Ecological Impact Assessment
Series: EIAS/5/2009-10

COMPREHENSIVE ENVIRONMENTAL ASSESSMENT OF INDUSTRIAL CLUSTERS

Central Pollution Control Board
Ministry of Environment and Forests
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DECEMBER 2009

CENTRAL POLLUTION CONTROL BOARD

APEX STATUTORY ORGANISATION FOR POLLUTION PREVENTION & CONTROL

INDIA

India has experienced multi-sectoral growth, at a geometrical progression rate, in manufacturing, transport, infrastructure, etc; in post-independence era. Therefore, the need for curbing an ever-increasing pollution due to change in the life style, is being seriously felt.

Central Pollution Control Board (CPCB) was established under statutory provisions of Water (Prevention and Control of Pollution) Act, 1974 with the main objective of maintaining the wholesomeness of water (surface and ground water) in India. The purview of the Board was widened further by provisions of other Acts and Rules there under, so as to cover compliance of other environmental components.

FUNCTIONS OF CENTRAL BOARD:

Besides main function of maintaining the wholesomeness of the water and improve air quality in India. The following are the other important supportive functions:

- Advise Central Government on prevention and control of environmental pollution;
- Coordinate activities of State Boards;
- Provide technical assistance and guidance to the State Boards;
- Organize training on pollution prevention & control;
- Organize Mass Awareness programs on pollution prevention & control;
- Perform as a State Board, as & when directed by Central Government;
- Collect, compile & publish technical & statistical data and also, prepare manuals, codes or guides related to prevention & control of environmental pollution;
- Lay down, modify and annul standards for quality of air & water;
- Execute nation-wide program on prevention & control of environmental pollution;
- Perform such other functions as may be prescribed by Government of India ;

The Board may establish or recognize laboratories to perform its functions.

CONTRIBUTION OF CPCB :

1. **Development of Standards:**
   - For Industrial effluent discharge: **43** Nos.
   - For Industrial emission release: **49** Nos.
2. **Preparation of Guidance Documents:**
   - CPCB publications : >**500** Nos.
   - Guidelines on Waste Management: **32** Nos.
   - Manuals on Laboratory Management: **18** Nos.
3. **Training programs in last 5 years: 200** Nos.
4. **National Ambient Monitoring Network:**
   - Air quality Monitoring Stations: **386** Nos. (including 40 continuous AAQM Stations)
   - Water Quality Monitoring Stations: **1429** Nos.
5. **Environmental surveillance of selected industries:** Approx. **300** Nos. per annum
6. **Compliance monitoring efforts led to Setting up of Common Environmental Infrastructure:**
   - Effluent Treatment Plants: **131** Nos. (Total 750 MLD Treatment capacity)
   - Waste Management Facilities for Hazardous Wastes: **34** Nos.
   - Bio-Medical Waste Management Facilities: **170** Nos.
7. **Patents obtained on R&D : 13** Nos.

WAYFORWARD FOR IMPROVED POLLUTION PREVENTION & CONTROL:

1. Escalated deployment of on-line monitoring systems enabling better environmental compliance by self-regulation at pollution sources.

2. Creation of a centralized data base on Process Technologies in use vis-à-vis Cleaner Technologies available globally.

3. Application of GIS based Environmental Impact Assessment of the Project under planning to improve the environmental decision-making process.

4. Promotion of common Environmental Infrastructural facilities for comprehensive waste management with various recycling options.

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Comprehensive Environmental Assessment of Industrial Clusters

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Foreword

A Comprehensive Environmental Pollution Index (CEPI), which is a rational number to characterize the environmental quality at a given location following the algorithm of source, pathway and receptor have been developed. The index captures the various health dimensions of environment including air, water and land.

The present CEPI is intended to act as an early warning tool, which is handy to use. It can help in categorizing the industrial clusters/areas in terms of priority of planning needs for interventions. The process of evolution of method and mechanisms that yielded results are dynamic in nature. Improvements and alterations for enhancing more efficiency will be a continuous task.

Application of CEPI in 88 selected industrial clusters/areas has been an exercise involving Central Pollution Control Board (CPCB), Concerned State Pollution Control Boards/ Pollution Control Committees, and IIT Delhi.

The effective implementation of the remedial action plan will help in pollution abatement and to restore the environmental quality of respective industrial clusters. The polluted industrial clusters/areas shall be further explored in order to define the spatial boundaries as well as the extent of eco-geological damages. The outcome shall be subjected to structured consultation with the stakeholders for determining comparative effectiveness of alternative plans and policies. The preparation of effective remedial action plan will yield desired results in terms of sustainable use of the carrying capacity of the respective industrial cluster/ area.

All this could become possible by a group of workers who deserve all appreciation. However, special thanks are due to Shri J S Kamyotra, Member Secretary, CPCB for overall coordination and supervision of the project.

The extensive exercise of data collection and processing been made possible by Shri A K Vidyarthi, Environmental Engineer, CPCB, Dr Arvind K Nema, Professor Mukesh Khare, Dr B J Alappat, Dr Radha Goel, Ms Mayuri Chabukdhara, Ms Anjali Gupta, Ms Sapana Seti, Mr Sanjay Gupta, and Mr Rajendra Kaushal of IIT Delhi who are thankfully acknowledged.

Hopefully this report would be useful to the all concerned for improving environmental quality.

Prof. S P Gautam
Chairman, CPCB

Chapter 1

Application of Comprehensive Environmental Pollution Index (CEPI)

The results of the application of the Comprehensive Environmental Pollution Index (CEPI) to selected industrial clusters or areas are presented in this report. The main objective of the study is to identify polluted industrial clusters or areas in order to take concerted action and to centrally monitor them at the national level to improve the current status of their environmental components such as air and water quality data, ecological damage, and visual environmental conditions. A total of 88 industrial areas or clusters have been selected by the Central Pollution Control Board (CPCB) in consultation with the Ministry of Environment & Forests Government of India for the study. The areas in alphabetical order are listed below[1].

1 Agra (Uttar Pradesh)
2 Ahmedabad (Gujarat)
3 Aligarh (Uttar Pradesh)
4 Angul Talcher (Orissa)*
5 Ankleshwar (Gujarat) *
6 Asansole (West Bengal)
7 Aurangabad (Maharashtra)
8 Bada Jamtara (Jharkhand)
9 Baddi (Himachal Pradesh)
10 Batala (Punjab)
11 Bhadravati (Karnataka) *
12 Bhavnagar (Gujarat)
13 Bhillai- Durg (Chhattisgarh)
14 Bhiwadi (Rajasthan)
15 Bidar (Karnataka)
16 Bulandsahar-Khurza (Uttar Pradesh)
17 Burnihat (Assam)
18 Chandrapur (Maharashtra)
19 Chembur (Maharashtra) *
20 Coimbatore (Tamil Nadu)
21 Cochin Greater (Kerala) *
22 Cuddalore (Tamil Nadu)
23 Dewas (Madhya Pradesh)
24 Dhanbad (Jharkhand) *
25 Digboi (Assam) *
26 Dombivalli (Maharashtra)
27 Durgapur (West Bengal) *
28 Erode (Tamil Nadu)
29 Faridabad (Haryana)
30 Ferozabad (Uttar Pradesh)
31 Ghaziabad (Uttar Pradesh)
32 Gwalior (Madhya Pradesh)
33 Hajipur (Bihar)
34 Haldia (West Bengal)
35 Haridwar (Uttarakhand)
36 Howrah (West Bengal) *
37 Indore (Madhya Pradesh)
38 Ib Valley (Orissa)
39 Jaipur (Rajasthan)
40 Jalandhar (Punjab)
41 Jamshedpur (Jharkhand)
42 Jharsuguda (Orissa)
43 Jodhpur (Rajasthan) *
44 Junagarh (Gujarat)
45 Kala Amb (Himachal Pradesh)
46 Kanpur (Uttar Pradesh)
47 Kathedan (Andhra Pradesh)
48 Korba (Chhattisgarh) *
49 Kukatpalli (Andhra Pradesh)
50 Ludhiana (Punjab)
51 Manali (Tamil Nadu) *
52 Mandi Gobind Garh (Punjab) *
53 Mangalore (Karnataka)
54 Mathura (Uttar Pradesh)
55 Meerut (Uttar Pradesh)
56 Mettur (Tamilnadu)
57 Moradabad (Uttar Pradesh)
58 Nagda -Ratlam (Madhya Pradesh) *
59 Nashik (Maharashtra)
60 Navi Mumbai (Maharashtra)
61 Nazafgarh drain basin* (including Anand Parvat, Naraina, Okhla, and Wazirpur), Delhi
62 Noida (Uttar Pradesh)
63 Pali (Rajasthan) *
64 Panipat (Haryana)
65 Paradeep (Orissa)

[1] These industrial clusters or areas include 24 existing critically polluted areas, which are indicated by an asterisk (*).

66 Parwanoo (Himachal Pradesh) *
67 Patancheru- -Bollaram (Andhra Pradesh) *
68 Pimpari-Chinchwad (Maharashtra)
69 Pinia (Karnataka)
70 Pitampur (Madhya Pradesh)
71 Raichur (Karnataka)
72 Raipur (Chhatisgarh)
73 Rajkot (Gujarat)
74 Ramgarh (Jharkhand)
75 Saraikela (Jharkhand)
76 Singhbhum, West (Bihar)
77 Singrauli (Uttar Pradesh) *
78 Surat (Gujarat)
79 Tarapur (Maharashtra) *
80 Tirupur (Tamil Nadu)
81 Udhamsingh Nagar (Uttarakhand)
82 Vadodara (Gujarat)
83 Vapi (Gujarat) *
84 Varansi-Mirzapur (Uttar Pradesh)
85 Vatva (Gujarat)
86 Vellore (North Arcot) (Tamil Nadu) *
87 Vijaywada (Andhra Pradesh)
88 Vishakhapatnam (AndhraPradesh) *

The calculations of CEPI have been carried out for all these 88 areas based on the data made available by the CPCB.

The framework of the CEPI is based on three factors—pollutant, pathway, and receptor (Figure 1).

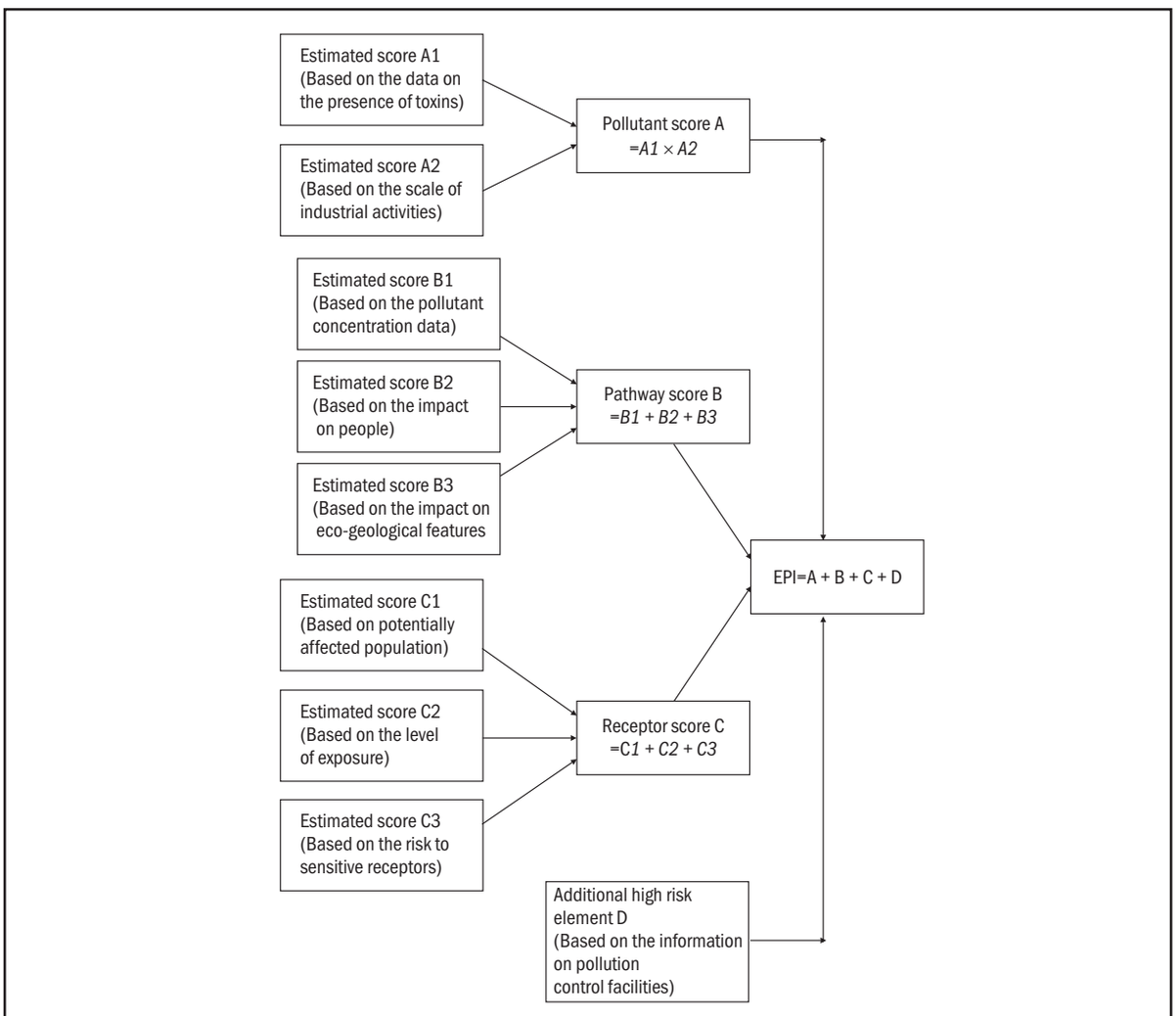


Figure 1 Framework of the Comprehensive Environmental Pollution Index

a POLLUTANT (up to 3 most critical pollutants to be taken)

- Factor number A1: presence of toxin
  - Group A - Toxins that are not assessed as acute or systemic = 1
  - Group B - Organics that are probable carcinogens (USEPA Class 2 and 3) or substances with some systemic toxicity, for example, VOC's, PAHs, PCBs, PM_{10}, and $PM_{2.5}$ = 2 (refer Appendix I for list)
  - Group C - Known carcinogens or chemicals with significant systemic or organ system toxicity, for example, vinyl chloride, benzene, lead, radionuclide, hexachromium, cadmium, and organophosphate = 4 (refer appendix II for list)

Table 1 lists the penalty values for combination of most critical pollutants for Factor A1

Table 1 Penalty values for combination of most critical pollutants Factor A1

S No.	Pollutant 1	Pollutant 2	Pollutant 3	Penalty
1.	C	C	C	2.0
2.	C	C	B/A	1.75
3.	C	B	B/A	1.5
4.	B	B	B/A	1.0

- Factor number A2: scale of industrial activities
  - Large = 5 (if there are
    $\geq$ 10 R_{17} per 10 km^2 area or fraction[2] or
    $\geq$ 2 R_{17} + 10 R_{54} per 10 km^2 area or fraction or
    $\geq$ 100 R_{54} per 10 km^2 area or fraction[3])
  - Moderate = 2.5 (if there are 2 to 10 R_{17} per 10 km^2 area or fraction or 10–100 R_{54} 10 km^2 area or fraction)
  - Limited = 1 (else there is any industry within 10 km^2 area or fraction)

These two factors are taken as multiplicative and, therefore, the overall score for this element is as follows.

SCORE A = A1 × A2 (max score = 6 × 5 = 30)

b PATHWAY

- Factor number B1: Ambient Pollutant Concentration
  - Critical = 6 (when exceedence factor[4] is more than 1.5)
  - High = 3 (when exceedence factor is between 1 and 1.5)
  - Moderate = 2 (when exceedence factor is between 0.5 and 1.0)
  - Low = 1 (when exceedence factor is < 0.5)

[2] R^{17} are 17 category of highly polluting industries other than red category industries categorized by the Central Pollution Control Board (CPCB)

[3] R^{54} are red category industries categorized by the CPCB

[4] Reliable evidence is in form of media reports, hospital records, public interest litigations (PIL) and NGOs reporting, academic research reports, published literature

Table 2 lists the penalty values for combination of most critical pollutants for Factor B1

Table 2 Penalty values for combination of most critical pollutants Factor B1

S No.	Pollutant 1	Pollutant 2	Pollutant 3	Penalty
1.	Critical	Critical	Critical/high/moderate	2.0
2.	Critical	High	High/moderate	1.75
3.	High	High	High	1.5
4.	High	High	Moderate	1.0

- Factor number B2: Evidence* of adverse impact on people.
  - No = 0 (when no reliable evidence is available)
  - Yes = 3 (when evidence of symptoms of exposure)
  - Yes = 6 (when evidence of fatality or disease(s) leading to fatality (such as cancer) due to exposure)

- Factor number B3: reliable evidence of adverse impact on eco-geological features.
  - No = 0 (when no reliable evidence is available)
  - Yes = 3 (when evidence of symptoms of exposure)
  - Yes = 6 (when evidence of loss of flora/fauna/significant damage to eco-geological features, [irreparable loss/damage])

Overall score for this element is as follows:

SCORE B = B1 + B2 + B3 = (8 + 6 + 6) = 20

c RECEPTOR

- Factor number C1: number of people potentially affected within 2 km boundary from the industrial pollution source.
  - <1000 = 1
  - 1000 to 10 000 = 1.5
  - 10 000 to 100 000 = 3
  - > 100 000 = 5

- Factor number C2: level of exposure
  - A surrogate number which will represent level of exposure (SNLF) is calculated using per cent violation of ambient pollutant concentration, which is calculated as follows.

SNLF = (Number of samples exceeded/total number of samples) × (exceedence factor)

- Low = 1 (SNLF = 0)
- Moderate = 1.5 (SNLF < 0.25)
- High = 2 (SNLF 0.25 - 0.5)
- Critical = 3 (SNLF ≥ 0.5)

Table 3 shows the penalty Values for Combination of most critical pollutants for Factor C2

Table 3 Penalty values for combination of most critical pollutants Factor C2

S No.	Pollutant 1	Pollutant 2	Pollutant 3	Penalty
1.	Critical	Critical	Critical/high/moderate	2.0
2.	Critical	High	High/moderate	1.75
3.	High	High	High	1.5
4.	High	High	Moderate	1.0

- Factor number C3: additional risk to sensitive receptors
  - No = 0
  - Yes (if > 500 sensitive people/ a sensitive historical/ archaeological/ religious/ national parks/ sanctuary/ ecological habitat are within 2 km distance from source, additional risk) = 5

SCORE C = (C1 × C2) + C3 (maximum score = (5 × 5) + 5 = 30)

d Additional high risk element

- Factor number D - Additional High Risk Element (inadequacy of pollution control measures for large scale, medium, and small-scale industries and also due to unorganized sector). It is cumulative of ETPs, CETPs, air pollution control devises (APCDs) and unorganized waste disposal (maximum score = 20).
  - If all the industries in the area have adequately designed/operated and maintained pollution control facilities and also common facilities such as CETP/ FETP/ CHWDF are having adequate capacity and have state-of-art technology = 0
  - If all the large industries in the area have adequately designed/operated and maintained pollution control facilities but small and medium industries are defaulting. Common facilities such as CETP/FETP/CHWDF have adequate in capacity or operation/ maintenance = 5
  - If all the industries in the area have adequately designed/operated and maintained pollution control facilities but the common facilities such as CETP/FETP/CHWDF have inadequate in capacity or operation/maintenance = 10
  - If all the large industries in the area have adequately designed/ operated and maintained pollution control facilities but small and medium industries are defaulting. Common facilities such as CETP/FETP/CHWDF have inadequate in capacity or operation/ maintenance = 15
  - Inadequate facilities of individual as well as common facilities, full penalty = 20

Table 4 Score for additional high-risk element: Factor D

S No.	Large- scale industries	Small/medium -scale industries	Common facilities for pollution control	Score
1.	Adequate	Adequate	Adequate	0
2.	Adequate	Inadequate	Adequate	5
3.	Adequate	Adequate	Inadequate	10
4.	Adequate	Inadequate	Inadequate	15
5.	Inadequate	Inadequate	Inadequate	20

Inadequate Facilities $\geq$ 10% units deficient in terms of design/ operation and maintenance of pollution control in case of small and medium scale industries or $\geq$ 2% units deficiency in terms of design/ operation and maintenance of pollution control in case of Large scale industries or common facilities

The status report (last two years) shall be used deciding the score for adequacy.

On the above basis, the total score is calculated as:

SCORE = (A + B + C + D) = (30 + 20 +30 +20) = 100

Application of CEPI on the identified industrial clusters

Table 5 below shows the CEPIs of various Industrial areas/ clusters for Air Environment.

Table 5 CEPIs of various Industrial areas/ clusters for Air Environment

No.	Industrial Cluster/Area	A1	A2	A	B1	B2	B3	B	C1	C2	C3	C	D	AIR CEPI
1	Agra (Uttar Pradesh)	6.00	2.50	15.00	8.00	3.00	3.00	14.00	5.00	3.00	5.00	20.00	10.00	59.00
2	Ahmedabad (Gujarat)	6.00	5.00	30.00	7.75	3.00	3.00	13.75	3.00	3.00	0.00	9.00	10.00	62.75
3	Aligarh (Uttar Pradesh)	6.00	2.50	15.00	8.00	3.00	3.00	14.00	3.00	3.00	5.00	14.00	10.00	53.00
4	Angul Talcher (Orissa)	2.00	5.00	10.00	3.00	3.00	3.00	9.00	5.00	5.00	5.00	30.00	15.00	64.00
5	Ankleshwar (Gujarat)	5.00	5.00	25.00	8.00	6.00	6.00	20.00	3.00	4.00	5.00	17.00	10.00	72.00
6	Asansole (West Bengal)	5.75	2.50	14.38	3.00	3.00	3.00	9.00	3.00	5.00	5.00	20.00	15.00	58.38
7	Aurangabad (Maharashtra)	5.75	5.00	28.75	6.00	3.00	3.00	12.00	3.00	3.00	5.00	14.00	10.00	64.75
8	Bada Jamtara (Jharkhand)	1.00	5.00	5.00	8.00	3.00	3.00	14.00	3.00	3.00	5.00	14.00	15.00	48.00
9	Baddi (Himachal Pradesh)	6.00	5.00	30.00	7.00	0.00	0.00	7.00	3.00	3.00	0.00	9.00	10.00	56.00
10	Batala (Punjab)	3.00	5.00	15.00	3.00	3.00	3.00	9.00	3.00	3.00	3.00	12.00	15.00	51.00
11	Bhadravati (Karnataka)	5.75	5.00	28.75	3.00	3.00	3.00	9.00	5.00	3.00	0.00	15.00	10.00	62.75
12	Bhavnagar (Gujarat)	5.50	5.00	27.50	8.00	0.00	0.00	8.00	3.00	3.00	0.00	9.00	10.00	54.50
13	Bhillai- Durg (Chhatisgarh)	2.00	2.50	5.00	3.00	3.00	3.00	9.00	5.00	3.00	5.00	20.00	10.00	44.00
14	Bhiwadi (Rajasthan)	6.00	5.00	30.00	6.00	0.00	0.00	6.00	5.00	5.00	0.00	25.00	10.00	71.00
15	Bidar (Karnataka)	5.75	5.00	28.75	6.00	0.00	0.00	6.00	3.00	3.00	5.00	14.00	10.00	58.75
16	Bulandsahar-Khurza (Uttar Pradesh)	5.00	2.50	12.50	6.00	0.00	0.00	6.00	3.00	4.50	0.00	13.50	10.00	42.00
17	Burnihat (Assam)	2.00	5.00	10.00	1.00	3.00	3.00	7.00	3.00	3.00	3.00	12.00	10.00	39.00
18	Chandrapur (Maharashtra)	5.75	5.00	28.75	6.00	3.00	3.00	12.00	5.00	4.00	0.00	20.00	10.00	70.75
19	Chembur (Maharashtra)	5.75	5.00	28.75	6.00	0.00	0.00	8.00	5.00	3.00	0.00	15.00	10.00	59.75
20	Coimbatore (Tamil Nadu)	5.75	5.00	28.75	3.00	0.00	3.00	6.00	5.00	3.50	0.00	17.50	10.00	62.25
21	Cochin, Greater (Kerala)	3.00	5.00	15.00	1.00	3.00	3.00	7.00	5.00	3.00	5.00	20.00	15.00	57.00

Table 5 contd...

No.	Industrial Cluster/Area	A1	A2	A	B1	B2	B3	B	C1	C2	C3	C	D	AIR CEPI
22	Cuddalore (Tamilnadu)	3.00	5.00	15.00	3.00	3.00	3.00	9.00	5.00	3.00	5.00	20.00	10.00	54.00
23	Dewas (Madhya Pradesh)	2.00	5.00	10.00	4.00	1.50	3.00	8.50	5.00	3.00	3.00	18.00	15.00	51.50
24	Dhanbad (Jharkhand)	3.00	5.00	15.00	6.00	3.00	3.00	12.00	5.00	3.50	5.00	22.50	15.00	64.50
25	Digboi (Assam)	2.00	2.50	5.00	2.00	3.00	3.00	8.00	3.00	3.00	0.00	9.00	10.00	32.00
26	Dombivalli (Maharashtra)	6.00	5.00	30.00	6.00	0.00	0.00	6.00	5.00	3.00	0.00	15.00	15.00	66.00
27	Durgapur (West Bengal)	2.00	5.00	10.00	6.00	0.00	3.00	9.00	5.00	3.50	3.00	20.50	10.00	49.50
28	Erode (Tamil Nadu)	5.75	2.50	14.38	3.00	3.00	0.00	6.00	3.00	4.00	5.00	17.00	10.00	47.38
29	Faridabad (Haryana)	6.00	5.00	30.00	6.00	0.00	0.00	6.00	5.00	3.50	0.00	17.50	10.00	63.50
30	Ferozabad (Uttar Pradesh)	6.00	2.50	15.00	7.00	0.00	3.00	10.00	3.00	3.00	0.00	9.00	15.00	49.00
31	Ghaziabad (Uttar Pradesh)	3.00	5.00	15.00	8.00	0.00	3.00	11.00	5.00	4.50	5.00	27.50	15.00	68.50
32	Gwalior (Madhya Pradesh)	5.75	2.50	14.38	6.00	0.00	0.00	6.00	3.00	3.50	0.00	10.50	15.00	45.88
33	Hajipur (Bihar)	3.00	2.50	7.50	4.00	0.00	3.00	7.00	3.00	3.00	5.00	14.00	15.00	43.50
34	Haldia (West Bengal)	5.75	5.00	28.75	3.00	0.00	3.00	6.00	3.00	3.00	0.00	9.00	10.00	53.75
35	Haridwar (Uttarakhand)	5.75	5.00	28.75	4.00	0.00	0.00	4.00	3.00	3.00	0.00	9.00	10.00	51.75
36	Howrah (West Bengal)	3.00	5.00	15.00	6.00	3.00	3.00	12.00	5.00	3.00	5.00	20.00	10.00	57.00
37	Indore (Madhya Pradesh)	2.00	2.50	5.00	8.00	3.00	3.00	14.00	5.00	4.00	5.00	25.00	15.00	59.00
38	Ib Valley (Orissa)	5.00	5.00	25.00	3.00	0.00	3.00	6.00	5.00	3.00	0.00	15.00	15.00	61.00
39	Jaipur (Rajasthan)	6.00	2.50	15.00	8.00	3.00	0.00	11.00	3.00	3.00	5.00	14.00	15.00	55.00
40	Jalandhar (Punjab)	2.00	5.00	10.00	3.00	3.00	3.00	9.00	5.00	4.00	3.00	23.00	10.00	52.00
41	Jamshedpur (Jharkhand)	5.75	5.00	28.75	2.00	0.00	0.00	2.00	5.00	3.00	0.00	15.00	10.00	55.75
42	Jharsuguda (Orissa)	5.00	5.00	25.00	3.00	0.00	3.00	6.00	5.00	3.00	0.00	15.00	15.00	61.00
43	Jodhpur (Rajasthan)	3.00	5.00	15.00	6.00	3.00	3.00	12.00	5.00	3.00	5.00	20.00	5.00	52.00
44	Junagarh (Gujarat)	5.75	5.00	28.75	4.00	0.00	0.00	4.00	3.00	3.50	0.00	10.50	10.00	53.25
45	Kala Amb (Himachal Pradesh)	6.00	5.00	30.00	7.75	0.00	0.00	7.75	3.00	3.00	0.00	9.00	10.00	56.75

Contd...

Table 5 contd...

No.	Industrial Cluster/Area	A1	A2	A	B1	B2	B3	B	C1	C2	C3	C	D	AIR CEPI
46	Kanpur (Uttar Pradesh)	6.00	5.00	30.00	8.00	0.00	3.00	11.00	5.00	2.00	0.00	10.00	15.00	66.00
47	Kathedan (Andhra Pradesh)	6.00	2.50	15.00	6.00	0.00	0.00	6.00	3.00	4.50	0.00	13.50	10.00	44.50
48	Korba (Chhatisgarh)	3.00	5.00	15.00	6.00	3.00	3.00	12.00	5.00	4.00	5.00	25.00	15.00	67.00
49	Kukatpalli (Andhra Pradesh)	6.00	2.50	15.00	6.00	0.00	0.00	6.00	3.00	3.50	0.00	10.50	10.00	41.50
50	Ludhiana (Punjab)	6.00	5.00	30.00	8.00	0.00	0.00	8.00	5.00	4.00	0.00	20.00	10.00	68.00
51	Manali (Tamilnadu)	5.00	5.00	25.00	6.00	3.00	3.00	12.00	3.00	4.00	0.00	12.00	15.00	64.00
52	Mandi Gobind Garh (Punjab)	4.00	5.00	20.00	6.00	3.00	6.00	15.00	3.00	4.00	5.00	17.00	10.00	62.00
53	Mangalore (Karnataka)	5.75	5.00	28.75	2.00	3.00	3.00	8.00	5.00	2.00	0.00	10.00	15.00	61.75
54	Mathura (Uttar Pradesh)	2.00	5.00	10.00	2.00	3.00	3.00	8.00	5.00	3.00	5.00	20.00	10.00	48.00
55	Meerut (Uttar Pradesh)	2.00	5.00	10.00	6.00	3.00	3.00	12.00	5.00	3.00	3.00	18.00	10.00	50.00
56	Mettur (Tamilnadu)	3.00	5.00	15.00	1.00	3.00	3.00	7.00	3.00	3.00	5.00	14.00	10.00	46.00
57	Moradabad (Uttar Pradesh)	2.00	5.00	10.00	3.00	3.00	3.00	9.00	5.00	4.00	5.00	25.00	10.00	54.00
58	Nagda -Ratlam (Madhya Pradesh)	2.00	5.00	10.00	6.00	3.00	1.50	10.50	3.00	3.00	5.00	14.00	10.00	44.50
59	Nashik (Maharashtra)	6.00	5.00	30.00	6.00	0.00	0.00	6.00	3.00	3.00	0.00	9.00	10.00	55.00
60	Navi Mumbai (Maharashtra)	6.00	5.00	30.00	6.00	0.00	0.00	6.00	3.00	5.00	0.00	15.00	10.00	61.00
61	Nazafgarh drain basin (including Anand Parvat, Naraina, Okhla and Wazirpur), Delhi	5.75	2.50	14.38	7.75	0.00	0.00	7.75	5.00	3.00	5.00	20.00	10.00	52.13
62	Noida (Uttar Pradesh)	6.00	5.00	30.00	7.75	0.00	3.00	10.75	3.00	5.00	0.00	15.00	10.00	65.75
63	Pali (Rajasthan)	3.00	5.00	15.00	4.00	0.00	0.00	4.00	5.00	4.00	3.00	23.00	10.00	52.00
64	Panipat (Haryana)	5.75	5.00	28.75	8.00	0.00	0.00	8.00	3.00	3.00	0.00	9.00	10.00	55.75
65	Paradeep (Orissa)	3.00	5.00	15.00	3.00	3.00	3.00	9.00	5.00	3.00	5.00	20.00	10.00	54.00
66	Parwanoo (Himachal Pradesh)	3.00	5.00	15.00	3.00	3.00	3.00	9.00	3.00	3.00	5.00	14.00	15.00	53.00
67	Patancheru- -Bollaram (Andhra Pradesh)	3.00	5.00	15.00	1.00	3.00	3.00	7.00	5.00	3.00	3.00	18.00	10.00	50.00
68	Pimpari-Chinchwad (Maharashtra)	5.75	5.00	28.75	6.00	0.00	0.00	6.00	3.00	3.50	0.00	10.50	10.00	55.25

Table 5 contd...

No.	Industrial Cluster/Area	A1	A2	A	B1	B2	B3	B	C1	C2	C3	C	D	AIR CEPI
69	Pinia (Karnataka)	5.75	5.00	28.75	6.00	0.00	0.00	6.00	3.00	4.00	0.00	12.00	10.00	56.75
70	Pitampur (Madhya Pradesh)	5.75	5.00	28.75	3.00	0.00	0.00	3.00	3.00	2.00	0.00	6.00	10.00	47.75
71	Raichur (Karnataka)	5.75	5.00	28.75	7.00	0.00	0.00	7.00	3.00	3.00	5.00	14.00	10.00	59.75
72	Raipur (Chhatisgarh)	2.00	5.00	10.00	7.50	3.00	3.00	13.50	5.00	4.00	3.00	23.00	10.00	56.50
73	Rajkot (Gujarat)	3.00	2.50	7.50	7.00	1.50	1.50	10.00	5.00	3.00	3.00	18.00	10.00	45.50
74	Ramgarh (Jharkhand)	3.00	5.00	15.00	1.00	3.00	3.00	7.00	3.00	3.00	3.00	12.00	10.00	44.00
75	Saraikela (Jharkhand)	2.00	5.00	10.00	4.50	3.00	3.00	10.50	5.00	3.00	5.00	20.00	10.00	50.50
76	Singhbhum, West (Bihar)	3.00	5.00	15.00	4.50	3.00	3.00	10.50	5.00	3.00	5.00	20.00	10.00	55.50
77	Singrauli (Uttar Pradesh)	2.00	5.00	10.00	7.75	3.00	6.00	16.75	5.00	4.75	5.00	28.75	15.00	70.50
78	Surat (Gujarat)	5.50	2.50	13.75	8.00	0.00	0.00	8.00	3.00	4.75	0.00	14.25	10.00	46.00
79	Tarapur (Maharashtra)	5.75	5.00	28.75	2.00	3.00	3.00	8.00	3.00	3.00	5.00	14.00	10.00	60.75
80	Tirupur (Tamil Nadu)	5.75	5.00	28.75	0.00	0.00	3.00	3.00	3.00	4.00	3.00	15.00	10.00	56.75
81	Udhamsingh Nagar (Uttarakhand)	6.00	2.50	15.00	7.00	0.00	0.00	7.00	3.00	4.00	0.00	12.00	10.00	44.00
82	Vadodara (Gujarat)	6.00	5.00	30.00	2.00	0.00	0.00	2.00	5.00	3.00	0.00	15.00	10.00	57.00
83	Vapi (Gujarat)	5.00	5.00	25.00	8.00	3.00	3.00	14.00	5.00	5.00	0.00	25.00	10.00	74.00
84	Varansi-Mirzapur (Uttar Pradesh)	6.00	5.00	30.00	6.00	0.00	0.00	6.00	3.00	4.00	0.00	12.00	10.00	58.00
85	Vatva (Gujarat)	3.00	5.00	15.00	4.00	3.00	3.00	10.00	5.00	4.00	5.00	25.00	10.00	60.00
86	Vellore (North Arcot) (Tamilnadu)	5.75	5.00	28.75	3.00	4.50	3.00	10.50	5.00	3.00	5.00	20.00	10.00	69.25
87	Vijaywada (Andhra Pradesh)	3.00	5.00	15.00	4.00	1.50	1.50	7.00	5.00	3.00	5.00	20.00	10.00	52.00
88	Vishakhapatnam (AndhraPradesh)	3.00	5.00	15.00	6.00	3.00	3.00	12.00	5.00	4.00	0.00	20.00	10.00	57.00

CEPI (Air Environment) = A + B + C + D
A (Pollutant Score) = A1 x A2; where, A1: Presence of Toxin; A2: Scale of industrial activities
B (Pathway Score) = B1 + B2 + B3; where, B1: Pollutant Concentration B2: Impact on people; B3: Impact on Eco-geological feature
C (Receptor Score) = C1 x C2 + C3; where, C1: Potentially affected population; C2: Level of exposure; C3: Risk to sensitive receptors
D= Additional High Risk Element

Table 6 below shows the CEPIs of various Industrial areas/ clusters for Water Environment.

Table 6 CEPIs of various Industrial areas/ clusters for Surface Water

No.	Industrial Cluster/Area	A1	A2	A	B1	B2	B3	B	C1	C2	C3	C	D	WATER CEPI
1	Agra (Uttar Pradesh)	5.50	2.50	13.75	7.00	0.00	3.00	10.00	5.00	5.00	5.00	30.00	10.00	63.75
2	Ahmedabad (Gujarat)	3.00	5.00	15.00	8.00	3.00	3.00	14.00	3.00	3.00	5.00	14.00	15.00	58.00
3	Aligarh (Uttar Pradesh)	2.00	2.50	5.00	8.00	3.00	3.00	14.00	3.00	3.00	5.00	14.00	15.00	48.00
4	Angul Talcher (Orissa)	3.00	5.00	15.00	6.00	0.00	3.00	9.00	5.00	5.00	5.00	30.00	15.00	69.00
5	Ankleshwar (Gujarat)	5.75	5.00	28.75	8.00	3.00	3.00	14.00	3.00	5.00	5.00	20.00	10.00	72.75
6	Asansole (West Bengal)	3.00	2.50	7.50	7.75	3.00	3.00	13.75	3.00	5.00	5.00	20.00	15.00	56.25
7	Aurangabad (Maharashtra)	5.50	5.00	27.50	8.00	3.00	3.00	14.00	3.00	3.00	5.00	14.00	5.00	60.50
8	Bada Jamtara (Jharkhand)	3.00	5.00	15.00	1.00	3.00	4.50	8.50	3.00	3.00	5.00	14.00	15.00	52.50
9	Baddi (Himachal Pradesh)	3.00	5.00	15.00	7.50	0.00	3.00	10.50	3.00	3.00	5.00	14.00	15.00	54.50
10	Batala (Punjab)	3.00	5.00	15.00	8.00	1.50	3.00	12.50	3.00	3.00	5.00	14.00	15.00	56.50
11	Bhadravati (Karnataka)	3.00	5.00	15.00	2.00	1.50	3.00	6.50	5.00	4.00	5.00	25.00	10.00	56.50
12	Bhavnagar (Gujarat)	3.00	5.00	15.00	7.50	3.00	3.00	13.50	3.00	3.00	5.00	14.00	15.00	57.50
13	Bhillai- Durg (Chhatisgarh)	2.00	2.50	5.00	2.00	1.50	1.50	5.00	5.00	3.00	0.00	15.00	10.00	35.00
14	Bhiwadi (Rajasthan)	3.00	5.00	15.00	8.00	3.00	3.00	14.00	5.00	5.00	0.00	25.00	15.00	69.00
15	Bidar (Karnataka)	3.00	5.00	15.00	7.00	1.50	1.50	10.00	3.00	3.00	5.00	14.00	10.00	49.00
16	Bulandsahar-Khurza (Uttar Pradesh)	3.00	2.50	7.50	2.00	0.00	0.00	2.00	3.00	3.00	0.00	9.00	15.00	33.50
17	Burnihat (Assam)	2.00	5.00	10.00	2.00	1.50	1.50	5.00	3.00	1.50	5.00	9.50	10.00	34.50
18	Chandrapur (Maharashtra)	3.00	5.00	15.00	8.00	1.50	3.00	12.50	5.00	4.00	5.00	25.00	15.00	67.50
19	Chembur (Maharashtra)	3.00	5.00	15.00	7.75	1.50	1.50	10.75	5.00	2.00	5.00	15.00	10.00	50.75
20	Coimbatore (Tamil Nadu)	3.00	5.00	15.00	7.75	3.00	3.00	13.75	5.00	3.00	5.00	20.00	10.00	58.75
21	Cochin, Greater (Kerala)	5.00	5.00	25.00	6.00	1.50	1.50	9.00	5.00	3.00	5.00	20.00	10.00	64.00

Table 6 contd...

No.	Industrial Cluster/Area	A1	A2	A	B1	B2	B3	B	C1	C2	C3	C	D	WATER CEPI
22	Cuddalore (Tamilnadu)	3.00	5.00	15.00	7.75	4.50	3.00	15.25	5.00	3.00	5.00	20.00	15.00	65.25
23	Dewas (Madhya Pradesh)	4.00	2.50	10.00	8.00	3.00	1.50	12.50	5.00	3.00	5.00	20.00	15.00	57.50
24	Dhanbad (Jharkhand)	3.00	5.00	15.00	3.00	3.00	3.00	9.00	5.00	3.00	5.00	20.00	15.00	59.00
25	Digboi (Assam)	3.00	2.50	7.50	2.00	3.00	3.00	8.00	1.50	1.50	5.00	7.25	10.00	32.75
26	Dombivalli (Maharashtra)	3.00	5.00	15.00	8.00	0.00	3.00	11.00	5.00	4.50	5.00	27.50	10.00	63.50
27	Durgapur (West Bengal)	3.00	5.00	15.00	8.00	1.50	1.50	11.00	5.00	3.50	5.00	22.50	10.00	58.50
28	Erode (Tamil Nadu)	3.00	2.50	7.50	7.75	0.00	3.00	10.75	3.00	3.00	5.00	14.00	15.00	47.25
29	Faridabad (Haryana)	3.00	5.00	15.00	8.00	3.00	3.00	14.00	5.00	3.00	5.00	20.00	10.00	59.00
30	Ferozabad (Uttar Pradesh)	3.00	2.50	7.50	8.00	0.00	3.00	11.00	3.00	4.50	0.00	13.50	15.00	47.00
31	Ghaziabad (Uttar Pradesh)	5.75	5.00	28.75	8.00	3.00	3.00	14.00	5.00	4.50	0.00	22.50	10.00	75.25
32	Gwalior (Madhya Pradesh)	3.00	2.50	7.50	7.50	0.00	0.00	7.50	3.00	4.50	0.00	13.50	10.00	38.50
33	Hajipur (Bihar)	3.00	2.50	7.50	4.50	0.00	3.00	7.50	3.00	3.00	5.00	14.00	15.00	44.00
34	Haldia (West Bengal)	6.00	5.00	30.00	8.00	0.00	3.00	11.00	3.00	4.50	0.00	13.50	10.00	64.50
35	Haridwar (Uttarakhand)	3.00	5.00	15.00	6.00	0.00	3.00	9.00	3.00	3.00	5.00	14.00	10.00	48.00
36	Howrah (West Bengal)	3.00	5.00	15.00	2.00	4.50	3.00	9.50	5.00	2.00	5.00	15.00	15.00	54.50
37	Indore (Madhya Pradesh)	4.00	2.50	10.00	8.00	3.00	1.50	12.50	5.00	3.00	5.00	20.00	15.00	57.50
38	Ib Valley (Orissa)	2.00	5.00	10.00	6.00	0.00	3.00	9.00	5.00	3.50	5.00	22.50	15.00	56.50
39	Jaipur (Rajasthan)	3.00	2.50	7.50	8.00	0.00	3.00	11.00	3.00	4.50	5.00	18.50	15.00	52.00
40	Jalandhar (Punjab)	3.00	5.00	15.00	3.00	3.00	3.00	9.00	5.00	3.00	3.00	18.00	10.00	52.00
41	Jamshedpur (Jharkhand)	5.50	5.00	27.50	7.50	0.00	0.00	7.50	3.00	3.50	0.00	10.50	10.00	55.50
42	Jharsuguda (Orissa)	2.00	5.00	10.00	6.00	0.00	3.00	9.00	5.00	3.50	5.00	22.50	15.00	56.50
43	Jodhpur (Rajasthan)	5.50	5.00	27.50	7.00	3.00	3.00	13.00	5.00	3.00	0.00	15.00	10.00	65.50
44	Junagarh (Gujarat)	3.00	5.00	15.00	6.00	3.00	3.00	12.00	3.00	3.50	0.00	10.50	15.00	52.50
45	Kala Amb (Himachal Pradesh)	3.00	5.00	15.00	8.00	1.50	3.00	12.50	3.00	4.00	5.00	0.00	15.00	54.50

Contd...

Table 6 contd...

No.	Industrial Cluster/Area	A1	A2	A	B1	B2	B3	B	C1	C2	C3	C	D	WATER CEPI
46	Kanpur (Uttar Pradesh)	3.00	5.00	15.00	8.00	0.00	3.00	11.00	5.00	3.50	5.00	22.50	15.00	63.50
47	Kathedan (Andhra Pradesh)	3.00	2.50	7.50	8.00	0.00	3.00	11.00	3.00	4.50	0.00	13.50	15.00	47.00
48	Korba (Chhatisgarh)	2.00	5.00	10.00	6.00	3.00	3.00	12.00	5.00	3.00	5.00	20.00	15.00	57.00
49	Kukatpalli (Andhra Pradesh)	3.00	2.50	7.50	8.00	0.00	3.00	11.00	3.00	4.50	0.00	13.50	15.00	47.00
50	Ludhiana (Punjab)	5.50	5.00	27.50	8.00	0.00	3.00	11.00	5.00	3.50	0.00	17.50	10.00	66.00
51	Manali (Tamilnadu)	3.00	5.00	15.00	8.00	3.00	3.00	14.00	3.00	5.00	5.00	20.00	10.00	59.00
52	Mandi Gobind Garh (Punjab)	3.00	5.00	15.00	4.00	3.00	4.50	11.50	3.00	3.00	5.00	14.00	15.00	55.50
53	Mangalore (Karnataka)	5.75	5.00	28.75	7.00	0.00	0.00	7.00	3.00	4.00	0.00	12.00	10.00	57.75
54	Mathura (Uttar Pradesh)	3.00	5.00	15.00	2.00	3.00	3.00	8.00	5.00	2.00	5.00	15.00	10.00	48.00
55	Meerut (Uttar Pradesh)	3.00	2.50	7.50	2.00	0.00	3.00	5.00	5.00	4.00	5.00	25.00	10.00	47.50
56	Mettur (Tamilnadu)	5.00	5.00	25.00	6.00	0.00	0.00	6.00	3.00	4.00	0.00	12.00	15.00	58.00
57	Moradabad (Uttar Pradesh)	2.00	5.00	10.00	3.00	3.00	3.00	9.00	5.00	3.00	5.00	20.00	10.00	49.00
58	Nagda -Ratlam (Madhya Pradesh)	4.00	5.00	20.00	6.00	1.50	3.00	10.50	3.00	3.00	5.00	14.00	10.00	54.50
59	Nashik (Maharashtra)	5.50	5.00	27.50	8.00	0.00	3.00	11.00	3.00	3.00	0.00	9.00	10.00	57.50
60	Navi Mumbai (Maharashtra)	3.00	5.00	15.00	8.00	3.00	3.00	14.00	5.00	3.00	5.00	20.00	10.00	59.00
61	Nazafgarh drain basin (including Anand Parvat, Naraina, Okhla and Wazirpur), Delhi	3.00	5.00	15.00	6.00	0.00	3.00	9.00	5.00	5.00	5.00	30.00	15.00	69.00
62	Noida (Uttar Pradesh)	3.00	5.00	15.00	8.00	3.00	3.00	14.00	3.00	5.00	5.00	20.00	15.00	64.00
63	Pali (Rajasthan)	4.00	5.00	20.00	8.00	3.00	3.00	14.00	5.00	3.00	0.00	15.00	15.00	64.00
64	Panipat (Haryana)	4.00	5.00	20.00	3.00	3.00	3.00	9.00	5.00	2.50	5.00	17.50	10.00	56.50
65	Paradeep (Orissa)	2.00	5.00	10.00	6.00	3.00	4.50	13.50	5.00	4.00	5.00	25.00	10.00	58.50
66	Parwanoo (Himachal Pradesh)	3.00	5.00	15.00	2.00	3.00	4.50	9.50	1.50	2.00	5.00	8.00	15.00	47.50
67	Patancheru- -Bollaram (Andhra Pradesh)	3.00	5.00	15.00	8.00	3.00	3.00	14.00	5.00	3.00	5.00	20.00	10.00	59.00
68	Pimpari-Chinchwad (Maharashtra)	3.00	5.00	15.00	7.00	0.00	3.00	10.00	5.00	3.50	0.00	17.50	10.00	52.50

Table 6 contd...

No.	Industrial Cluster/Area	A1	A2	A	B1	B2	B3	B	C1	C2	C3	C	D	WATER CEPI
69	Pinia (Karnataka)	3.00	5.00	15.00	6.00	0.00	3.00	9.00	3.00	4.00	0.00	12.00	10.00	46.00
70	Pitampur (Madhya Pradesh)	5.50	5.00	27.50	6.00	0.00	0.00	6.00	3.00	3.50	0.00	10.50	10.00	54.00
71	Raichur (Karnataka)	3.00	2.50	7.50	6.00	0.00	3.00	9.00	5.00	3.00	5.00	20.00	10.00	46.50
72	Raipur (Chhatisgarh)	2.00	5.00	10.00	6.00	1.50	1.50	9.00	5.00	2.00	3.00	13.00	10.00	42.00
73	Rajkot (Gujarat)	3.00	2.50	7.50	6.00	3.00	3.00	12.00	3.00	5.00	5.00	20.00	15.00	54.50
74	Ramgarh (Jharkhand)	2.00	5.00	10.00	8.00	3.00	3.00	14.00	3.00	3.00	5.00	14.00	15.00	53.00
75	Saraikela (Jharkhand)	3.00	5.00	15.00	3.00	3.00	3.00	9.00	5.00	2.00	5.00	15.00	10.00	49.00
76	Singhbhum, West (Bihar)	3.00	5.00	15.00	2.00	1.50	3.00	6.50	5.00	3.00	5.00	20.00	10.00	51.50
77	Singrauli (Uttar Pradesh)	3.00	5.00	15.00	8.00	3.00	3.00	14.00	5.00	3.00	5.00	20.00	15.00	64.00
78	Surat (Gujarat)	3.00	2.50	7.50	7.75	0.00	3.00	10.75	3.00	4.50	0.00	13.50	15.00	46.75
79	Tarapur (Maharashtra)	3.00	5.00	15.00	8.00	0.00	3.00	11.00	3.00	5.00	0.00	15.00	15.00	56.00
80	Tirupur (Tamil Nadu)	3.00	5.00	15.00	7.75	0.00	3.00	10.75	3.00	5.00	0.00	15.00	10.00	50.75
81	Udhamsingh Nagar (Uttarakhand)	5.50	2.50	13.75	7.00	0.00	0.00	7.00	3.00	3.50	0.00	10.50	10.00	41.25
82	Vadodara (Gujarat)	3.00	5.00	15.00	6.00	0.00	5.00	11.00	3.00	4.00	0.00	12.00	10.00	48.00
83	Vapi (Gujarat)	5.00	5.00	25.00	8.00	3.00	6.00	17.00	5.00	4.50	0.00	22.50	10.00	74.50
84	Varansi-Mirzapur (Uttar Pradesh)	5.50	5.00	27.50	8.00	0.00	3.00	11.00	3.00	4.50	0.00	13.50	10.00	62.00
85	Vatva (Gujarat)	3.00	5.00	15.00	8.00	4.50	4.50	17.00	5.00	2.00	5.00	15.00	15.00	62.00
86	Vellore (North Arcot) (Tamilnadu)	3.00	5.00	15.00	7.75	4.50	3.00	15.25	5.00	3.00	5.00	20.00	15.00	65.25
87	Vijaywada (Andhra Pradesh)	3.00	5.00	15.00	1.00	1.50	1.50	4.00	5.00	1.50	5.00	12.50	10.00	41.50
88	Vishakhapatnam (AndhraPradesh)	3.00	5.00	15.00	8.00	1.50	3.00	12.50	5.00	3.00	5.00	20.00	10.00	57.50

CEPI (Water Environment) = A + B + C + D
A (Pollutant Score) = A1 x A2; where, A1: Presence of Toxin; A2: Scale of industrial activities
B (Pathway Score) = B1 + B2 + B3; where, B1: Pollutant Concentration B2: Impact on people; B3: Impact on Eco-geological feature
C (Receptor Score) = C1 x C2 + C3; where, C1: Potentially affected population; C2: Level of exposure; C3: Risk to sensitive receptors
D= Additional High Risk Element

Table 7 below shows the CEPIs of various Industrial areas/ clusters for Land (Soil and Ground water)

Table 7 CEPIs of various Industrial areas/ clusters for Land (Soil & Groundwater)

No.	Industrial Cluster/Area	A1	A2	A	B1	B2	B3	B	C1	C2	C3	C	D	LAND CEPI
1	Agra (Uttar Pradesh)	5.50	2.50	13.75	7.00	0.00	0.00	7.00	5.00	4.75	5.00	28.75	10.00	59.50
2	Ahmedabad (Gujarat)	3.00	5.00	15.00	8.00	3.00	3.00	14.00	3.00	3.00	5.00	14.00	15.00	58.00
3	Aligarh (Uttar Pradesh)	2.00	2.50	5.00	8.00	3.00	3.00	14.00	3.00	3.00	5.00	14.00	15.00	48.00
4	Angul Talcher (Orissa)	3.00	5.00	15.00	7.75	0.00	3.00	10.75	5.00	4.00	5.00	25.00	15.00	65.75
5	Ankleshwar (Gujarat)	5.75	5.00	28.75	8.00	3.00	6.00	17.00	3.00	5.00	5.00	20.00	10.00	75.75
6	Asansole (West Bengal)	3.00	2.50	7.50	2.00	3.00	3.00	8.00	3.00	5.00	5.00	20.00	15.00	50.50
7	Aurangabad (Maharashtra)	5.50	5.00	27.50	7.00	3.00	3.00	13.00	3.00	3.00	5.00	14.00	5.00	59.50
8	Bada Jamtara (Jharkhand)	3.00	5.00	15.00	1.00	3.00	4.50	8.50	3.00	3.00	5.00	14.00	15.00	52.50
9	Baddi (Himachal Pradesh)	3.00	5.00	15.00	7.50	0.00	3.00	10.50	3.00	3.00	5.00	14.00	15.00	54.50
10	Batala (Punjab)	3.00	5.00	15.00	6.00	1.50	3.00	10.50	3.00	3.00	5.00	14.00	15.00	54.50
11	Bhadravati (Karnataka)	3.00	5.00	15.00	2.00	3.00	3.00	8.00	5.00	1.50	5.00	12.50	10.00	45.50
12	Bhavnagar (Gujarat)	3.00	5.00	15.00	7.75	3.00	3.00	13.75	3.00	3.00	5.00	14.00	15.00	57.75
13	Bhillai- Durg (Chhatisgarh)	2.00	2.50	5.00	2.00	1.50	0.00	3.50	5.00	3.00	0.00	15.00	10.00	33.50
14	Bhiwadi (Rajasthan)	3.00	5.00	15.00	7.00	3.00	4.50	14.50	5.00	3.00	0.00	15.00	15.00	59.50
15	Bidar (Karnataka)	3.00	5.00	15.00	2.00	1.50	1.50	5.00	3.00	3.00	5.00	14.00	10.00	44.00
16	Bulandsahar-Khurza (Uttar Pradesh)	3.00	2.50	7.50	2.00	0.00	3.00	5.00	3.00	3.00	0.00	9.00	15.00	36.50
17	Burnihat (Assam)	2.00	5.00	10.00	2.00	1.50	1.50	5.00	3.00	1.50	5.00	9.50	10.00	34.50
18	Chandrapur (Maharashtra)	3.00	5.00	15.00	4.00	3.00	4.50	11.50	5.00	4.00	5.00	25.00	15.00	66.50
19	Chembur (Maharashtra)	3.00	5.00	15.00	3.00	1.50	1.50	6.00	5.00	2.00	5.00	15.00	10.00	46.00
20	Coimbatore (Tamil Nadu)	3.00	5.00	15.00	4.00	0.00	1.50	5.50	5.00	2.00	5.00	15.00	10.00	45.50
21	Cochin, Greater (Kerala)	3.00	5.00	15.00	3.00	3.00	3.00	9.00	5.00	3.00	5.00	20.00	10.00	54.00

Table 7 contd...

No.	Industrial Cluster/Area	A1	A2	A	B1	B2	B3	B	C1	C2	C3	C	D	LAND CEPI
22	Cuddalore (Tamilnadu)	4.00	5.00	20.00	3.00	3.00	3.00	9.00	5.00	3.00	5.00	20.00	15.00	64.00
23	Dewas (Madhya Pradesh)	3.00	2.50	7.50	3.00	3.00	3.00	9.00	5.00	3.00	5.00	20.00	15.00	51.50
24	Dhanbad (Jharkhand)	3.00	5.00	15.00	8.00	3.00	4.50	15.50	5.00	3.00	5.00	20.00	15.00	65.50
25	Digboi (Assam)	2.00	2.50	5.00	3.00	3.00	3.00	9.00	3.00	3.00	5.00	14.00	10.00	38.00
26	Dombivalli (Maharashtra)	3.00	5.00	15.00	8.00	1.50	3.00	12.50	5.00	3.00	5.00	20.00	10.00	57.50
27	Durgapur (West Bengal)	2.00	5.00	10.00	4.50	1.50	1.50	7.50	5.00	3.00	5.00	20.00	10.00	47.50
28	Erode (Tamil Nadu)	3.00	2.50	7.50	4.00	0.00	3.00	7.00	3.00	3.00	5.00	14.00	15.00	43.50
29	Faridabad (Haryana)	3.00	5.00	15.00	8.00	3.00	3.00	14.00	5.00	4.75	0.00	23.75	10.00	62.75
30	Ferozabad (Uttar Pradesh)	3.00	2.50	7.50	8.00	0.00	3.00	11.00	3.00	4.75	0.00	14.25	15.00	47.75
31	Ghaziabad (Uttar Pradesh)	5.75	5.00	28.75	6.00	0.00	3.00	9.00	5.00	4.75	0.00	23.75	10.00	71.50
32	Gwalior (Madhya Pradesh)	3.00	2.50	7.50	8.00	0.00	3.00	11.00	3.00	4.50	0.00	13.50	10.00	42.00
33	Hajipur (Bihar)	3.00	2.50	7.50	5.00	0.00	3.00	8.00	3.00	3.00	5.00	14.00	15.00	44.50
34	Haldia (West Bengal)	5.50	5.00	27.50	7.50	0.00	3.00	10.50	3.00	3.00	0.00	9.00	10.00	57.00
35	Haridwar (Uttarakhand)	3.00	5.00	15.00	6.00	0.00	0.00	6.00	3.00	3.00	0.00	9.00	10.00	40.00
36	Howrah (West Bengal)	3.00	5.00	15.00	8.00	1.50	1.50	11.00	5.00	3.50	5.00	22.50	15.00	63.50
37	Indore (Madhya Pradesh)	2.00	2.50	5.00	6.00	3.00	3.00	12.00	5.00	3.00	5.00	20.00	15.00	52.00
38	Ib Valley (Orissa)	3.00	5.00	15.00	3.00	3.00	3.00	9.00	5.00	3.00	5.00	20.00	15.00	59.00
39	Jaipur (Rajasthan)	3.00	2.50	7.50	8.00	0.00	3.00	11.00	3.00	4.00	5.00	17.00	15.00	50.50
40	Jalandhar (Punjab)	3.00	5.00	15.00	3.00	3.00	3.00	9.00	5.00	3.00	3.00	18.00	10.00	52.00
41	Jamshedpur (Jharkhand)	3.00	5.00	15.00	3.00	0.00	0.00	3.00	3.00	3.00	5.00	14.00	10.00	42.00
42	Jharsuguda (Orissa)	3.00	5.00	15.00	3.00	0.00	3.00	6.00	5.00	3.00	5.00	20.00	15.00	56.00
43	Jodhpur (Rajasthan)	3.00	5.00	15.00	3.00	3.00	3.00	9.00	5.00	3.00	5.00	20.00	10.00	54.00
44	Junagarh (Gujarat)	3.00	5.00	15.00	8.00	0.00	3.00	11.00	3.00	4.50	5.00	18.50	15.00	59.50
45	Kala Amb (Himachal Pradesh)	3.00	5.00	15.00	6.00	0.00	3.00	9.00	3.00	4.00	0.00	12.00	15.00	51.00

Contd...

Table 7 contd...

No.	Industrial Cluster/Area	A1	A2	A	B1	B2	B3	B	C1	C2	C3	C	D	LAND CEPI
46	Kanpur (Uttar Pradesh)	3.00	5.00	15.00	8.00	0.00	3.00	11.00	5.00	3.00	0.00	15.00	15.00	56.00
47	Kathedan (Andhra Pradesh)	3.00	2.50	7.50	8.00	0.00	0.00	8.00	3.00	5.00	0.00	15.00	15.00	45.50
48	Korba (Chhatisgarh)	3.00	5.00	15.00	8.00	3.00	1.50	12.50	5.00	5.00	5.00	30.00	15.00	72.50
49	Kukatpalli (Andhra Pradesh)	3.00	2.50	7.50	7.50	0.00	3.00	10.50	3.00	3.50	0.00	10.50	15.00	43.50
50	Ludhiana (Punjab)	5.75	5.00	28.75	8.00	0.00	3.00	11.00	5.00	3.00	0.00	15.00	10.00	64.75
51	Manali (Tamilnadu)	2.00	5.00	10.00	7.75	3.00	3.00	13.75	3.00	4.75	5.00	19.25	15.00	58.00
52	Mandi Gobind Garh (Punjab)	4.00	5.00	20.00	4.00	3.00	4.50	11.50	3.00	3.50	5.00	15.50	15.00	62.00
53	Mangalore (Karnataka)	3.00	5.00	15.00	3.00	3.00	3.00	9.00	5.00	3.00	5.00	20.00	10.00	54.00
54	Mathura (Uttar Pradesh)	3.00	5.00	15.00	2.00	3.00	3.00	8.00	5.00	2.00	5.00	15.00	10.00	48.00
55	Meerut (Uttar Pradesh)	3.00	2.50	7.50	4.00	1.50	1.50	7.00	5.00	2.00	5.00	15.00	10.00	39.50
56	Mettur (Tamilnadu)	3.00	5.00	15.00	1.00	3.00	3.00	7.00	3.00	1.50	5.00	9.50	15.00	46.50
57	Moradabad (Uttar Pradesh)	2.00	5.00	10.00	3.00	3.00	1.50	7.50	5.00	3.00	5.00	20.00	10.00	47.50
58	Nagda -Ratlam (Madhya Pradesh)	4.00	5.00	20.00	6.00	3.00	3.00	12.00	3.00	3.00	5.00	14.00	10.00	56.00
59	Nashik (Maharashtra)	3.00	5.00	15.00	7.75	0.00	0.00	7.75	5.00	3.50	0.00	17.50	10.00	50.25
60	Navi Mumbai (Maharashtra)	3.00	5.00	15.00	6.00	1.50	3.00	10.50	5.00	3.00	5.00	20.00	10.00	55.50
61	Nazafgarh drain basin (including Anand Parvat, Naraina, Okhla and Wazirpur), Delhi	3.00	5.00	15.00	7.75	3.00	4.50	15.25	5.00	3.00	5.00	20.00	15.00	65.25
62	Noida (Uttar Pradesh)	3.00	5.00	15.00	7.00	0.00	3.00	10.00	3.00	5.00	5.00	20.00	15.00	60.00
63	Pali (Rajasthan)	2.00	5.00	10.00	6.00	3.00	3.00	12.00	5.00	3.00	0.00	15.00	15.00	52.00
64	Panipat (Haryana)	3.00	5.00	15.00	8.00	3.00	3.00	14.00	5.00	3.00	5.00	20.00	10.00	59.00
65	Paradeep (Orissa)	3.00	5.00	15.00	2.00	3.00	3.00	8.00	5.00	2.00	5.00	15.00	10.00	48.00
66	Parwanoo (Himachal Pradesh)	3.00	5.00	15.00	3.00	3.00	3.00	9.00	1.50	3.00	5.00	9.50	15.00	48.50
67	Patancheru- -Bollaram (Andhra Pradesh)	2.00	5.00	10.00	8.00	3.00	3.00	14.00	5.00	3.00	5.00	20.00	10.00	54.00
68	Pimpari-Chinchwad (Maharashtra)	3.00	5.00	15.00	6.00	0.00	3.00	9.00	3.00	4.00	0.00	12.00	10.00	46.00

Table 7 contd...

No.	Industrial Cluster/Area	A1	A2	A	B1	B2	B3	B	C1	C2	C3	C	D	LAND CEPI
69	Pinia (Karnataka)	3.00	5.00	15.00	2.00	0.00	3.00	5.00	3.00	4.00	0.00	12.00	10.00	42.00
70	Pitampur (Madhya Pradesh)	5.50	5.00	27.50	4.00	0.00	0.00	4.00	3.00	3.00	0.00	9.00	10.00	50.50
71	Raichur (Karnataka)	3.00	2.50	7.50	6.00	3.00	3.00	12.00	5.00	3.00	0.00	15.00	10.00	44.50
72	Raipur (Chhatisgarh)	2.00	5.00	10.00	3.00	3.00	3.00	9.00	5.00	3.00	5.00	20.00	10.00	49.00
73	Rajkot (Gujarat)	3.00	2.50	7.50	7.00	3.00	3.00	13.00	5.00	3.00	5.00	20.00	15.00	55.50
74	Ramgarh (Jharkhand)	3.00	5.00	15.00	6.00	1.50	3.00	10.50	3.00	3.00	5.00	14.00	15.00	54.50
75	Saraikela (Jharkhand)	3.00	5.00	15.00	3.00	3.00	3.00	9.00	5.00	2.00	5.00	15.00	15.00	54.00
76	Singhbhum, West (Bihar)	3.00	5.00	15.00	2.00	1.50	3.00	6.50	5.00	3.00	5.00	20.00	10.00	51.50
77	Singrauli (Uttar Pradesh)	3.00	5.00	15.00	2.00	3.00	4.50	9.50	5.00	3.00	5.00	20.00	15.00	59.50
78	Surat (Gujarat)	3.00	2.50	7.50	8.00	0.00	0.00	8.00	3.00	5.00	0.00	15.00	15.00	45.50
79	Tarapur (Maharashtra)	3.00	5.00	15.00	7.75	3.00	3.00	13.75	5.00	1.50	0.00	7.50	15.00	51.25
80	Tirupur (Tamil Nadu)	3.00	5.00	15.00	5.00	0.00	3.00	8.00	3.00	5.00	5.00	20.00	10.00	53.00
81	Udhamsingh Nagar (Uttarakhand)	5.50	2.50	13.75	7.00	0.00	0.00	7.00	3.00	4.50	0.00	13.50	10.00	44.25
82	Vadodara (Gujarat)	3.00	5.00	15.00	6.00	0.00	3.00	9.00	3.00	3.00	0.00	9.00	15.00	48.00
83	Vapi (Gujarat)	4.00	5.00	20.00	8.00	3.00	6.00	17.00	5.00	5.00	0.00	25.00	10.00	72.00
84	Varansi-Mirzapur (Uttar Pradesh)	5.50	5.00	27.50	7.00	0.00	0.00	7.00	3.00	3.00	0.00	9.00	10.00	53.50
85	Vatva (Gujarat)	3.00	5.00	15.00	3.00	0.00	3.00	6.00	5.00	3.00	5.00	20.00	15.00	56.00
86	Vellore (North Arcot) (Tamilnadu)	3.00	5.00	15.00	4.00	3.00	3.00	10.00	5.00	3.50	5.00	22.50	15.00	62.50
87	Vijaywada (Andhra Pradesh)	3.00	5.00	15.00	1.00	3.00	1.50	5.50	5.00	1.50	5.00	12.50	10.00	43.00
88	Vishakhapatnam (AndhraPradesh)	3.00	5.00	15.00	6.00	3.00	3.00	12.00	5.00	3.00	3.00	18.00	10.00	55.00

CEPI (Soil Environment) = A + B + C + D
A (Pollutant Score) = A1 x A2; where, A1: Presence of Toxin; A2: Scale of industrial activities
B (Pathway Score) = B1 + B2 + B3; where, B1: Pollutant Concentration B2: Impact on people; B3: Impact on Eco-geological feature
C (Receptor Score) = C1 x C2 + C3; where, C1: Potentially affected population; C2: Level of exposure; C3: Risk to sensitive receptors
D= Additional High Risk Element

Table 8 below shows the CEPI scores for industrial areas/ clusters descending order. The overall CEPI is presented in the alpha-numeric form stating the score along with the status of Air, Water and Land environment in terms of subscript as critical/ severe/ normal. A sub-index score of more than 60 shows a critical level of pollution in the respective environmental component, whereas a score between 50–60 shows a severe level of pollution with reference to the respective environmental component.

Table 8 The CEPI scores for industrial areas/ clusters descending order

No.	Industrial Cluster/Area	AIR	WATER	LAND	CEPI	
1.	Ankleshwar (Gujarat)	72.00	72.75	75.75	88.50	Ac_Wc_Lc
2.	Vapi (Gujarat)	74.00	74.50	72.00	88.09	Ac_Wc_Lc
3.	Ghaziabad (Uttar Pradesh)	68.50	75.25	71.50	87.37	Ac_Wc_Lc
4.	Chandrapur (Maharashtra)	70.75	67.50	66.50	83.88	Ac_Wc_Lc
5.	Korba (Chhatisgarh)	67.00	57.00	72.50	83.00	Ac_Ws_Lc
6.	Bhiwadi (Rajasthan)	71.00	69.00	59.50	82.91	Ac_Wc_Ls
7.	Angul Talcher (Orissa)	64.00	69.00	65.75	82.09	Ac_Wc_Lc
8.	Vellore (North Arcot) (Tamilnadu)	69.25	65.25	62.50	81.79	Ac_Wc_Lc
9.	Singrauli (Uttar Pradesh)	70.50	64.00	59.50	81.73	Ac_Wc_Ls
10.	Ludhiana (Punjab)	68.00	66.00	64.75	81.66	Ac_Wc_Lc
11.	Nazafgarh drain basin (including Anand Parvat, Naraina, Okhla and Wazirpur), Delhi	52.13	69.00	65.25	79.54	As_Wc_Lc
12.	Noida (Uttar Pradesh)	65.75	64.00	60.00	78.90	Ac_Wc_Lc
13.	Dhanbad (Jharkhand)	64.50	59.00	65.50	78.63	Ac_Ws_Lc
14.	Dombivalli (Maharashtra)	66.00	63.50	57.50	78.41	Ac_Wc_Ls
15.	Kanpur (Uttar Pradesh)	66.00	63.50	56.00	78.09	Ac_Wc_Ls
16.	Cuddalore (Tamilnadu)	54.00	65.25	64.00	77.45	As_Wc_Lc
17.	Aurangabad (Maharashtra)	64.75	60.50	59.50	77.44	Ac_Wc_Ls
18.	Faridabad (Haryana)	63.50	59.00	62.75	77.07	Ac_Ws_Lc
19.	Agra (Uttar Pradesh)	59.00	63.75	59.50	76.48	As_Wc_Ls
20.	Manali (Tamilnadu)	64.00	59.00	58.00	76.32	Ac_Ws_Ls
21.	Haldia (West Bengal)	53.75	64.50	57.00	75.43	As_Wc_Ls
22.	Ahmedabad (Gujarat)	62.75	58.00	58.00	75.28	Ac_Ws_Ls
23.	Jodhpur (Rajasthan)	52.00	65.50	54.00	75.19	As_Wc_Ls
24.	Cochin, Greater (Kerala)	57.00	64.00	54.00	75.08	As_Wc_Ls
25.	Mandi Gobind Garh (Punjab)	62.00	55.50	62.00	75.08	Ac_Ws_Lc
26.	Howrah (West Bengal)	57.00	54.50	63.50	74.84	As_Ws_Lc
27.	Vatva (Gujarat)	60.00	62.00	56.00	74.77	Ac_Wc_Ls
28.	Ib Valley (Orissa)	61.00	56.50	59.00	74.00	Ac_Ws_Ls

Contd...

Table 8 contd...

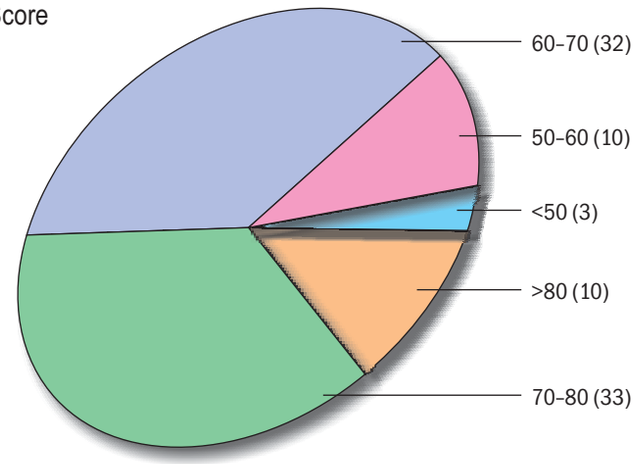
No.	Industrial Cluster/Area	AIR	WATER	LAND	CEPI	
29.	Varansi-Mirzapur (Uttar Pradesh)	58.00	62.00	53.50	73.79	As_Wc_Ls
30.	Navi Mumbai (Maharashtra)	61.00	59.00	55.50	73.77	Ac_Ws_Ls
31.	Pali (Rajasthan)	52.00	64.00	52.00	73.73	As_Wc_Ls
32.	Mangalore (Karnataka)	61.75	57.75	54.00	73.68	Ac_Ws_Ls
33.	Jharsuguda (Orissa)	61.00	56.50	56.00	73.34	Ac_Ws_Ls
34.	Coimbatore (Tamil Nadu)	62.25	58.75	45.50	72.38	Ac_Ws_Ln
35.	Bhadravati (Karnataka)	62.75	56.50	45.50	72.33	Ac_Ws_Ln
36.	Tarapur (Maharashtra)	60.75	56.00	51.25	72.01	Ac_Ws_Ls
37.	Panipat (Haryana)	55.75	56.50	59.00	71.91	As_Ws_Ls
38.	Indore (Madhya Pradesh)	59.00	57.50	52.00	71.26	As_Ws_Ls
39.	Bhavnagar (Gujarat)	54.50	57.50	57.75	70.99	As_Ws_Ls
40.	Vishakhapatnam (AndhraPradesh)	57.00	57.50	55.00	70.82	As_Ws_Ls
41.	Junagarh (Gujarat)	53.25	52.50	59.50	70.82	As_Ws_Ls
42.	Asansole (West Bengal)	58.38	56.25	50.50	70.20	As_Ws_Ls
43.	Patancheru- -Bollaram (Andhra Pradesh)	50.00	59.00	54.00	70.07	As_Ws_Ls
44.	Paradeep (Orissa)	54.00	58.50	48.00	69.26	As_Ws_Ln
45.	Nashik (Maharashtra)	55.00	57.50	50.25	69.25	As_Ws_Ls
46.	Chembur (Maharashtra)	59.75	50.75	46.00	69.19	As_Ws_Ln
47.	Baddi (Himachal Pradesh)	56.00	54.50	54.50	69.07	As_Ws_Ls
48.	Kala Amb (Himachal Pradesh)	56.75	54.50	51.00	68.77	As_Ws_Ls
49.	Dewas (Madhya Pradesh)	51.50	57.50	51.50	68.77	As_Ws_Ls
50.	Batala (Punjab)	51.00	56.50	54.50	68.59	As_Ws_Ls
51.	Tirupur (Tamil Nadu)	56.75	50.75	53.00	68.38	As_Ws_Ls
52.	Durgapur (West Bengal)	49.50	58.50	47.50	68.26	An_Ws_Ln
53.	Raichur (Karnataka)	59.75	46.50	44.50	68.07	As_Wn_Ln
54.	Bidar (Karnataka)	58.75	49.00	44.00	67.64	As_Wn_Ln
55.	Singhbhum, West (Bihar)	55.50	51.50	51.50	67.30	As_Ws_Ls
56.	Mettur (Tamilnadu)	46.00	58.00	46.50	66.98	An_Ws_Ln
57.	Vadodara (Gujarat)	57.00	48.00	48.00	66.91	As_Wn_Ln
58.	Jaipur (Rajasthan)	55.00	52.00	50.50	66.82	As_Ws_Ls
59.	Rajkot (Gujarat)	45.50	54.50	55.50	66.76	An_Ws_Ls
60.	Nagda -Ratlam (Madhya Pradesh)	44.50	54.50	56.00	66.67	An_Ws_Ls
61.	Jamshedpur (Jharkhand)	55.75	55.50	42.00	66.06	As_Ws_Ln
62.	Pimpari-Chinchwad (Maharashtra)	55.25	52.50	46.00	66.06	As_Ws_Ln

Contd...

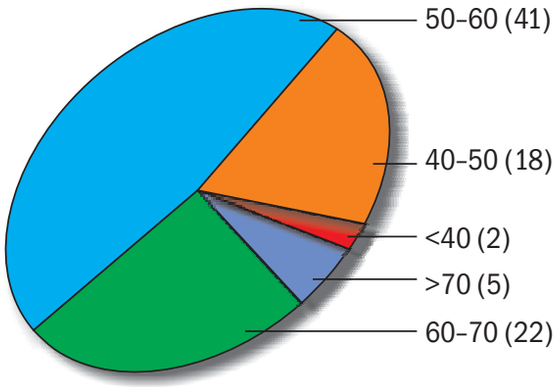
Table 8 contd...

No.	Industrial Cluster/Area	AIR	WATER	LAND	CEPI	
63.	Raipur (Chhatisgarh)	56.50	42.00	49.00	65.45	As_Wn_Ln
64.	Saraikela (Jharkhand)	50.50	49.00	54.00	65.38	As_Wn_Ls
65.	Ramgarh (Jharkhand)	44.00	53.00	54.50	65.11	An_Ws_Ls
66.	Pinia (Karnataka)	56.75	46.00	42.00	65.11	As_Wn_Ln
67.	Pitampur (Madhya Pradesh)	47.75	54.00	50.50	65.09	An_Ws_Ls
68.	Jalandhar (Punjab)	52.00	52.00	52.00	64.98	As_Ws_Ls
69.	Moradabad (Uttar Pradesh)	54.00	49.00	47.50	64.71	As_Wn_Ln
70.	Bada Jamtara (Jharkhand)	48.00	52.50	52.50	64.47	An_Ws_Ls
71.	Aligarh (Uttar Pradesh)	53.00	48.00	48.00	63.83	As_Wn_Ln
72.	Parwanoo (Himachal Pradesh)	53.00	47.50	48.50	63.83	As_Wn_Ln
73.	Haridwar (Uttarakhand)	51.75	48.00	40.00	61.01	As_Wn_Ln
74.	Vijaywada (Andhra Pradesh)	52.00	41.50	43.00	60.57	As_Wn_Ln
75.	Ferozabad (Uttar Pradesh)	49.00	47.00	47.75	60.51	An_Wn_Ln
76.	Mathura (Uttar Pradesh)	48.00	48.00	48.00	59.98	An_Wn_Ln
77.	Meerut (Uttar Pradesh)	50.00	47.50	39.50	59.38	As_Wn_Ln
78.	Erode (Tamil Nadu)	47.38	47.25	43.50	58.19	An_Wn_Ln
79.	Surat (Gujarat)	46.00	46.75	45.50	57.90	An_Wn_Ln
80.	Kathedan (Andhra Pradesh)	44.50	47.00	45.50	57.73	An_Wn_Ln
81.	Kukatpalli (Andhra Pradesh)	41.50	47.00	43.50	56.56	An_Wn_Ln
82.	Hajipur (Bihar)	43.50	44.00	44.50	55.12	An_Wn_Ln
83.	Gwalior (Madhya Pradesh)	45.88	38.50	42.00	54.63	An_Wn_Ln
84.	Udhamsingh Nagar (Uttarakhand)	44.00	41.25	44.25	54.37	An_Wn_Ln
85.	Bhillai- Durg (Chhatisgarh)	44.00	35.00	33.50	50.57	An_Wn_Ln
86.	Bulandsahar-Khurza (Uttar Pradesh)	42.00	33.50	36.50	49.09	An_Wn_Ln
87.	Burnihat (Assam)	39.00	34.50	34.50	46.26	An_Wn_Ln
88.	Digboi (Assam)	32.00	32.75	38.00	44.55	An_Wn_Ln

Distribution of CEPI Score



Distribution of Air CEPI Score



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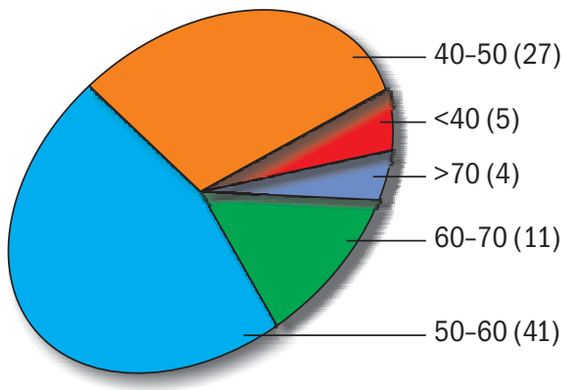
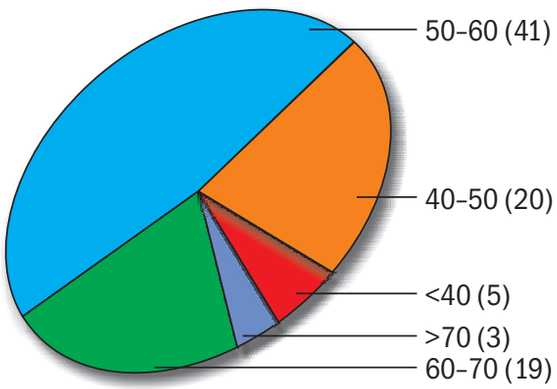
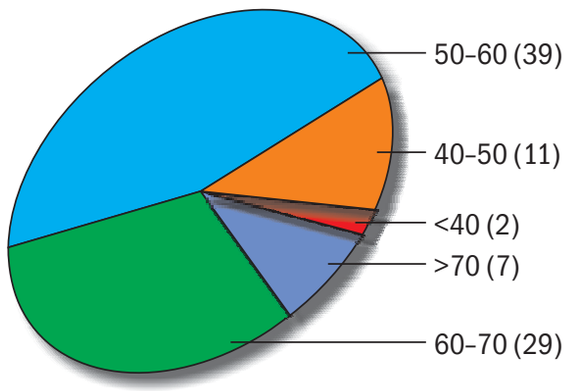


Distribution of Water CEPI Score



Distribution of Maximum CEPI Score Air/Water/Land



Chapter 2
Summary and conclusions

The present CEPI is intended to act as an early warning tool, which is easy and quick to use. It can help in categorizing the industrial clusters/ areas in terms of priority of needing attention. The analysis shows that there are 43 industrial areas/clusters out of the 88 are found to be critically polluted, with respect to one or more environmental component.

It is suggested that areas having aggregated CEPI scores of 70 and above should be considered as critically polluted industrial clusters/ areas, whereas the areas having CEPI between 60-70 should be considered as severely polluted areas and shall be kept under surveillance and pollution control measures should be efficiently implemented, whereas, the critically polluted industrial clusters/ areas need further detailed investigations in terms of the extent of damage and an formulation of appropriate remedial action plan.

It is recommended that as the step II a comprehensive analysis of spatial and temporal data shall be done for the identified critical polluted industrial clusters/ areas so as to define the spatial boundaries and extent of damage to the eco-geological features. The outcome shall be subjected to structured consultation with the stakeholders for determining comparative effectiveness of alternative plans and policies. The effective implementation of the remedial action plan will help in abatement of pollution and to restore the environmental quality of these industrial clusters.

Further, it is to be noted that although efforts have been made to perfect the process of CEPI application to industrial clusters/ areas, there are still some aspects that need to be improved upon including, consistency in pollution monitoring data (parameters and frequency) available with the pollution control authorities; selection of sampling locations for the environmental monitoring; and collection of data on adverse impact on human population and other geo-ecological features due to industrial pollution. The process of evolution of the method and the mechanisms that yielded results are dynamic in nature. Improvements and alterations towards making it more efficient shall be a continuous task.

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