

**IMPLEMENTATION OF ACTION PLAN FOR CRITICALLY
POLLUTED AREA (HOWRAH)**



WEST BENGAL POLLUTION CONTROL BOARD

Building no. 10A, Block – LA, Sector – III,

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I. Introduction:

The District of Howrah has gained its importance with the opening of railways from Howrah in 1854. The District occupies 9th position in the State in respect of its size with an area of 1467 sq.km. There is a large industrial population in the district. The industrial heritage of the district is enviable and it plays a vital role in the economy of both the state and the country as a whole. Howrah city is much older than city of Kolkata and is connected with Kolkata by the Howrah Bridge which is known as Rabindra Setu and another bridge called Vidyasagar Setu. Located on the west bank of the Hooghli River, it is a twin city of Kolkata. It is West Bengal's second largest city in terms of both area and population. The district has a rich heritage of industrial development from the British period. Metal Casting Foundry, Metal Spare Parts, Re-Rolling Mill Cluster, Embroidery & Garments Manufacturing Cluster are the major clusters available in Howrah district. Consistent growth of industries and simultaneous urbanization of the district have seriously affected the environment of the district.

In order to assess the impact of individual clusters on the environment, Central Pollution Control Board (CPCB) uses a Comprehensive Environmental Pollution Index (CEPI). This is a rational number to characterize the environmental quality of an industrial cluster following an algorithm of source-receptor-pathway framework. Industrial clusters having aggregated CEPI score of 70 and above are generally considered by MoEF as critically polluted cluster.

Ministry of Environment & Forests (MoEF), Government of India issued an Office Memorandum dated 13.01.2010 imposing moratorium on setting up of new industries and also expansion of existing industries requiring Environmental Clearance as per the EIA notification S. O. 1533(E) dated 14.09.2006 and its amendments thereof, located in a number of critically polluted industrial areas in the country including Haldia, Howrah and Asansol in West Bengal. The areas under moratorium were also demarcated by MoEF.

In order to improve the environmental quality of Howrah and surrounding areas, the West Bengal Pollution Control Board initiated a series of time bound action plans from 2010 onwards.

The CPCB conducted monitoring in the Critically Polluted Areas (CPAs) during February-April, 2013 and reassessed the CEPI score. In view of reassessment of CEPI score, MoEF vide Office Memorandum dated 17.09.2013 lifted the moratorium on consideration of projects for environmental clearance in the above mentioned critically polluted areas subject to following conditions:

- i) The concerned SPCB to ensure that any new project / activity, or any expansion / modernisation of existing project or activity or any change in product mix is in line with the overall approved action plan of the concerned critically polluted area (CPA).
- ii) The implementation of action plan of every CPA to be reviewed by the concerned Chairman, SPCB on a quarterly basis and report sent to CPCB by the 7th day of the month succeeding the end of quarter.

- iii) Monitoring in CPAs to be got done by SPCB through a third party on annual basis for computing CEPI. The monitoring to be done during December – February and the report sent to CPCB by April. CPCB in turn to submit its report to MoEF.
- iv) Monitoring in CPAs be got done by CPCB through a third party on biannual basis for computing CEPI and report submitted to MoEF for taking an appropriate view.

In the above context, this report is prepared to comply with the conditions (i) and (ii) above. A report on condition (iii) will be submitted in due time.

2. **Boundary of the “Critically Polluted Area” (CPA) of Howrah:**

CPCB has considered two major industrial clusters of Howrah district as CPA:

Jalan Industrial Complex: Jalan Industrial Complex is a privately developed/promoted industrial hub whose area/boundary is not clearly defined. The area is not recognized as industrial zone/cluster by any governmental organization. The complex comprises of Mouza- Begri, Baniara & Biprannapara. New industries are constantly being set up, increasing the area of the complex.

Bamungachi Area : Bamungachi industrial cluster identified for CEPI is not defined as such. Area under Malipanchghora, Liluah, Bally, Bantra Police Stations mostly falls under this area. Those areas are mostly coming under Howrah Municipal Corporation area.

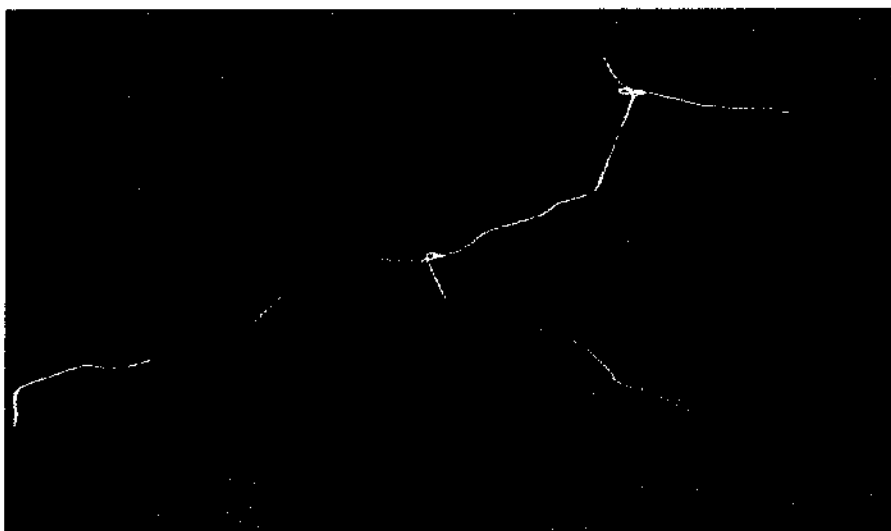


Fig. -1: Boundary of critically polluted area in Howrah as per the MoEF Memo No. J-11013/5/2010-1A.11(I) dated 15.03.2010.



Fig. -2: Boundary (in Red line) of critically polluted area in Bamungachi Industrial Complex demarcated by CPCB, MoEF Memo No. J-11013/5/2010-1A.II(I) dated 15.03.2010

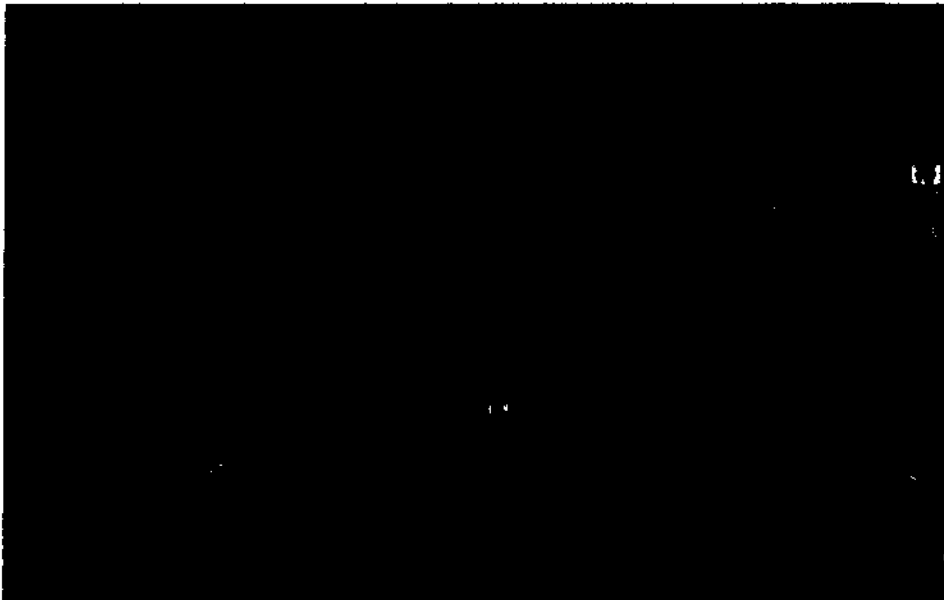


Fig. -3: Boundary (in Red line) of critically polluted area in Jalan Industrial Complex demarcated by CPCB, MoEF Memo No. J-11013/5/2010-1A.II (I) dated 15.03.2010

3. Major Industries and Water Bodies in the Area

The Jalan Industrial Complex is purely industrial. No sensitive receptors within its impact zone. Bamungachi area is a dense conglomerate of industry and human settlement. Population density of the area may be the highest among the peer cities of the country. Barjora canal passes alongside the Jalan Industrial complex. Four nacchas (narrow waterways, or water channels) are connected to the Barojora canal. Before the Complex came up, the land was solely used for agricultural purpose, and the water of the Barojora canal and the nacchas was used for irrigation purpose.

Rani Jheel is a major water body in Bamungachi area. Santragachi Jheel is also located in the said area. Belurmath, a place of religious importance is located in the area.

For Jalan Industrial Complex :

Industries under "17 Categories" – 05 nos
Red Category Industries – about 86 nos.
Orange and Green Category industries – above 120 nos.
Grossly Polluting Industries –03 nos.

For Bamungachi Area :

Industries under "17 Categories" – 04 nos.
Red Category Industries –about 400 nos.
Orange and Green Category industries – about 1300 nos.
Grossly Polluting Industries – 08 nos.

Keeping in mind the environmental load bearing capacity of a sensitive area like Howrah, which has so many major industries, the West Bengal Pollution Control Board has taken elaborate action plan since 2010 involving the major industries HMC, local authority and industry association. Action plan includes short term and long term action points. Action plans are as follows:

Earthen Pottery units (Bamungachi Area)

| Action Points | Possible improvement in environmental quality |
|--|---|
| Technological development of earthen pottery cluster | Minimization of air pollution & overall environmental improvement |

Individual Rolling Mills of both Jalan Industrial Complex and Bamungachi Area

| Action Points | Possible improvement in environmental quality |
|--|--|
| Rolling mills are to be encouraged to adopt coal gas | Air quality improvement |

Long term action points

| Action Points (including source & mitigation measures) | Responsible Stake Holders | Possible improvement in environmental quality |
|---|---|--|
| Installation of CETP at Jalan Industrial Complex | Industry Association Industry, WBPCB, MOEF as per CETP cost sharing principle of MOEF, coordinated by SPCB | Improve water quality of the area |
| Installation of AAAQM at Jalan Industrial Complex | Industry association and Industry | Assessment of Air quality for improvement of overall environment |
| Development of proper drainage facility in Jalan Industrial Complex | Industry association and Industry | Improve overall environment and water quality |
| Development of proper roads in Jalan Industrial Complex | Industry association and Industry | Improve overall environment and air quality |
| Embankment and desilting of effluent carrying canal at Jalan Industrial Complex | Industry association and Industry | Improve overall environment and water quality |
| Development of roads in Bamungachi area | Howrah Municipal Corporation and Bally Municipality | Improve overall environment and air quality |
| Development of drainage system in Bamungachi area | Howrah Municipal | Improve overall environment and water quality |

| Action Points (including source & mitigation measures) | Responsible Stake Holders | Possible improvement in environmental quality |
|--|---|---|
| | Corporation and Bally Municipality | |
| Tree plantation in both areas (Jalan Industrial Complex and Bamungachi Area) | Howrah Municipal Corporation and Bally Municipality | Improve overall environment and air quality |

Status of Implementation of Action Plan for Howrah Critically Polluted Area as on September 2014 is enclosed in Annexure - B

Status of Implementation of Action plans for Howrah area as on September 2014

Short Term Action Points:

| Sl no. | Action points | Stake holder | Status (Jalan Complex) as on March 2014 | Status (Bamungachi area) as on September 2014 | Compliance status | Remarks |
|--------|---|-----------------------|---|---|--|--|
| 1 | Technological development of earthen pottery cluster so that emission can be arrested & treated | Earthen Pottery units | <ul style="list-style-type: none"> Earthen pottery cluster is not available in this complex. | <ul style="list-style-type: none"> In this region, there is a pottery cluster consisting of about 50 pottery units. They are making earthen cups (Kullahad). During discussion with pottery makers, they informed that most of the families are below poverty line (BPL) and illiterate. Silty clay/ Black clay (procured from Canning, Diamond Harbour region) is raw material for pottery items. Coal is used as fuel for baking of the green pottery items. The burning of coal is main source of pollution. The coal consumption varies between 20 – 40 kg / day per unit depending upon market demand/ quality of clay and weather condition. During 2007-2008 an initiative was taken by WBPCB for technological improvement of pottery kilns in this cluster by installation of a kiln using cleaner fuel with support from GTZ, Germany. It was also decided that the proposed kiln will be used by all the potteries in this cluster on sharing basis. However this could not materialise due to number of constraints such as lack of awareness, tiny individual units etc. | Technological improvement of this cluster is under consideration | WBPCB is exploring the possibility of technological development of pottery units through MSME Dept. GoWB and CGCRI |

Status of Implementation of Action plans for Howrah area as on September 2014

| Sl no. | Action points | Stake holder | Status (Jalan Complex) as on March 2014 | Status (Bamungachi area) as on September 2014 | Compliance status | Remarks |
|--------|--|---------------------|--|---|--------------------------------|---|
| 2 | Rolling mills are to be encouraged to adopt coal gas | Individual industry | <ul style="list-style-type: none"> 1 no. of Rolling mills has adopted Coal gas/ Producer gas technology. Remaining 4 mills are yet to adopt Coal gas technology. Installation of Coal Gas technology requires huge investment (Rs 1 Crore approx). | <ul style="list-style-type: none"> 5 nos. of Rolling mills have adopted Coal gas/ Producer gas technology. Remaining 37 mills are yet to adopt Coal gas technology. M/s Greater Calcutta Gas Supply Agency (Dankuni Coal Complex) earlier was the supplier of coal gas in the area but at present this agency is not able to supply sufficient gas. Howrah Chamber of Commerce & Industries has already got land (600 acres- approx) for Industry/ Cluster development at Jagatballavpur area (Howrah district) and Rolling mills are interested to shift their plant from Bamungachi to Jagatballavpur. | Complied by some stake holders | Implementation could not be achieved fully. |

Status of Implementation of Action plans for Howrah area as on September 2014

Long Term Action Points

| Sl no. | Action points | Stake holder | Status as on September 2014 | Compliance status | Remarks |
|--------|---|--|---|---------------------------------|--|
| 1 | Installation of CETP at Jalan Industrial Complex | Industry Association Industry, WBPCB, MOEF as per CETP cost sharing principle of MOEF, coordinated by SPCB | <ul style="list-style-type: none"> Land is identified for CETP installation. Resolution of the formalities in this regard is to be taken up. Industry Association already taken action to change existing open drainage to a closed type effluent drainage line. WBPCB already advised Industry Association to develop a system for collection and transportation of effluent from individual industries to the proposed CETP site. At present process water from all industries of Jalan Complex is routed to Sarswati River which finally meets with River Ganga after treatment by the industries. | Action initiated for compliance | Individual industries are mostly complying with effluent discharge norms |
| 2 | Installation of AAAQM at Jalan Industrial Complex | Industry association and Industry | <ul style="list-style-type: none"> Installation of AAAQM Station to be done with joint funding of WBPCB and CPCB as discussed during 58th Chairmen and Member Secretaries Conference held at Bangaluru. | Action initiated for compliance | |
| 3 | Development of proper drainage facility in Jalan Industrial Complex | Industry association and Industry | <ul style="list-style-type: none"> Main drainage system- 5.325 Km concreted | Complied | Implemented |
| 4 | Development of proper roads in Jalan Industrial Complex | Industry association and Industry | <ul style="list-style-type: none"> Road construction- 25 Km (Black stone brick laying) | Complied | Implemented |

Status of Implementation of Action plans for Howrah area as on September 2014

Long Term Action Points

| Sr.no. | Action points | Stake holder | Status as on September 2014 | Compliance status | Remarks |
|--------|---|--|---|-------------------|----------------------|
| 5 | Embankment and desilting of effluent carrying canal at Jagan Industrial Complex | Industry association and Industry | <ul style="list-style-type: none"> De-silting of the drains is carried out in a regular interval. | Under compliance | Implemented |
| 6 | Development of roads in Bamungachi area | Howrah Municipal Corporation and Bally Municipality | <ul style="list-style-type: none"> Maintenance of existing road is being done time to time. | Under compliance | Under implementation |
| 7 | Development of drainage system in Bamungachi area | Howrah Municipal Corporation and Bally Municipality | <ul style="list-style-type: none"> Maintenance of existing drainage system is regular activity of concerned municipality. Strengthening of drainage system is under consideration. | Under compliance | Under implementation |
| 8 | Tree plantation in both areas | Howrah Municipal Corporation and Bally Municipality, local Panchayats and Industry Association | <ul style="list-style-type: none"> Some plantation program has been initiated in both the areas | Under compliance | Under implementation |

Summary of Compliance Status:

During assessment of the progress made in implementation of Action Plans and subsequent improvement in the environmental condition of Howrah area, following points have been noticed:

- Some of the Short Term Action Plans implemented by few individual industries and stake holders.
- Some of the Long Term Action Plans already complied. Few other Action Plans are either partially complied or under consideration.
- It has been observed that there is a decreasing trend in current CEPI score (61.11) as compared to CEPI score (74.84) during 2010, both calculated by CPCB (available in CPCB website). Efforts will be continued in future for further improvement of environmental quality and a lower CEPI.

Status of Implementation of Action plans for Howrah area as on September 2014

Short Term Action Points:

| Sl no. | Action points | Stake holder | Status (Jafan Complex) as on March 2014 | Status (Bamungachi area) as on September 2014 | Compliance status | Remarks |
|--------|---|-----------------------|---|---|--|--|
| 1 | Technological development of earthen pottery cluster so that emission can be arrested & treated | Earthen Pottery units | <ul style="list-style-type: none"> Earthen pottery cluster is not available in this complex. | <ul style="list-style-type: none"> In this region, there is a pottery cluster consisting of about 50 pottery units. They are making earthen cups (Kullahad). During discussion with pottery makers, they informed that most of the families are below poverty Line (BPL) and illiterate. Silty clay/ Black clay (procured from Canning, Diamond Harbour region) is raw material for pottery items. Coal is used as fuel for baking of the green pottery items. The burning of coal is main source of pollution. The coal consumption varies between 20 – 40 kg / day per unit depending upon market demand/ quality of clay and weather condition. During 2007-2008 an initiative was taken by WBPCB for technological improvement of pottery kilns in this cluster by installation of a kiln using cleaner fuel with support from GTZ, Germany. It was also decided that the proposed kiln will be used by all the potteries in this cluster on sharing basis. However this could not materialise due to number of constraints such as lack of awareness, tiny individual units etc. | Technological improvement of this cluster is under consideration | WBPCB is exploring the possibility of technological development of pottery units through MSME Dept. GoWB and CGCRI |

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| 2 | Rolling mills are to be encouraged to adopt coal gas | Individual industry | <ul style="list-style-type: none"> 1 no. of Rolling mills has adopted Coal gas/ Producer gas technology. Remaining 4 mills are yet to adopt Coal gas technology. Installation of Coal Gas technology requires huge investment (Rs 1 Crore approx). | <ul style="list-style-type: none"> 5 nos. of Rolling mills have adopted Coal gas/ Producer gas technology. Remaining 37 mills are yet to adopt Coal gas technology. M/s Greater Calcutta Gas Supply Agency (Dankuni Coal Complex) earlier was the supplier of coal gas in the area but at present this agency is not able to supply sufficient gas. Howrah Chamber of Commerce & Industries has already got land (600 acres- approx) for Industry/ Cluster development at Jagatballavpur area (Howrah district) and Rolling mills are interested to shift the plant from Bamungachi to Jagatballavpur. | Complied by some stake holders | Implementation could not be achieved fully. |

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Status of Implementation of Action plans for Howrah area as on September 2014

Long Term Action Points

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| 5 | Embankment and desilting of effluent carrying canal at Jalan Industrial Complex | Industry association and Industry | <ul style="list-style-type: none"> De-silting of the drains is carried out in a regular interval. | Under compliance | Implemented |
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