose appropriate remediation plan for three sites contaminated by naphthalene manufacturing units in Belda, Durgapur and Dankuni and two areas contaminated with mercury in Durgapur and Kolkata. The selection of Consultants for this component is in process and the work is expected to commence from April 2012.

Laboratory equipment

Various laboratory equipments are being purchased for strengthening the existing capacity of the Board's laboratory related to sampling and analysis of hazardous wastes. Some equipments have already been purchased.

Upgrading Information Management System

The existing Environment Management Information System (EMIS) of the Board is being upgraded under the project through augmentation of the servers and networking devices. A GPS system will also be procured for GIS mapping of hazardous waste units and coupling them with already developed EMIS with special reference to their hazardous waste generation.

Training

Appropriate training for Board's personnel and other stakeholders will be organized as part of this capacity building project.

Remediation of Hooghly Hazardous waste sites

Remediation of 7(seven) numbers of contaminated illegal hazardous waste dumpsites along old Delhi Road in Hooghly district and their surroundings will be undertaken under this activity. The Consultant for assessment of the sites has already been appointed and the work will commence from December 2011. The District Authorities and the Public Works Department have also been involved in the project as stakeholders in view of the complex social, legal and institutional aspects.

Up-gradation or closure of existing chrome waste landfill site at Chakundi, Hooghly

A common landfill facility, developed and managed by some chrome chemical manufacturing units for disposal of their process wastes, is not being managed properly and threatens to pollute the environment. The upgradation or closure of this site is proposed to be taken up as part of this project in its third year only if the operators fail to upgrade it and ensure safe disposal within this time.



Remediation of Dhapa MSW site

Remediation/ containment of part of the MSW dumpsite at Dhapa, which is already closed, will be undertaken under the project. The work of assessment of the site is expected to commence from February 2012. The Kolkata Municipal Corporation will be a stakeholder for this activity.



Dhapa MSW Dumpsite

45. Laboratory facility and involvement of analysis of samples

The State Board is mandated to monitor the quality of emission (liquid, gaseous, and solid) to determine the compliance of various emission standards. The board's laboratories are also engaged for monitor the ambient conditions of the state for ascertaining the effectiveness of various pollution control initiatives to be taken up by the regulatory agency. The West Bengal Pollution Control Board routinely monitors all the major rivers Viz.(river Ganga, Daamodar Ganga at Haldia, Barakar, Subarnarekha, Churni, Mahananda, Teesta, Bidyadhari, Shilabati, Rupnarayan, Kanshi, Jalangi, Matha Bhangra, Korala, Kaljani, Dwaraka, Mayurakshi, Dwarakeshwar), & lake, canal, well of state as per guide line of Central Pollution control Board under the name of National Water Monitoring Programme, to ascertain the water quality comparing their fitness for various criteria use. On the basis of the water quality data, action plans are also taken either by the State Pollution Control Board or the Central Pollution Control Board

46. Consent Administration of West Bengal Pollution Control Board during May 2011 – October 2011

| Consent to Establish (CTE) | Special Red | Ordinary Red | Orange | Green | Total |
|--|-------------|--------------|--------|-------|-------|
| No. of CoE applications received during May. - Oct. 2011 | 148 | 489 | 853 | 578 | 2068 |
| No. of CoE applications granted during May. - Oct. 2011 | 166 | 454 | 788 | 532 | 1940 |

| Consent to Operate (CTO) | Special Red | Ordinary Red | Orange | Green | Total |
|--|-------------|--------------|--------|-------|-------|
| No. of CTO applications received during May. - Oct. 2011 | 322 | 755 | 1708 | 767 | 3552 |
| No. of CTO applications granted during May. - Oct. 2011 | 366 | 698 | 1597 | 679 | 3340 |

| | |
|---|------|
| No. of inspections conducted during May. - Oct. 2011 | 2852 |
| No. of air samples collected and analysed during May. - Oct. 2011 | 557 |
| No. of water samples collected and analysed during May. - Oct. 2011 | 1289 |

47. Status of Realisation of water cess and various pollution cost

| Sl. No. | Description | Amount |
|---------|---|--------------|
| 1. | Water Cess deposited by the industries duly transferred to Govt. of India upto 30.09.2011 | ₹9,55,70,610 |
| 2. | Bank Gurantee received from 28 nos. of industries for violating pollution norms | ₹1,40,00,000 |
| 3. | Bank Gurantee forfeitred from 3 nos. of industries | ₹15,00,000 |
| 4. | Pollution cost from 86 nos. of polluting industries | ₹98,21,000 |

48. Matter Related to Calcutta Leather Complex

A full day visit has been conducted to Calcutta Leather Complex by the Chairman, Member Secretary and Senior Officials of the Board on 03.11.2011. During the visit members of the CLCTA management and representatives from WBIIDC were also present. During meeting with the CLCTA and WBIIDC after the inspection following issues related to secured land fill, list of members, list of tanners in CCRU, problems regarding disposal of savings, effluent transportation system, WBPCB norms, bypass channel, sludge removal, maintenance of CETP, etc. were discussed.

A meeting was organised on 14th November, 2011 for discussion of the problem related to Calcutta Leather Complex at the Chamber of Hon'ble MIC, Department of Environment, GoWB. The meeting was jointly chaired by Dr. Sudarshan Ghosh Dastidar, Hon'ble MIC, DoE and Shri Javed Ahmed Khan, Hon'ble MIC, Department of Fire, Emergency Services and Disaster Management, GoWB. Representatives from CLC Tanners Association, officials from WBPCB and Department of Commerce and Industries were also present in the meeting. Following decisions were taken:

1. Consent to Establish to new applicants may be issued with the condition that Consent to Operate will be issued only after construction and operationalisation of 5th and 6th modules of CETP.
2. Consent to Establish and Consent to Operate will be issued to all dry units and they will not be allow to discharge their domestic effluent into the CETP.
3. Provision for Solar Street Lighting, Primary Health Care Centres, Labour Quarters, Canteen and Market within CLC may be explored by the Department of Industries and WBIDC.
4. Road condition and internal security arrangements within CLC have to be improved.

49. Plan for Future Activities

Besides day to day regulatory activities, the following action plan has been chalked out for coming days:-

- To consider environmental auditing for certain category of industries;
- To organize awareness programme involving school and college students;
- To development of green network in the State by earmarking designated 'Paribesh Sevok' at local levels;
- To take actions on pollution from sponge iron units based on the forthcoming report of the committee set up in this purpose;
- To take effective and meaningful actions on Bantala Leather Complex.
- To explore external research funding against projects of interest for WBPCB;
- Monitoring of sapling plantation in industries
- Other issues relating to environmental awareness and environmental protection.