



**Government of Madhya Pradesh
Department of Environment
Mantralaya, Vallabh Bhawan, Bhopal**

No. F 12-16/2019/32-3

Bhopal,

Date: 17.07.2019


To,

**Joint Secretary (HSMD),
Govt. of India,
Ministry of Environment Forests & Climate Change,
Indira Paryawaran, Bhawan,
Jor Bagh Road, New Delhi - 110003**

Sub: Submission of Integrated Plan for Hazardous Wastes Management under Rule 5(3) of Hazardous and other Wastes (Management & Transboundary Movement) Rules, 2016.

With reference to above subject, the Integrated Plan for Hazardous Wastes Management under Rule 5(3) of Hazardous and other Wastes (Management & Transboundary Movement) Rules, 2016 for Madhya Pradesh state is attached in compliance of the said rules and for your kind perusal.

Encl: As above


(Pankaj Agarwal)
Principal Secretary

Copy to:

1. The Chairman, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Shahdara, Delhi – 32
2. Principal Secretary, Department of Industries, Govt. of Madhya Pradesh, Mantralaya, Vallabh Bhawan, Bhopal.
3. Principal Secretary, Department of Labour, Govt. of Madhya Pradesh, Mantralaya, Vallabh Bhawan, Bhopal.
4. Principal Secretary, Department of Urban Development, Govt. of Madhya Pradesh, Mantralaya, Vallabh Bhawan, Bhopal.
5. The Member Secretary, M.P. Pollution Control Board, Bhopal for information and necessary action please.

Integrated Plan

For effective implementation of provisions of
Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016

Year 2018-19

Submitted to

Ministry of Environment, Forest and Climate Change
Government of India



Department of Environment



Government of
MADHYA PRADESH





Department of Environment



M.P. Pollution Control Board

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Integrated Plan

Integrated Plan

For effective implementation of provisions of
Hazardous and Other Wastes (Management and Transboundary Movement)
Rules, 2016

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Preface

After promulgation of Environment (Protection) Act 1986, Government of India, Ministry of Environment and Forests, published the Hazardous Wastes (Management & Handling) Rules, 1989. Presently, the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 are applicable since 04th April, 2016. As per these rules the state government has to develop Common Treatment, Storage and Disposal Facility (CTSDf) to take care of disposal of the hazardous wastes generated in the state.

The state of Madhya Pradesh has identified the site for development of Common Treatment, Storage and Disposal Facility (CTSDf) at Pithampur Industrial area. The state has developed the facility through M/s. M.P. Waste Management Facility (A unit of M/s. Ramky Enviro Engineers Ltd. Hyderabad) on BOOT basis as per Central Pollution Control Board (CPCB) guidelines in consultation and supervision of M.P. Pollution Control Board (MPPCB). The CTSDf is operative since 2005-06. The site is designed to dispose off hazardous wastes for 20 years at the rate of 70,000 MT/Year through landfill and 20,000 MT/Year through incineration.

M.P. Pollution Control Board is compiling the year wise inventory of hazardous waste generating industries and institutions in the state alongwith the quantities of hazardous waste generation. As per the last updated inventory, therefore 2564 hazardous waste generating units in the state and approximate hazardous waste generation under various categories is as landfillable-52000 MT/Annum, Incinerable-6900 MT/Annum, Recyclable-70000 MT/Annum and Utilisable 122000 MT/Annum.

For promoting recycling, resource conservation, coprocessing etc 52 Nos. of Lead Acid Battery scrap recycling units with authorized capacity 1,23,700 MT/Year, 15 Nos. of Waste/used oil recycling units with authorized capacity 1,33,000 MT/Year, 30 nos. of non ferrous metal recovery/recycling units with authorized capacity 1,40,000 MT/Year, 12 nos. of contaminated drums/barrels washing/recycling units with authorized capacity 14,00,000 Nos./year and 3 nos. of cement plant having co-processing facilities with authorized capacity of about 6,00,000 MT/year are authorized as per the “Guidelines for Environmentally Sound Recycling of Hazardous Wastes” for commonly recyclable hazardous wastes and the SOPs issued under Rule-9 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 by Central Pollution Control Board, Delhi.

This integrated plan for the State provides details of management of hazardous wastes through the CTSDf and the recycling/co-processing facilities in the state which are capable of handling and disposal of hazardous waste generated in the state and some of the energy containing wastes from the other states for incineration/co-processing for atleast next five years.

**Principal Secretary
Environment Department
Government of Madhya Pradesh**

Introduction

Government of India, Ministry of Environment, forest and Climate Change has notified Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 vide number G.S.R No. 395 published in the GAZETTE OF INDIA, Extraordinary, Part II, Section 3, Sub-Section (i), dated 04th April, 2016.

Responsibilities of State Government for environmentally sound management of hazardous and other wastes are defined as below in the Rule-5 of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 :

- (1) **Department of Industry** in the State or any other government agency authorised in this regard by the State Government, to ensure earmarking or allocation of industrial space or shed for recycling, pre-processing and other utilisation of hazardous or other waste in the existing and upcoming industrial park, estate and industrial clusters;
- (2) **Department of Labour** in the State or any other government agency authorised in this regard by the State Government shall -
 - (a) ensure recognition and registration of workers involved in recycling, preprocessing and other utilisation activities;
 - (b) assist formation of groups of such workers to facilitate setting up such facilities;
 - (c) undertake industrial skill development activities for the workers involved in recycling, pre-processing and other utilisation;
 - (d) undertake annual monitoring and to ensure safety and health of workers involved in recycling, pre-processing and other utilisation.
- (3) **Every State Government** may prepare **integrated plan** for effective implementation of these provisions and to submit annual report to the Ministry of Environment, Forest and Climate Change, in the Central Government.

Authorities and corresponding duties as defined in Rules 13 (6) and 21 of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 are given in SCHEDULE VII and narrated as below:

1. Duties of Ministry of Environment, Forests and Climate Change under the Environment (Protection) Act, 1986 are as below :

- (i) Identification of hazardous and other wastes
- (ii) Permission to exporters of hazardous and other wastes
- (iii) Permission to importer of hazardous and other wastes
- (iv) Permission for transit of hazardous and other wastes through India.
- (v) Promote environmentally sound management of hazardous and other waste.
- (vi) Sponsoring of training and awareness programme on Hazardous and Other Waste Management related activities.

2. Duties of Central Pollution Control Board constituted under the Water (Prevention and Control of Pollution) Act, 1974 are as below :

- (i) Co-ordination of activities of State Pollution Control Boards
- (ii) Conduct training courses for authorities dealing with management of hazardous and other wastes
- (iii) Recommend standards and specifications for treatment and disposal of wastes and leachates, recommend procedures for characterisation of hazardous wastes.
- (iv) Inspection of facilities handling hazardous waste as and when necessary.
- (v) Sector specific documentation to identify waste for inclusion in these rules.
- (vi) Prepare and update guidelines to prevent or minimise the generation and handling of hazardous and other wastes.
- (vii) Prepare and update guidelines/ Standard Operating Procedures (SoPs) for recycling, utilization, pre-processing, co-processing of hazardous and other wastes.
- (viii) To prepare annual review report on management of hazardous waste.
- (ix) Any other function assigned by the Ministry of Environment, Forest and Climate Change, from time to time.

3. Duties of State Government are as below :

- (i) Identification of site (s) for common Hazardous and Other Waste Treatment Storage and Disposal Facility (TSDF)
- (ii) Assess Environment Impact Assessment (EIA) reports and convey the decision of approval of site or otherwise Acquire the site or inform operator of facility or occupier or association of occupiers to acquire the site
- (iii) Notification of sites.
- (iv) Publish periodically an inventory of all potential or existing disposal sites in the State or Union Territory

4. Duties of State Pollution Control Boards constituted under the Water(Prevention and Control of Pollution) Act, 1974 are as below :

- (i) Inventorisation of hazardous and other wastes
- (ii) Grant and renewal of authorization (iii) Monitoring of compliance of various provisions and conditions of permission including conditions of permission for issued by Ministry of Environment, Forest and Climate Change for exports and imports
- (iv) Examining the applications for imports submitted by the importers and forwarding the same to Ministry of Environment, Forest and Climate Change
- (v) Implementation of programmes to prevent or reduce or minimise the generation of hazardous and other wastes.
- (vi) Action against violations of these rules.
- (vii) Any other function under these Rules assigned by Ministry of Environment, Forest and Climate Change from time to time.

5. Duties of Directorate General of Foreign Trade are as below :

- (i) Grant of license for import of hazardous Trade constituted under the Foreign Trade (Development and Regulation) Act, 1992 and other wastes
- (ii) Refusal of license for hazardous and other wastes prohibited for imports and export

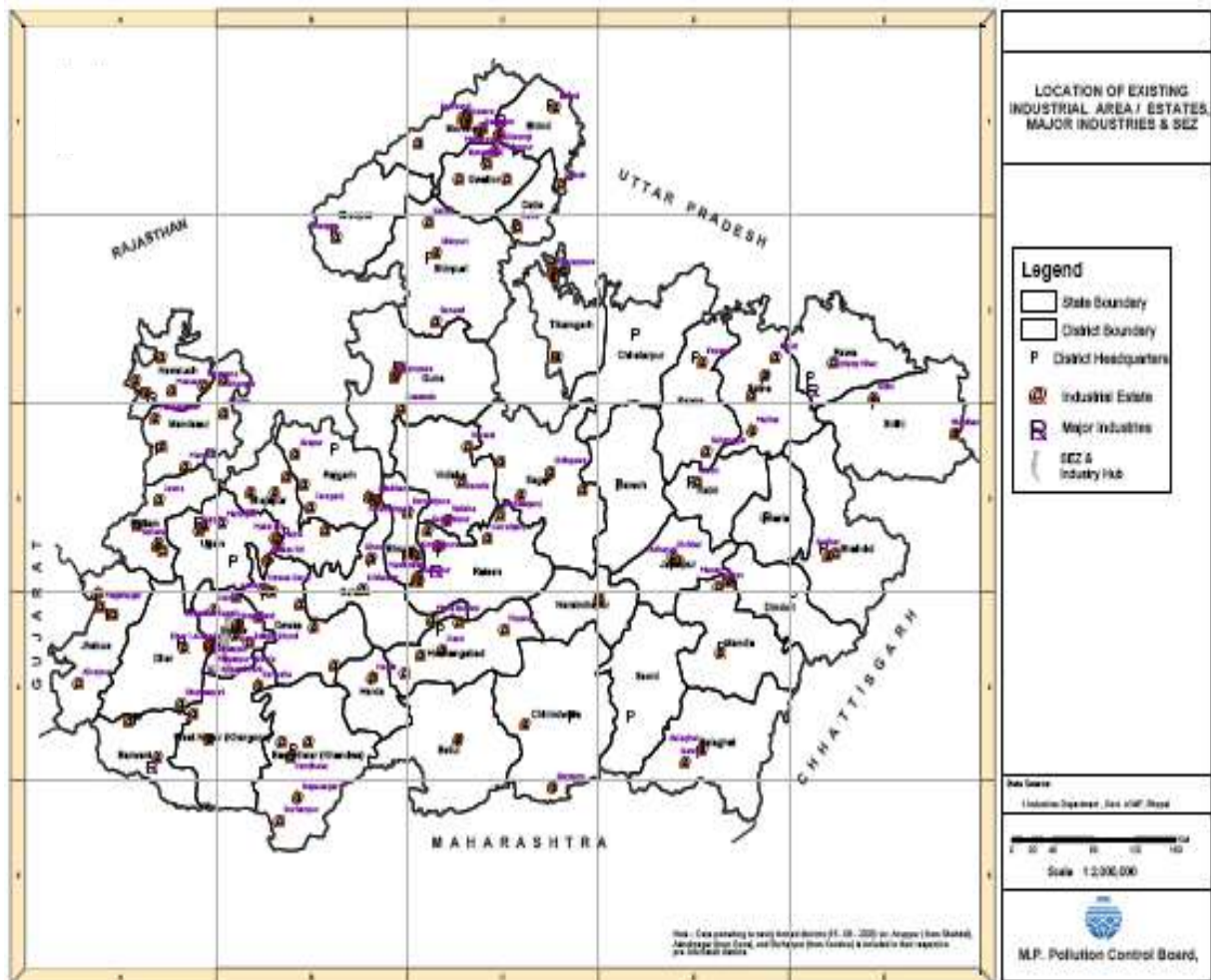
6. Duties of Port authority under Indian Ports Act, 1908 (15 of 1908) and Customs Authority under the Customs Act, 1962 (52 of 1962) are as below :

- (i) Verify the documents
- (ii) Inform the Ministry of Environment, Forests and Climate Change of any illegal traffic
- (iii) Analyse wastes permitted for imports and exports, wherever required.
- (iv) Train officials on the provisions of these rules and in the analysis of hazardous and other wastes
- (v) Take action against exporter or importer for violations under the Indian Ports Act, 1908 or Customs Act, 1962

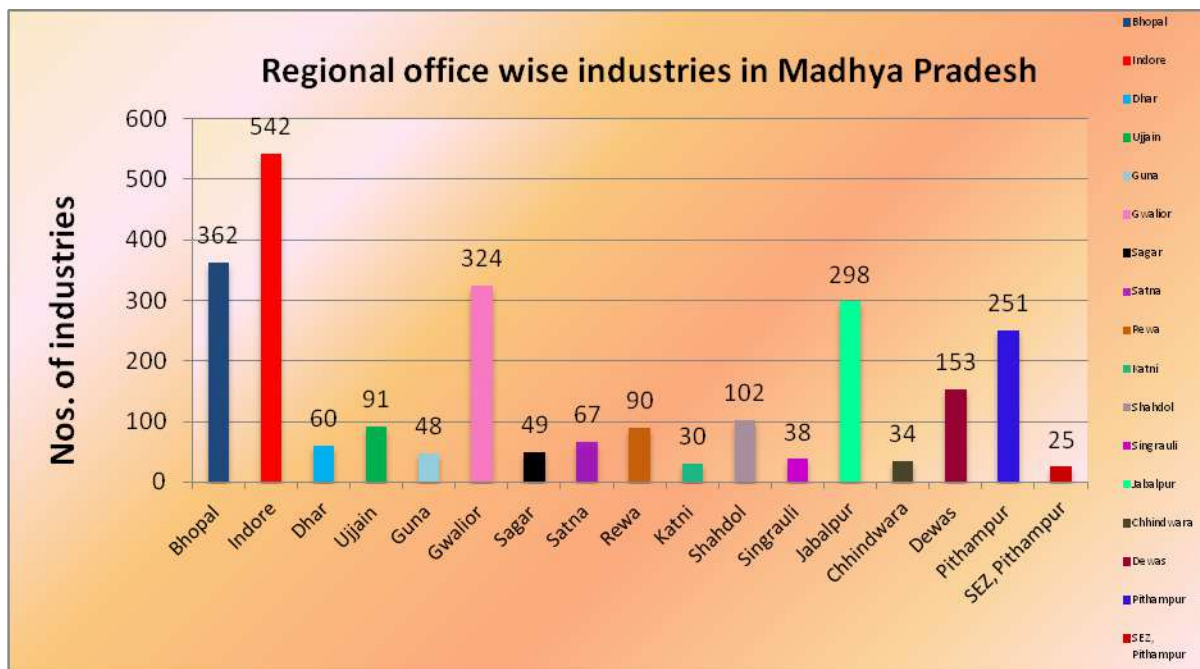
Department of Environment, Government of Madhya Pradesh has sensitized the departments of Industries and Labour of Government of Madhya Pradesh for responsibilities of State Government for environmentally sound management of hazardous and other wastes and compliance of the same.

Madhya Pradesh At Glance

Madhya Pradesh is the second largest Indian State, covering 9.5% of the area of the country. Industries in Madhya Pradesh, are largely natural resources driven. It has abundant natural wealth in the form of Lime Stone, Coal, Bauxite, Iron, Diamond ore, Silica and so on and crops like Soya, Cotton, Wheat, Paddy etc. The State has a strong industrial setup in the sectors such as Auto, Textile, Cement, Soya and Textile processing units. The Major Central Public Sectors Undertaking like :- BHEL Bhopal, National Fertilizer Ltd. (NFL) Vijaypur Distt. Guna, Gas Authority of India Ltd., (GAIL) Vijaypur Distt. Guna, Security Paper Mill (SPM) Hoshangabad, Currency Printing Press-Bank Note Press, Dewas, Opium Alkaloid Factory Neemuch, Ordnance Factory Itarsi, Gun Carriage Factory Jabalpur and Nepa Mills, Nepa Nagar etc. are also located in the State .



Authorised Industries Located in Madhya Pradesh



Status of Waste Generation in Madhya Pradesh

M.P. Pollution Control Board is compiling the year wise inventory of hazardous waste generating units and the quantities of hazardous waste generation and submitting to CPCB regularly. The last updated inventory on hazardous waste generating units and the quantities of hazardous waste generation has been submitted to CPCB for the year 2017-18.

S.No	Particular	Authorized Quantity (MT)	Generated Quantity (MT)	Disposal Quantity (MT)
1	Land fillable	195602.24	52133.98	40987.92
2	Incinerable	25426.29	6912.24	5613.12
3	Recyclable	206728.14	70079.20	75911.25
4	Utilizable	1242316.21	122109.30	179029.44

Nodal agency for implementation - M.P. Pollution Control Board

Government of M.P. has constituted State Pollution Control Boards under section 4(2) of the Water (Prevention & Control of Pollution) Act, 1974. The M.P. Pollution Control Board has been constituted in year 1974 on 23rd September, 1974.

The responsibilities of implementation of following Acts and rules relevant to management of hazardous waste has been entrusted to the M.P. Pollution Control Board.

- Water (Prevention & Control of Pollution) Act 1974
- Air (Prevention & Control of Pollution) Act, 1981
- The Environmental (Protection) Act, 1986
- EIA Notification, 2006
- Hazardous and Other Waste (Management and Transboundary movement) Rules, 2016.
- Bio-Medical Waste Management Rules 2016
- Construction and Demolition Waste Management Rules, 2016.
- E-Waste (Management) Rules, 2016.
- Plastic Waste Management Rules, 2016.
- Solid Waste Management Rules, 2016 And
- Other environmental notifications like flyash, SOPs etc.

Common Treatment Safe Disposal Facility (CTSDF)

As per Rule 16 of Treatment, storage and disposal facility for hazardous and other wastes has to be developed by the State Government, occupier, operator of a facility or any association of occupiers shall individually or jointly or severally be responsible for identification of sites for establishing the facility for treatment, storage and disposal of the hazardous and other waste.

For the management of hazardous waste being generated in Madhya Pradesh & in context to the Hazardous Waste (Management & Handling) Rules 1989 (as amended, 2003, 2008 and 2016), a Common Treatment, Storage & Disposal Facility was developed by M/s Ramky Enviro Engineers Ltd with the coordination of Madhya Pradesh Government, M.P. State Audyogik Vikas Nigam, M.P. State Audyogik Kendra Vikas Nigam and Pithampur Auto Cluster Ltd. (Industrial Organization) on build, operate, own and toll (BOOT) basis.

Common Treatment Storage Disposal Facility is operational since November 2006 at Pithampur Industrial Area, Distt. Dhar (M.P) by M/s. M.P. Waste Management Facility (A group of M/s. Ramky Enviro Engineers Ltd. Hyderabad). The site is designed to dispose off hazardous waste for 20 years are as follows:-

S.No.	Description	Capacity
1	Land Fill.	
1A	Direct Landfill (DL)	50,000 MT/Y
1B	Land fill after incineration (LAT	20,000 MT/Y
2.	Incineration	20,000 MT/Y

Facility for disposal of all types of hazardous wastes

CTSDF site has following facilities :

- (A) Temporary waste storage area.
- (B) Solidification/stabilization area.
- (C) Incinerator,
- (D) Secured Land Fill.
- (E) Laboratory for analytical purposes.
- (F) Intractable waste storage area.
- (G) Other facilities such as weighbridge, tyre wash area etc.

Glimpses of SLF at CTSDF, Pithampur



SLF –II Permanent Capping Photographs

Common Incinerator

MPWMP has a state of art facility of incinerator which is unique in the state of M.P. It has a double combustion chamber with gas quenching system. Air pollution control system for particulate matter removal. Dry scrubbing system to absorb the organics. Neutralization of acidic fume in stack for safe exhaust of treated gas. ID fan to maintain the negative draft throughout the system. Continuous emission monitoring at the end of the stack to monitor emissions. This helps us to maintain the emission standards as per the CPCB guidelines. PLC & SCADA systems for process control & automation. This Plant Technique has based on ALSTOM Preair Heat Company America & plant is constructed by Allied Furnace Pvt. Ltd.

As per Honourable supreme court order, MPWMP has successfully completed trail run of HIL waste in June, 2012 and UCIL waste in August, 2015 in presence of MoEF, CPCB & MPPCB & Monitoring of emission done as per CPCB norms with results within limits.



Incinerator Capacity : 5.5 mkcal/hour



Multi Effect Evaporator (MEE)

Promotion of Recycling

M.P. Pollution Control Board is promoting the management of hazardous and other wastes with following steps in accordance with the Rule-4 of Rule 2016 –

- (1)
 - (a) prevention
 - (b) minimization
 - (c) reuse
 - (d) recycling
 - (e) recovery, utilisation including co-processing
 - (f) safe disposal
- (2) The occupier shall be responsible for safe and environmentally sound management of hazardous and other wastes.
- (3) The hazardous and other wastes generated in the establishment of an occupier shall be sent or sold to an authorised actual user or shall be disposed of in an authorised disposal facility.
- (4) The hazardous and other wastes shall be transported from an occupier's establishment to an authorised actual user or to an authorised disposal facility in accordance with the provisions of these rules.
- (5) The occupier who intends to get its hazardous and other wastes treated and disposed of by the operator of a treatment, storage and disposal facility shall give to the operator of that facility, such specific information as may be needed for safe storage and disposal.
- (6) The occupier shall take all the steps while managing hazardous and other wastes to
 - (a) contain contaminants and prevent accidents and limit their consequences on human beings and the environment; and
 - (b) provide persons working in the site with appropriate training, equipment and the information necessary to ensure their safety.

1. Recyclers of Lead Acid Battery Scrap in the State of M.P.

S. No.	Name of Industries with Address	Hazardous Waste	Hazardous Waste Qty./year
1.	M/s. S.P. Metal Industries, Plot No. 11, Industrial Area, Banmore, Dist. Morena, (M.P.) Mobile .No. 9406581865, 9826404245	Lead Acid Battery (LAB) Scrap	1700 MT
2.	M/s. G.S. Metals, Plot No. 40 - 41 /10, Industrial Area, Phase - I, A - B Road, DEWAS (M.P.) Mobile .No.9669171717	LAB Scrap.	750 MT
3.	M/s. Unicon Metal & Alloys Pvt. Ltd., Plot No. 48 C,D, Industrial Area No. 1, A - B Road,	LAB Scrap	5000 MT

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	DEWAS (M.P.)P.No. 07272-259394Mobile .No. 9893106540		
4.	M/s. Hemal Industries, Plot No. 299-B, Sector-F, Sanwer Road, Industrial Area,INDORE (M.P.)P.No 0731-4282229	LAB Scrap	3000 MT
5.	M/s. A.M. Industries, 96 B Sector - F, Sanwer Road, Indore (M.P.)	LAB Scrap	1600 MT
6.	M/s. Aman Enterprises, Plot No. A-10/A, Sector-E,Industrial Area, Sanwar Road, INDORE (M.P.)Mobile .No.930240020	LAB Scrap	5000 MT
7.	M/s. Varun Enterprises, 290-B, 303-304 A, Sector-E,Sanwer Road, Industrial Area,INDORE (M.P.)Mobile .No.9302400203	LAB Scrap	5000 MT
8.	M/s. A.K. Industries, Purani Chhawani,A – B Road, Behind Police Station,GWALIOR (M.P.) Mobile .No.9301568481	LAB Scrap	600 MT
9.	M/s. M.M. Enterprises, 32 B, 32 E, Sector – C,Industrial Area, RATLAM (M.P.) Mobile .No. 9826257177	LAB Scrap	5000 MT
10.	M/s. Sameer Industries, Plot No. 130 – 131, Sector-E,Sanwer Road, Industrial Area,INDORE (M.P.)P.No. 0731-2721523, 2721988	LAB Scrap	4200 MT
11.	M/s. Neha Industries, Plot No. 327 – 328, Sector-F,Sanwer Road, Industrial Area,INDORE	LAB Scrap	3600 MT
12.	M/s. Shiv Shakti Iron & Metal Industries, Plot No. 2-B, Baraghat Industrial Area, GWALIOR (M.P.)P.No. 0751-2421093	LAB Scrap	1600 MT
13.	M/s. Shivalik Vyapar Pvt. Ltd., Khasra No. 69/1/1, 69/1/2, Gram Panchderia, Sanwer Road,INDORE (M.P.) P.No. 0731-4293579Web: corproballerier.com	LAB Scrap	5000 MT
14.	M/s. Vaishnav Sai Industry, Plot No. 101-A, Industrial Area No. 3, A – B Road, Deaws P.No.0731-4061081	LAB Scrap	5000 MT
15.	M/s. Mahamaya Batteries, E-32, Sector-C, Sanwer Road,Industrial Estate, Indore	LAB Scrap	3600 MT
16.	M/s. Balaji Industries, Purani Chawani, A – B Road, Gwalior	LAB Scrap	850 MT
17.	M/s. Singhai Metals Plot No. 68-B, 69-A, Sector-F, Industrial Area, Sanwer Road, Indore	LAB Scrap	3600 MT
18.	M/s. Naman Industries, Plot No. 319, A-3, Sector-F, Sanwer Road, Industrial Area, Indore	LAB Scrap	3700 MT
19.	M/s. M.M. Metal Ind. Ltd., Plot No. 7-B, Sector-B, Industrial Estate, Mandideep, Dist. Raisen	LAB Scrap	3000 MT

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20.	M/s. Aastha Industries, Plot No. 96, Industrial Area, Dewas	LAB Scrap	500 MT
21.	M/s. Swastic Enterprises, Plot No. 101-B, Industrial Area No.1, A – B Road, Dweas	LAB Scrap	330 MT
22.	M/s. R.K. Industries, Plot No. E16-B. E-17 A , Sector-C, Sanwer Road, Indore	LAB Scrap	900 MT
23.	M/s. Calcutta Metal Industries, Shed No. 12-A, Industrial Area, Jabalpur	LAB Scrap	310 MT
24.	M/s. Priya Industries, P. No. 101-B, Industrial Area No. 1, A - B Road, Dewas	LAB Scrap	310 MT
25.	M/s. Padwal Industries Plot No. 12-14, AKVN Industrial Area, Meghnagar, Dist. Jhabua	LAB Scrap	450 MT
26.	M/s. Shivam Industry Vill. Mordongri, Near Warehouse, Nagpur Road, Pandhurna, Dist. Chhindwara	LAB Scrap	900 MT
27.	M/s. Yuvika Alloys , Plot No. 3, Industrial Growth Centre, Maneri, Mandla	LAB Scrap	1800 MT
28.	M/s. S.P. Plastic Industry Plot No. 11, A – B Road, Banmore, Dist. Morena (M.P.)	LAB Scrap	1500 MT
29.	M/s. Nobal Industries, Plot No. 296/B, Sector-F, Sanwer Road, Indore	LAB Scrap	3000 MT
30.	M/s. M.S. Metal Plot No. 300, Sector-F, Industrial Estate, Sanwer Road, Indore	LAB Scrap	3600 MT
31.	M/s. Shanti Industry Plot No. 5, 2 nd Phase, Baraghatta, Industrial Area, Jhansi Road, Gwalior	LAB Scrap	500 MT
32.	M/s. Manoj Industry, Plot No. D-16, 17, Sector-C, Industrial Area, Sanwer Road, Indore	LAB Scrap	3000 MT
33.	M/s. Agrawal Metal Industry, Plot No. 251/A, Sector-F, Sanwer Road, Indore	LAB Scrap	2000 MT
34.	M/s. Krishna Metal Agency, Plot No. 158-B, Sector-F, Industrial Area, Sanwer Road, Indore	LAB Scrap	1800 MT
35.	M/s. Shanti Prakash Power (P) Ltd., Plot No. 9, Phase-II, Baraghata, Jhansi Road, Gwalior	LAB Scrap	900 MT
36.	M/s. Chhabi Industries, Plot No. 59-B/1, Industrial Area, Dewas (M.P.)	LAB Scrap	300 MT
37.	M/s. Gwalior Metal Industries, Shankarpur, Transport Nagar, Gwalior (M.P.)	LAB Scrap	1700 MT
38.	M/s. Krishna Iron & Metal Industry, Plot No. 19, Baraghata Industrial Area, Jhansi Road, Gwalior (M.P.)	LAB Scrap	800 MT
39.	M/s. OMS Metals, Plot No. 287/1/2, 155/1, Vill. Pangara, Tehsil Uchera, Distt. Satna	LAB Scrap	1200 MT

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40.	M/s. Lakshmi Vilas Metal Enterprises Pvt. Ltd., Plot No. 24(B), IGC, AKVN Boregaon, Tehsil Saunsar, Distt. Chhindwara	LAB Scrap	6000 MT
41.	M/s. Kanti Metal Industries, Plot No. 2, Industrial Area, Tehsil Mudwara, Dist. Katni	LAB Scrap	510 MT
42.	M/s. Krishna Industries Plot No. 287-B, 288-A, Sector-F, Sanwer Road, Indore	LAB Scrap	3000 MT
43.	M/s. Banke Bihari Industries, Plot No. 3, Barghata, Tehsil Gird, Distt. Gwalior	LAB Scrap	900 MT
44.	M/s. Indore Metal Corp. Plot No. 70, Industrial Area, Richhai, Jabalpur	LAB Scrap	4800 MT
45.	M/s. Mahaveer Metal Industries, Plot No. 5, Industrial Area, Baraghata, Tehsil Gird, Distt. Gwalior	LAB Scrap	800 MT
46.	M/s. A.P. Metal Industries, Plot No. 42, Industrial Area, Richhai, Jabalpur	LAB Scrap	1200 MT
47.	M/s. Maa Gomti Steel Industries, (lead & Copper unit) Plot No. 143, 144/A, Sector-E, Industrial Area, Indore	LAB Scrap	4000 MT
48.	M/s. Ankur Pesticides Pvt. Ltd. 244, Sector-F, Sanwer Road, Industrial Area, Indore	LAB Scrap	2100 MT
49.	M/s. Gurukripa Industries, Plot No. B/27-D, B/27, Sector-C, Industrial Area, Sanwer Road, Indore	LAB Scrap	4800 MT
50.	M/s. Balaji Industries, Plot No. 231/A, 232/A, Sector-E, Sanwer Road, Industrial Area, Indore	LAB Scrap	4300 MT
51.	Cyrus Metal Plot No. 10, Industrial Area, Navghat Khedi, Narmada Road, Barwaha, Distt. Khargone	LAB Scrap	1500 MT
52.	M/s. P.B. Metals & Alloys Plot No. 452, Sector-III, Industrial Area, Pithampur, Dist. Dhar – 454 774	LAB Scrap	2200 MT
Total			123710 MT

2. Recycling Industries of Used oil/Waste oil in the State of M.P.

S. No	Name of Industries with Address	Hazardous Waste	Hazardous Waste Qty./year
1.	M/s. Shikhar Sai Oils Pvt. Ltd., 695, AKVN Industrial Area, Sector-3, Pithampur, Dist. Dhar, Mobile .No. 9893020360 P.No. 0731-4082154	used oil Waste oil	4300 MT 4300 MT
2.	M/s. Jaital Chemicals Baraghatta, Industrial Area, II nd Phase, Jhansi Road, Gwalior (M.P.) P.No. 0751-2324273, 2435434, 6453471	Waste oil Used oil	900 KLA 900 KLA
3.	M/s. Universal Petrochemical, Sagar Road, Vidisha (M.P.)	Used oil	3600 KLA
4.	M/s. P2O Green Ref. Ltd., K. No. 225, Naita, Bapcha, Dewas	Used oil	50,000 MT

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5.	M/s. Manspuran Petro Chem P. Ltd., 205-A , New Industrial Area, Mandideep, Dist. Raisen	Used oil	3600 KLA
6.	M/s. Bhaskar Lub. Pvt. Ltd., Richhai, Industrial Area, Jabalpur	Used oil	3200 KLA
7.	M/s. Sagar Shri Lubricant Plot No. 379, Sector-3, Pithampur, Dist. Dhar	Used oil	900 KLA
8.	M/s. Shri Nakoda Industries Plot No. 93, 5 Sector, Industrial Area, Pithampur, Dist. Dhar	Used oil	900 KLA
9.	M/s. Shri Rang Petrochem Ind, 51/A, AKVN Industrial Area, Megh Nagar, Dist. Jhabua	Used oil Waste oil	6000 KLA 12000 KLA
10.	M/s. Manglam Petro Chemicals, Sagar Road, Vidisha	Used oil Waste oil	6000 KLA 1000 KLA
11.	M/s. Shri Agrasen Oil Refinery Pvt. Ltd., Plot No. 3, Sector-III, Pithampur, Dist. Dhar (M.P.)	Used oil	1000 KLA
12.	M/s. Sarvavyapi Petrochem (P) Ltd., Plot No. 118-B, Malanpur, Dist. Bhind (M.P.)	Used oil Waste oil	3000 KLA 2500 KLA
13.	M/s. Swarn Lubricant Pvt. Ltd., Plot No. 699, Sector-3, AKVN Industrial Area, Pithampur, Dist. Dhar	Used oil Waste oil	10,000 MTA 10,000 MTA
14.	M/s. Nakoda Lubricant, Plot No. 992/1, Jawad Phanta, Bharbhadia, Distt. Neemuch	Used oil	3000 MT
15.	M/s. Aadi Chemtrade Pvt. Ltd., 404, Sector-3, Industrial Area, pithampur, Dist. Dhar	Used oil Waste oil	1000 MTA 5000 MTA

3. Industries Recycling Non Ferrous Metals & utilizing hazardous waste under Rule-9 as per SOPs issued by CPCB

S. No.	Name of Industries with Address	Hazardous Waste	Hazardous Waste Qty./year
1.	M/s. Uttam Organic Fertichem Pvt. Ltd., 4/5, Industrial Area, Nimrani, Dist. Khargone (M.P.) Mobile .No. 9425084562	Zinc Ash	8400.MTA
2.	M/s. Rajratan Technique & Technology Pvt. Ltd.,Khasra No. 168, 169, 170 & 168/458/4,11/1, Pipliyarao,Bholaram Ustad Marg,Bhawrkua, INDORE – 452 013 (M.P.)	Ink sludge/residue	4500.MTA
3.	M/s. Balaji Phosphate Pvt. Ltd., 23-B, 24-A, Industrial Area, A - B Road, Dewas.	Zink Ash	1000 MTA
4.	M/s Unique Echo Recycler Plot No. 26, Industrial Area, Palda, Indore	E-waste	6000 MTA
5.	M/s. Siddharth Wires (P) Ltd., A – B Road, Biora, Dist. Rajgarh	Zinc dross	1800 MTA
6.	M/s. Savitri Enterprises, Plot No. 22-B, Laxmibai Nagar, Industrial Area, Indore	Brass Dross, Copper Dross, Zinc Dross & Zinc Ash	300 MTA
7.	M/s. Yuvika Alloys Plot No. 3, Industrial Growth Centre, Maneri, Dist. Mandla	Brass Scrap, Copper Scrap, Aluminum Zinc Scrap	600 MT 600 MT 600 MT 600 MT

Integrated Plan for Hazardous Waste Management in Madhya Pradesh

8.	M/s. Vayanktesh Metal & Alloys Pvt. Ltd., Plot No. 203, Sector-F, Sanwer Road, Indore	Metal Salt, Nickel & Cobalt	2000 MTA
9.	M/s. Hostech Eco Management Pvt. Ltd., Plot No. 27, Sector-C, Sanwer Road, Indore	Electronic Waste Sch. 4, Sl. No. 18	585 MTM 7020 MTA
10.	M/s. Cable Processors India (P) Ltd., Plot No. 1, Sector-A, Industrial Area, Maneri, Mandla (M.P.)	(1) Copper Scrap/ Alloys (2) Insulated copper wire scrap/ copper Druid	500 MTA 1500 MTA
11.	M/s. Jaza Industries Shed No. 15, Industrial Area, Govindpura, Bhopal	(1) Copper Dross (2) Insulated copper wire scrap/ copper with PVC sheathing	30 MA 170 MT
12.	M/s. Vishal Fab (India) Pvt. Ltd., (Unit-2) Plot No. 13 – 14, Sector-F, Industrial Area, Sanwer Road, Indore	Copper scrap Bar Scrap, cable copper Mill-barry Rod, copper clave, copper punching, copper powder	1800 MT
13.	M/s. Laxmi Vilas Metal Enterprises Pvt. Ltd., Plot No. 24 (B) IGC AKVN Boregaon, Tehsil Saunsar, Dist. Chhindwara	Copper Scrap, Jelly filled, copper cable scrap, Druid copper cable scrap	1350 MT
14.	M/s. Sugam Chemicals, Plot No. 341, Sector-3, Industrial Area, Pithampur , Dist. Dhar	Spent solvent	615 MT
15.	M/s. Premier Refractories of India Pvt. Ltd., Plot No. 41, 528/3, NKJ Katni, Tehsil Mudwara, Distt. Katni	Spent catalyst	15000 MTA
16.	M/s. M.P. Dyechem Industries Pvt. Ltd., Plot No. 59-63, Sector-A, Sanwer Road, Indore	Spent solvent	1080 MT
17.	M/s. K.K. Industries Plot No. 306/2, Sondwa, Vill. Chhoktala, Tehsil & Distt. Alirajpur	Copper Dross & Druid	720 MTA
18.	M/s. Mishra Traders Kh.NO. 895/5, 896/3, Vill. Berwa Tola, Dhatura, Post Pachore, Dist. Singrauli	Alumina dross	600 MTA
19.	M/s. Dielectric Corporation, Plot No. F/92, Industrial Area, Govindpura, Bhopal	Resin waste	20 MTA
20.	M/s. Royal Enterprises Plot No. 94-B, Industrial Area A – B Road, Dewas	Spent Solvent	1050 MT
21.	M/s. Krishna Calcination & Refractories Pvt. Ltd., Plot No. 21 & 86, Lamtara, Tehsil Mudwara, Dist. Katni	(1) Process & waste from treatment of salt sludge (2) Cathode residue including POT lining waste (3) Used Anode	6000 MT 1500 MT 2000 MT

Integrated Plan for Hazardous Waste Management in Madhya Pradesh

		butts	
22.	M/s. Perfect Stoneware Pipe Ltd., (old name: Perfect Acid Ware, Plot No. 49 to 50, AKVN Industrial Area, Maneri, Dist. Mandla	Spent Alumina from Polymerization in swing unit of petro chem.	10000 MT
23.	M/s. Shloak Chemical India Pvt. Ltd., Plot No. 21, Sector-3, Industrial Area, Pithampur, Dist. Dhar	Spent solvent	250 MT
24.	M/s. Shailchem Distillate Pvt. Ltd., Plot No. 139-A, 140-142-A, AKVN Industrial Area, Meghnagar, Dist. Jhabua	Spent solvent	2500 MT
25.	M/s. Tanishi Organo Chem Plot No. 49-B, Sector-2, Industrial Area, Pithampur, Distt. Dhar	Spent solvent	240 MT
26.	M/s. Krish Enterprises, Plot No. 309/A-1, Udyog Nagar, Palda, Indore, Distt. Indore	Spent solvent	1000 MT
27.	M/s. Mittal Appliance Ltd., Plot No. 75, Sector-3, Industrial Area, Pithampur, Dist. Dhar	Insulated copper wire scrap/coppe with PVC sheathing ISRI Code material name 'druid'	24000 MTA
28.	M/s. Shalni Plastic Pvt. Ltd., Plot No. 103, 104, 285, Shri Ram Marg, Maksi, Dist. Shajapur	Zinc Ash Zinc dross/bottom dross Brass dross	2000 MT 600 MT 1000 MT
29.	M/s. Maa Gomti Steel Industries, (Lead & Copper unit) Plot No. 143, 144-A, Sector-E, Industrial Area, Indore	Insulated copper wire scrap)(IV-2,7) Copper dross & PVC sheathing including ISRI	1840 MTA
30.	M/s. Baba Metals, Plot No. 722-B, Sector-3, Pithampur, Distt. Dhar	Cleaned barrel/ Drums/ container for industrial Re-use	30,000 Nos./year
31.	M/s. Eco-Cycler Traders Plot No. 205, Sector-3, Industrial Area, Pithampur, Dist. Dhar	Cleaned barrel/ Drums/ container for industrial Re-use	96000 Nos./year
32.	M/s. Saurabh Industry, Plot No. 55-J, Industrial Area, Maksi Road, Ujjain	Spent solvent	1200 MT
33.	M/s. Satyamitra Sales & Trading Co. Ltd., Plot 23-B, Industrial Area, Sanwer Road, Indore	Empty Barrels/Containers /liners contaminated with H.W. chemical	5,00,000 Nos/year

Integrated Plan for Hazardous Waste Management in Madhya Pradesh

34.	Ms/. Mittal Coin Pvt. Ltd., Plot No. 76, Sector-III, Industrial Area, Pithampur, Distt. Dhar	Insulated copper wire scrap)/ copper with PVC sheathing (Sch.IV-2,7) Copper dross	28000 MTA
35.	M/s. Shri Balaji Traders 392/2, Vill. Naryali, Sector-F, Industrial Area, Sanwer Road, Indore	Empty Barrels/Containers /liners contaminated with H.W. chemical	12000 Nos./year
36.	M/s. Vani Enterprises, Plot No. 64-A, New Industrial Area-II, Mandideep, Dist. Raisen (M.P.)	Empty Barrels/Containers /liners contaminated with H.W. chemical	90,000 Nos./year
37.	M/s. Recycle Waste (New Unit) Plot No. 317-A, 316-A/2, Sector-E, Industrial Area, Sanwer Road, Indore (M.P.)	Empty Barrels/Containers /liners contaminated with H.W. chemical	50,000 Nos./year
38.	M/s. R.K. Steel & Scrap Suppliers, Plot No. S-4/2, Sector-III, Industrial Area, Pithampur, Distt. Dhar (M.P.)	Empty Barrels/Containers /liners contaminated with H.W. chemical	2,00,000 Nos./year
39.	M/s. Beena Fabrication Industry (Unit-II) Plastic Park Industrial Area, Tamod, The. Goharganj, Distt. Raisen	Empty Barrels/Containers /liners contaminated with H.W. chemical	4,00,000 Nos./year
40.	M/s. Ankur Industries, Plot No. 35-A, 34-C, Sector-E, Industrial Area, Sanwer Road, Indore (M.P.)	Empty Barrels/Containers /liners contaminated with H.W. chemical	16,000 Nos./year
41.	M/s. Ashok Kumar Manoharlal Drum Udyog, S-85, Sector No. 71, Dhar Road, Indore – 452 003 (M.P.)	Empty Barrels/Containers /liners contaminated with H.W. chemical	30,000 Nos./year
42.	M/s. Ishkripa Industries, Plot No. 142/6, Sector-F, Sanwer Road, Indore-452 015 (M.P.)	Empty Barrels/Containers /liners contaminated with H.W. chemical	4500 Nos./year

Co-processing in Cement units

4. Co-processing in Cement Plants

M.P. Pollution Control Board has authorised following cement plants to use hazardous and other waste in co-processing in cement kilns according to SOPs issued by CPCB :

1. M/s Ultratech Cement (Vikram Cement) Khor, Distt. Neemuch
2. M/s ACC Ltd. (Kymore Cement Works), Kymore, Distt. Katni
3. M/s. Ultratech Cement (Dhar), Manawar, Distt. Dhar.

The industries permitted for utilization of hazardous waste under Rule-9 in Madhya Pradesh as per SOPs of CPCB

M.P. Pollution Control Board has permitted total 26 units in the state, as per the Rule -9 of Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016 as per SOPs issued by CPCB. The details are as follows :-

S.No.	Utilization of Hazardous Waste under Rule-9	No. Of Unit
1.	Recovery of Solvents Spent solvents	9
2.	Utilization of Spent HCl generated from steel rolling mills for producing Ferric Chloride.	1
3.	Utilization of Used Anode Butt to produce Carbon Pellets and High Energy (HE) Coke for use in Steel furnaces/foundries.	1
4.	Utilization of pre-processed Used Anode Butt to produce Green Anodes through Anode-Baking Process for use in Aluminium Smelters	1
5.	De-contamination of contaminated drums/containers/ barrels.	11
6.	Utilization of process sludge and primary ETP sludge generated from Pulp & Paper Industries for producing Paper Board/Mill Board/ Card Board.	1
7.	Utilization of Aluminium Dross generated from refining and casting house of Aluminium smelter units to recover Aluminium Metal	1
8.	Utilization of Spent Pot Lining (SPL) generated from Primary Aluminium Smelting Industries	1

Status of Contaminated sites and probable contaminated sites

Contaminated sites

M.P. Pollution Control Board in consultation with Central Pollution Control Board had identified 04 hazardous waste dump sites in Ratlam and Maksi area which belongs to M/s. Beta-naphthol Ltd., Maksi, M/s. Jayant Vitamins, M/s. Bordia Chemicals & M/s. Sajjan Chemicals, Ratlam. All the industries have been closed between 1997 to 2003. The approx. quantity of waste stored at various locations (industrial premises and near by area) is 23,594 MT & waste shifting proposals (Rs. 6.60 crore) to TSDF, Pithampur, Dhar had been forwarded to CPCB and MoEF in 17.04.2008. MoEF had appointed M/s. SENES Consultant India (P) Ltd., Noida for study of these sites as per following Terms of Reference :-

1. Review of the existing polluted sites management.
2. Prepare project specific technical and investment plans for demonstration of polluted sites rehabilitation at the pre identified polluted sites i.e. Ratlam and Maksi of Madhya Pradesh.

Pre feasibility studies draft report has been prepared by M/s. SENES Consultant India (P) Ltd., and the same has been submitted by Govt. of India, to Task Team Leader and Lead Environment Socialist, South Asia Sustainable Development. Further, Joint visit of a team of Officers of NGRI, CPCB & MPPCB took place during 19 – 20 January 2011. CPCB has compiled the information and included only M/s. Jayant Vitamins & M/s. Sajjan Chemicals as the only hazardous waste unauthorized dump site in Madhya Pradesh. As there is no waste existing at two sites i.e. M/s. Boardia Chemical, Ratlam and M/s. Beta Naphthol, Maksi. The M.P. Pollution Control Board has initiated legal action against M/S Sajjan Chemical & Investment Pvt. Ltd. Ratlam and M/S Jayant Vitamins, Ratlam. The Jayant Vitamins, Ratlam is under the custody of Court receiver appointed by Hon'ble High Court of Mumbai.

The Chairman CPCB and Secretary MoEF&CC stressed that a DPR of the contaminated sites for remediation has to be prepared afresh, only after which the exact cost required for remediation could be estimated and subsequently the contribution required from State could be finalized.

The meeting of IMG (Inter Ministerial Group) was held on 11.08.2011, in which the MoEF's proposal for remediation of selected hazardous waste contaminated dumpsites was approved in principle subject to the following:-

- i. Total Government support from NCEF shall be limited to 40% of total project cost:
- ii. The administrative Ministry may go ahead with preparation of DPRs for the twelve sites as proposed, and towards that end, an amount of Rs. 60.0 crore is recommended to be released from the NCEF. However, financial support given for preparation of DPR will be included in computing the overall ceiling of 40% of the total project cost:
- iii. For balance 60% of the project cost, MoEF shall explore the option of alternate funding like enhanced State's support, PPP model etc:
- iv. After preparation of DPR and tying up of balance funds;
- v. the administrative Ministry will seek final approval of the IMG in respect of each site.

The Government of India has taken the decision to provide funding for this through the National Clean Energy Fund (NCEF). 40% of the total project cost ranging from the preparation of the Detailed Project Reports(DPRs) to the actual execution of remedial activities would be borne by the Central Govt. 30% of the project cost is to be borne by the State Government. The remaining 30% may be mobilized by the State Government by invoking the "polluter pays " principal or through public private partnership(PPs) or a combination of these. A PPP model is considered quite feasible as the remediated sites would become available to the State Govt./ULB/Industrial estate as valuable real estate with very significant appreciation of value. This would be a direct economic benefit besides the obvious environmental and public health benefits.

M. P. State Government has given "in principal" consent of the state Govt. for remediation of contaminated four site of Dis. Ratlam under the NCEF Project vide Letter No. 710/77/2012/32 dt.23/02/2012, hence these are included in National Clean Energy Fund supported remediation scheme for the contaminated site CBIPMP.

The primary work after finalization of consultant by MoEF & CPCB for the same has been started. The work related to contaminated site situated in Madhya Pradesh are awarded to M/S ERM Gurgaon. Phase I Step I, II & III work are completed for which necessary support from State Pollution Control Board and local body have been provided. A public

consultation was also held at Ratlam for inclusion of observations of public at large in the study.

As per the direction of Hon'ble NGT in OA No. 804/2018 vide order dated 12.04.2019, Government of Madhya Pradesh has constituted Technical Review Committee (TRC) for the monitoring of remediation contaminated sites. (**Appendix-I**)

Probable contaminated sites –

During investigation by MoEFCC joint consortium, 20 probable contaminated sites are found in the Madhya Pradesh (**Appendix-II**), 08 sites were found in Class 'D' [This site is already investigated / inspected and found not contaminated] and thereafter Madhya Pradesh Pollution Control Board has requested these 08 sites may be removed/delisted from the list of probable contaminated sites in Madhya Pradesh state. One site Ratlam Industrial Area-457001 (M/s Sajjan Chemical & Investment Industrial Area Ratlam and M/s JVL Industrial Area Ratlam) is found in Class 'C' [This site is already investigated / inspected and found to be contaminated] in the Madhya Pradesh State. Other sites are under investigation and shall be finalize after issuance of guidelines by MoEF&CC in this regard.

Plan for collection of hazardous waste and E-Waste from household solid waste

Action plan for municipal solid waste management in Madhya Pradesh has been prepared by Urban Development Department, Government of Madhya Pradesh (**Appendix-III**). As per the plan, the Department of Urban Development & Housing, Madhya Pradesh has prepared “Action plan for hazardous waste from household solid waste. Four hazardous and e-waste waste facilities are planned at zone level i.e. in Bhopal, Indore, Jabalpur, and Gwalior. The residential/ industrial hazardous waste and e-waste will be transported to these facilities and will be processed and disposed by relevant technologies. These four projects will be planned as PPP projects with private operator responsible for collection, transportation, processing and disposal of waste.

Software tracking System of Hazardous waste and Other Wastes in Madhya Pradesh

Looking to the cumbersome process of manifest reconciliation and tracing of the hazardous waste movement in the State. Madhya Pradesh Pollution Control Board has developed software for on-line tracking of hazardous waste movement end to end from generator to actual user/CTSDf. The system provide facilities of instant generation of manifest with QR code along with the details of stock deduction. The software provides facility to the CTSDf and actual users to move the generators who are sending their waste for disposal/processing. The software facilitate the generator to know the actual users for their wastes and also the pool of transporters available with compliance of CPCB guidelines for transportation of hazardous wastes.

Madhya Pradesh Pollution Control Board considering the transportation guidelines for hazardous wastes published by CPCB and with due approval of State Board developed the comprehensive hazardous waste transporter Authorization system to comply with the Rule-18 of Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016. Since each generator or actual user or CTSDf can't facilitate transportation of hazardous waste in accordance with the Rule-18(7) of Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016 hence as facilitator a pool of transporters as per CPCB guidelines are developed.

M.P. Pollution Control board has Authorised 14 No Transporters with about 112 Nos. of Vehicles enabled with GPS system, colour coding, 10th Passed trained driver etc. As per CPCB guidelines for the compliance of Rule-18 of Hazardous and Other Wastes (Management and Transboundary movement) Rule, 2016 for safe disposal of hazardous and other wastes.

Environmental Policy of Madhya Pradesh

Provision for environmental protection has been laid down in the Directive Principles of State Policy in the Constitution of India by assigning the duties for the State and all citizens through Article 48A and Article 51A (g) which state that the 'State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife in the country' and 'to protect and improve the natural environment including forests, lakes and rivers and wildlife, and to have compassion for the living creatures'.

The State Environment Policy seeks to lay down guidelines that will facilitate development while ensuring environmental conservation yet without hampering the present and future development imperatives.

Environmental policies of Madhya Pradesh (**Appendix-IV**) is in its Chapter 7.4 "Industry" elaborates the concern of consideration of hazardous waste and its management –

- i. Promotion of no waste/low waste/recycling based environmentally clean technologies for industries
- ii. Operationalization of "polluter pays" principle.
- iii. Environmentally compatible siting of industries.
- iv. Identification of areas for establishment of polluting industries.
- v. Establish common effluent treatment and common incineration systems in cluster of small scale industries, while major and medium industries should be required to install adequate pollution control systems on their own.
- vi. Enforcement of pollution control norms and introduction of environmental audit, on site emergency planning and public liability insurance
- vii. Integrate public awareness programmes for environmental
- viii. safety and hazards from industries with mandatory environmental clearance.
- ix. Prior public hearing for siting of major hazardous and polluting industries.
- x. Setting up of Environmental Cells in industries and ensure their close liaison with regulatory agencies.

<http://www.mppcb.nic.in/proc/environmental-policy-1999.pdf>

Recommendation

This integrated plan for implementation of Hazardous and other Wastes (Management and Transboundary Movement) Rules, 2016 provides the –

1. Inventorization of hazardous waste
2. Tracking of wastes generation and disposal
3. Conservation of resources by utilization of hazardous waste for
 - a. Recycling
 - b. Co-processing
 - c. Co-incineration
 - d. Pre-processing
4. Provision of collection household hazardous wastes and E-waste
5. Disposal of hazardous waste in Scientific CTSDF.
6. Facilitate incinerable waste disposal to other State (Government of M.P. has extended support to Govt. Of Chhatishgarh to disposed its incinerable waste in CTSDF, Pithampur, Dist. Dhar).

मध्यप्रदेश शासन
पर्यावरण विभाग
मंत्रालय

//आदेश//

भोपाल, दिनांक 10/07/2019

क्रमांक एफ 12-16/2019/32-3- माननीय राष्ट्रीय हरित अधिकरण, नई दिल्ली में प्रचलित प्रकरण ओ.ए. क्रमांक 804/2017 (श्री राजीव नारायण विरुद्ध भारत संघ व अन्य) एवं एम.ए. क्रमांक 1302/2018 में माननीय अधिकरण द्वारा पारित आदेश दिनांक 30/07/2018 में केन्द्रीय प्रदूषण नियंत्रण बोर्ड को परिसंकटमय व अन्य अपशिष्ट (प्रबंधन एवं सीमापार संचलन) नियम-2016 के अनुपालन सुनिश्चित करने हेतु मॉनिटरिंग कमेटी का गठन किया गया। मॉनिटरिंग कमेटी द्वारा अंतरिम रिपोर्ट जनवरी-2019 माननीय अधिकरण में प्रस्तुत की गई तथा अधिकरण द्वारा पारित आदेश दिनांक 12/04/2019 (प्रति संलग्न) के पैरा-4 एवं पैरा-5 निम्नानुसार हैं:

"4. The Monitoring Committee furnished its interim report in compliance of orders of this Tribunal after reviewing the various aspects of enforcement of the Rules proposing actions as follows:"

"5. Having regard to the sensitiveness of the issue and impact of non-compliance on environment and public health, the above recommendations need to be fully implemented and monitored by the Chief Secretaries at State Level and by the MoEF&CC and CPCB at national level." आदेश दिनांक 12/04/2019 में उल्लेखित अंतिम रिपोर्ट की अनुशंसा अनुसार प्रदेश के कन्टामिनेटेड साइट्स के रिमेडियेशन कार्य के पर्यवेक्षण हेतु निम्नानुसार टेक्नीकल रिव्यू कमेटी का गठन किया जाता है:

1. अध्यक्ष, मध्यप्रदेश प्रदूषण नियंत्रण बोर्ड, -अध्यक्ष
 2. क्षेत्रीय संचालक, केन्द्रीय प्रदूषण नियंत्रण बोर्ड, भोपाल -सदस्य
 3. डायरेक्टर, आई.आई.टी., इन्दौर अथवा उनके प्रतिनिधि -सदस्य
 4. डायरेक्टर, NEERI, नागपुर अथवा उनके प्रतिनिधि -सदस्य
 5. सदस्य सचिव, म.प्र. प्रदूषण नियंत्रण बोर्ड, भोपाल -सदस्य संयोजक
- समिति द्वारा बैठक में आवश्यकता के अनुसार विशेषज्ञ/अन्य अधिकारियों को भी आमंत्रित किया जा सकेगा।

संलग्न :उपरोक्तानुसार।

(पंकज अग्रवाल)

प्रमुख सचिव

मध्यप्रदेश शासन

पर्यावरण विभाग

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क्रमांक एफ12-16/2019/32-3

प्रतिलिपि :

भोपाल, दिनांक 10/07/2019

1. प्रमुख सचिव, मुख्य सचिव कार्यालय, मध्य प्रदेश शासन, मंत्रालय भोपाल ।
 2. प्रमुख सचिव, मध्य प्रदेश शासन, पर्यावरण विभाग, मंत्रालय भोपाल ।
 3. अध्यक्ष, मध्य प्रदेश प्रदूषण नियंत्रण बोर्ड, भोपाल ।
 4. प्रमुख सचिव, म०प्र० शासन उद्योग विभाग, मंत्रालय भोपाल ।
 5. प्रमुख सचिव, म०प्र० शासन वित्त विभाग, मंत्रालय, भोपाल ।
 6. संचालक, भारतीय प्रौद्योगिकी संस्थान, सिमरौली/इन्दौर मध्य प्रदेश की ओर सहमति सूचनार्थ ।
 7. संचालक, राष्ट्रीय पर्यावरण अभियांत्रिकीय शोध संस्थान NEERI की ओर सहमति सूचनार्थ ।
 8. सदस्य सचिव, म.प्र. प्रदूषण नियंत्रण बोर्ड, भोपाल ।
 9. क्षेत्रीय संचालक, केन्द्रीय प्रदूषण नियंत्रण बोर्ड, भोपाल ।
 10. विधि अधिकारी, मध्य प्रदेश प्रदूषण नियंत्रण बोर्ड, भोपाल ।
- की ओर सूचनार्थ व आवश्यक कार्यवाही हेतु।

LO

11/7/19

10/7/19
प्रमुख सचिव
मध्य प्रदेश शासन
पर्यावरण विभाग



केन्द्रीय प्रदूषण नियंत्रण बोर्ड 68
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE GOVT. OF INDIA



MOST URGENT
SUPREME COURT MATTER

SPEED POST

B-29016/CS-II/2017-18/CPCB/WM-I/

December 15, 2017

To

The Member Secretary
Madhya Pradesh Pollution Control Board
Paryavaran Parisar, Sector E-5,
Arera Colony, Bhopal - 462 016

Sub: Status of contaminated sites - Regarding

Sir,

This has reference to Orders of the Hon'ble Supreme Court of India, dated 22/11/2017, regarding identification and remediation of contaminated sites, in the matter of WP (C) no. 657 of 1995. In the said matter, it is required to file the present status of contaminated sites in your State before the Hon'ble Supreme Court.

The above matter was discussed during 4th review meeting of SPCBs/PCCs held at CPCB on 14/12/2017, wherein it was decided that the list of probably contaminated sites identified in a study conducted by MoEF&CC shall be circulated to respective SPCBs/PCCs for verification and preparation of action plan. The said list of probably contaminated in your State is enclosed for ready reference.

In view of the above, you are requested to submit verification report and along with intended action plan by 26/12/2017 as per the enclosed format. In case no information is received by 26/12/2017, we shall not be able to place the status report pertaining to your SPCBs/PCC before the Hon'ble Supreme Court.

Yours faithfully,

(B. Vinod Babu)

Additional Director & Nodal Officer,
Waste Management Division

Encl.: As above

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List of Contaminated Site in Madhya Pradesh

S. No.	Site ID	Site Name and Address	Latitude	Longitude	current Land use	Type of contamination	Contaminants of Concern (CoCs)	Outcome of verification* (A/B/C/D)	Type of contamination* (S1/S2/L/P1/P2)	Action Taken	Action proposed
1	MP-452-1	Deoguradiya (Municipal landfill) Site, Near Devguradia, Indore - 452001	22.675556	75.926667	Other (MSW Dump site)	Municipal Solid Waste	Chromium, Lead, Cadmium				
2	MP-454-1	Indo Zinc, Plot-79, Sector - 3, Pithampur, Dist Dhar, MP-454775	22.641215	75.574299	Industrial	Hazardous Waste	Zinc, Cadmium, Mercury, Arsenic, Chromium, Lead, Fluoride				
3	MP-456-1	M/s Grasim Chemical, Grasm Nagar, Nagda-456001	23.444977	75.412697	Water bodies	Effluent	Arsenic, Lead, Mercury				
4	MP-457-1	Sajjan Chemicals (now Kataria wiresLtd)-Plot No ; 54 E dosigoan Industrial area, RATLAM - 4571001	23.357857	75.045467	Industrial	Hazardous Waste	Sulphate, Chlorides, Heavy Metals, Phenolic compounds, Colour	C	S1 & P2		
5	MP-457-2	Sajjan chemical Pvt Ltd (Dilapidated Shed) Plot 61) Dosigoan Industrial Aream, Ratlam	23.360211	75.047161	Industrial	Hazardous Waste	Sulphate, Chlorides, Aluminium, Heavy Metals, Phenolic compounds, PAH components	C	S1/P2		
6	MP-457-3	Abandoned Kandarwasa Mines, Ratlam (Dumping by Sajjan Chemicals)	23.487821	75.065871	Other (Abandoned mine)	Hazardous Waste	Sulphate, Chlorides, Aluminium, Heavy Metals, Phenolic compounds, PAH components	D	Not applicable		
7	MP-457-4	M/s Jayant Vitamin, Ratlam-457001	23.330447	75.043353	Industrial	Hazardous waste	Sulphate, Chlorides, Aluminium, Iron	A	No access to site		
8	MP-457-5	Ratlam Industrial Area-457001	23.362234	75.048865	Industrial	Hazardous waste	Sulphate, Chlorides, Aluminium, Iron				
9	MP-457-5	M/s Boardia Chemicals Pvt Ltd, Ratlam, Madhya Pradesh-457001	23.334655	74.977187	Industrial	Hazardous waste	Sulphate, Chlorides, Aluminium, Heavy Metals, Phenolic compounds, PAH components				
10	MP-462-1	M/s Union carbide (UCIL), J.P. Nagar, Bhopal, Madhya Pradesh 462001	23.280833	77.410556	Industrial	Hazardous waste	Pesticides (Organochlorine, Carbamate and chlorinated benzene (HCB)), Mercury, VOC (Chloroform)	C	S1		
11	MP-462-3	Atal Ayub Nagar, Near UCIL factory, Bhopal-462001	23.28088	77.41183	Habitation settlement	Hazardous waste	Pesticides (Organochlorine, Carbamate and chlorinated benzene (HCB)), Mercury, VOC (Chloroform)				
12	MP-462-4	Solar Evaporation Ponds outside UCIL premises, Bhopal	23°17'7.26"N	77°24'43.55"E	Habitation settlement	Contaminated Sediment	Pesticides (Organochlorine, Carbamate and chlorinated benzene (HCB)), Mercury, VOC (Chloroform)	C	S2		

13	MP-462-5	Kainchi Chihola colony, Bhopal-462001	23.27844	77.41486	Habitation settlement	Hazardous waste	Pesticides (Organochlorine, Carbamate and chlorinated benzene (HCB)), Mercury, VOC (Chloroform)			
14	MP-462-6	Garib Nagar, Bhopal-462001	23.28573	77.41492	Habitation settlement	Hazardous waste	Pesticides (Organochlorine, Carbamate and chlorinated benzene (HCB)), Mercury, VOC (Chloroform)			
15	MP-462-7	Blue Moon & Nawab Colony, Bhopal-462001	23.28488	77.41096	Habitation settlement	Hazardous waste	Pesticides (Organochlorine, Carbamate and chlorinated benzene (HCB)), Mercury, VOC (Chloroform)			
16	MP-462-8	New Arif Nagar, Bhopal-462001	23.28388	77.40839	Habitation settlement	Hazardous waste	Pesticides (Organochlorine, Carbamate and chlorinated benzene (HCB)), Mercury, VOC (Chloroform)			
17	MP-462-9	Shiv nagar, near Hindustan petroleum depot, Bhopal-462001. Shakti Nagar, Near Arif Nagar, Near Union Carbide factory, Bhopal	23.29052	77.4185	Habitation settlement	Hazardous waste	Pesticides (Organochlorine, Carbamate and chlorinated benzene (HCB)), Mercury, VOC (Chloroform)			
18	MP-464-1	Mandideep Industrial area, Mandideep, Raisan-462040	23.083	77.531158	Industrial	Effluent	VOCs (not specified)			
19	MP-465-1	M/S Beta Naphthol-village Maksi, Shajapur dist 465106	23.246889	76.156033	Industrial	Hazardous waste	Aluminium, Sulphate, Chlorides, Iron			
20	MP-486-1	Post Vindhyan nagar, Dist. Sanerruji, MP-486885	24.098766	82.675866	Industrial	Air, Effluent	SO2, NOx, SPM etc as air pollutants. Hg, As			

* Note: Method of Verification of the list of Probably Contaminated Sites provided by Inventory report of MoEF&CC

Outcome of Verification

A There are traces of dumping of Hazardous waste / accumulation of Effluent or its sediment or sludge / Spillage of Chemicals / leakage of underground pipelines / contamination of groundwater; which requires further assessment.

Type of Contamination

Type S1 / S2 / L / P1 / P2

S1: Land bound solid phase contamination

S2: Water bound sediments solid phase contamination

L: Land bound liquid phase contamination

P1: NAPL contaminants in soil (Non Aqueous Phase Liquids)

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P2: Groundwater contaminations

B There are no traces of dumping of Hazardous waste / no accumulation of Effluent sludge / no Spillage of Chemicals / no leakage of underground pipelines / no contamination of groundwater; which does not require any further assessment.

C This site is already investigated / inspected and found to be contaminated.

Type of Contamination

Type S1 / S2 / L / P1 / P2

S1: Land bound solid phase contamination

S2: Water bound sediments solid phase contamination

L: Land bound liquid phase contamination

P1: NAPL contaminants in soil (Non Aqueous Phase Liquids)

P2: Groundwater contaminations

D This site is already investigated / inspected and found not contaminated.





ACTION PLAN
&
Present status
Of
MUNICIPAL SOLID WASTE MANAGEMENT
IN MADHYA PRADESH

(Revised October 2018)

URBAN DEVELOPMENT & HOUSING DEPARTMENT (UD&HD)
GOVERNMENT OF MADHYA PRADESH

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1. NEED FOR MUNICIPAL SOLID WASTE MANAGEMENT

1.1 OVERVIEW

Solid Waste Management (SWM) is a part of public health and sanitation, and according to the Indian Constitution, falls within the purview of the State list. Since this activity is non-exclusive, non-rivalled and essential, the responsibility for providing the service lies within the public domain. The activity being of a local nature is entrusted to the Urban Local Bodies (ULBs) by 12th Schedule of 74th Amendment of the Constitution.

Supreme Court directed all the Urban Local Bodies (ULBs) to manage **Municipal Solid Waste (MSW)** in accordance with “MSW Management and Handling Rules 2000”, hence all ULBs are obliged to carry out collection, transportation, segregation, processing and scientific disposal of MSW as per the mandated rules.

Government of India (GoI) has also framed **eight parameters as Service Level Benchmarks (SLBs)** for MSW in 2009 and 13th Finance Commission links the disbursement of Performance Grant to ULBs with the level of achievement of SLBs, as specified in Chapter 10 of its report.

Importantly, **National Green Tribunal (NGT)** has stipulated ULBs to follow all environmental rules and norms in order to avoid adverse environmental effects of MSW activities.

SCIENTIFIC MANAGEMENT OF SMWM

The scientific management of Municipal Solid Waste Management includes:

- **Waste minimization and reduction at source**
- **Door to door collection** of waste from all residential, commercial, institutional establishments in covered vehicles in compliance with SWM Rules 2016 and in accordance with SLBs for MSW.

- **100% Segregation** of waste at source in accordance with SWM rules 2016.
- **Covered Bins** for secondary collection in compliance with SWM Rules 2016.
- **Secondary collection and transportation** in covered vehicles in compliance with SWM Rules 2016.
- **Covered waste transfer/storage stations** in compliance with CPCB/SPCB norms, if required.
- **Material recovery /recycling** in accordance with SLBs for MSW.
- **Scientific processing** in compliance with SWM Rules 2016 and CPCB/SPCB norms.
- **Scientific disposal** of inert in compliance with SWM Rules 2016 and CPCB/SPCB norms.
- **100% cost recovery of Operation & Maintenance (O&M) expenses from user charges as mandatory urban reform stipulates and 90% collection efficiency of user charges** in accordance with SLB for MSW.

1.2 DIRECTIONS FROM HON'BLE NGT

Hon'ble National Green Tribunal (NGT) in OA No 199 of 2014 (Almitra H. Patel Vs Union of India) on 12th January, 2017 directed State Government to *“file complete and detailed Action Plan and affidavits to show how the municipal solid waste in the State would be processed and degradation of environment and public health resulting here from would be prevented. As part of this Action Plan they would also be required to submit total solid waste generated and how that solid waste was required to be treated in a time bound manner in regard to these directions”*.

Madhya Pradesh Government had prepared an action plan in 2015 itself and had submitted it to Hon'ble Supreme Court. It was further updated and submitted to Hon'ble Tribunal.

1.3 MADHYA PRADESH STORY

Madhya Pradesh is a state with a population of 73 million covering 9.5% of the total area of the country (308,000 Sq. Km.). The urban population of the state is across 378 ULBs which has increased to 21 million in 2011 from 16 million in 2001, growing at a CAGR of ~2.2%.

The high rate of urbanization has led to increased focus on urban infrastructure and municipal service delivery which has further led to increased investment requirement in the urban development. However, this rate of urbanization has resulted in generation of large quantities of Municipal Solid Waste in big cities as well as small towns also.

Thus, preparation of a time-targeted action plan, for management of Municipal Solid Waste (MSW), for each city and town in the state is essential in accordance with the population and developmental growth, so that environmental conditions improve and makes city liveable for every citizen.

2. PAST PREVAILING SITUATION OF MSWM & PRACTICE

The Solid Waste Management in all ULBs should have started as directed by the Hon'ble Supreme Court of India by 2005. But due to non-availability of trained and knowledgeable manpower, lack of financial resources, operational non viability because of inadequate quantity of waste generated in maximum number of ULBs, the complete management of MSW as per rules could not be implemented in any of ULBs.

However some of the bigger ULBs had started implementing it on a piece meal basis. Some examples are as follows:

1. Indore	Outsourced secondary collection and waste processing of 500 TPD to a private operator. But the result was not satisfactory because of many reasons.
2. Gwalior	It was the first town in Madhya Pradesh which got Sanitary Landfill constructed and started managing it. It also outsourced door to door collection (DTDC) to a private operator. All the operations stopped later on.
3. Ujjain	Have recently outsourced waste processing to private operator. The complete results are yet to be assessed.
4. Rewa	It also outsourced secondary transportation of waste. But the results have not been satisfactory.

3. INITIATIVES OF STATE GOVERNMENT FOR ISWM

3.1 ACTION PLAN FOR WASTE MANAGEMENT IN THE STATE

To comply with SWM 2016 rules, the State studied the urbanization pattern in MP and found it to be skewed, as shown in table below.

Table: Population range by ULBs

Population Range	Number of ULBs
<20,000	210
20,000 - 50,000	107
50,000 – 1,00,000	28
1,00,000 – 2,00,000	18
>2,00,000	15
Total	378

More than 90% ULBs with population of less than 1 lakh could not implement all its components because of reasons mentioned below:

- Not operationally viable for smaller ULBs because of very less quantity of waste being generated.
- Huge financial burden in setting up large facilities for treating waste.
- Most of the ULBs lack technical know-how and manpower.

Therefore, the state decided to form 'clusters' of ULBs for effective Integrated Solid Waste Management on Regional Landfill concept and implement the projects through Public Private Partnership (PPP) mode.

As a result, the state formed ~26 clusters covering all the 378 ULBs of the state with total waste of around 150 TPD.

The cluster-based approach has been designed considering two factors:

- (1) For optimizing the waste
- (2) Logistics

INTEGRATED SOLID WASTE MANAGEMENT PROJECTS

The whole state has been divided into ~26 clusters for MSW management (details list towns in cluster is attached in Annexure A).

Table: Regional Integrated MSW facilities

1	Sagar Cluster (11 ULBs)	11	Chhatarpur Cluster (33 ULBs)	21	Vidisha Cluster (15 ULBs)
2	Katni Cluster (05 ULBs)	12	Damoh Cluster (07 ULBs)	22	Shajapur Cluster (26 ULBs)
3	Jabalpur City (01 ULBs) Jabalpur Cluster (15 ULBs)	13	Bhind Cluster (14 ULBs)	23	Ratlam Cluster (22 ULBs)
4	Bhopal Cluster (08 ULBs)	14	Singrauli Cluster (01 ULBs)	24	Chhindwara Cluster (20 ULBs)
5	Rewa Cluster (28 ULBs)	15	Betul Cluster (08 ULBs)	25	Barwani Cluster [#] (22 ULBs)
6	Indore Cluster (08 ULBs)	16	Balaghat Cluster (13 ULBs)	26	Ujjain Town* (01 ULBs)
7	Gwalior Cluster (16 ULBs)	17	Shahdol Cluster (16 ULBs)		
8	Khandwa Cluster (10 ULBs)	18	Shivpuri Cluster (11 ULBs)		
9	Dewas Cluster (24 ULBs)	19	Guna Cluster (10 ULBs)		
10	Hoshangabad Cluster (14 ULBs)	20	Neemuch Cluster (19 ULBs)		

Name of Clusters for Integrated Solid Waste Management on Regional Landfill approach

*For Ujjain City – Solid Waste Management Project has been executed in 2016 by NN-Ujjain because of Simhasth Mela.

As per the Feasibility Study Reports recommendations, some of the ULBs are re-clustered considering improved logistics of waste transfer. Also the earlier Mandsaur, Pithampur and Ratlam Clusters are rearranged to form Neemuch, Barwani and Ratlam Clusters. On rearrangement, Ratlam, at present, is Waste to Energy (WTE) or Waste to Fuel Cluster.

INVESTMENT REQUIREMENT AND PHASING

The total capital investment required for implementing Integrated Solid Waste Management in all 378 ULBs shall be around Rs. 2,950 crores.

Further, the investment required will be covered by a mix of Central Government grant, State Government grant and share of private operator.

The grant is being provided for reducing the concessionaire's investment so that tipping fee is reasonable. This will help in imposing affordable user charges on citizens.

The State Government intends to select the concessionaire for all projects by 31st August 2018. The target is to start all Waste to Compost (WTC) projects by October 2019 and all Waste to Energy (WTE) projects by March 2020.

KEY HIGHLIGHTS OF THE FINANCIAL MODEL



* Assured payment of tipping fee with provision of annual revision. In case of default of Tipping fees, the GoMP shall deposit the tipping fees in Escrow account of the Project.

** PPA is to be executed between concessionaire and Madhya Pradesh Power Management Com. Ltd. As levelized Power Tariff rate shall be INR 6.39 / Unit for the concession period.

KEY FEATURES OF CLUSTER-BASED ISWM

- Larger ULB chosen as a lead member and smaller ULBs within a distance of 50-80 kms as cluster members.
- The Regional Landfill site to be situated in the lead member town.
- MSW to be transported from other ULBs for processing and disposal at the Regional Landfill site.
- Satellite waste storage and satellite processing facilities to be developed in each of the clusters if required. Waste to be brought from smaller ULBs to satellite stations in order to keep the transportation cost minimal.
- Each cluster will have a combination of ISWM Facility, satellite segregation-cum-processing units (if required) and waste storage units.
- Private sector to carry out various activities of MSW management - door to door collection, transportation, segregation, processing and disposal, in accordance with MSW Rules and relevant statutory requirements.
- Leverage the Technical as well as Operations & Maintenance (O&M) expertise of the Private Sector (PPP player).

In addition to the above, the following additional points have been considered while designing the projects.

- **Clear work definition with existing workers:** Existing sweepers will be used for sweeping, drain cleaning and specific area cleaning activities. Given the limited manpower available with ULBs, focussed street cleaning as well as drain cleaning will result in quality job.
- **Bidding Parameter:** SWM being a service delivery project the tipping fees was kept as a bidding parameter. This compels private operator to collect all waste generated in the project area as his returns are dependent on the quantity of waste collected and treated and disposed by him.
- Tipping Fee model allows the private operator to leverage on the O&M strength as well as bring in sustainable technological solutions.
- **Affordable user charges:** It is suggested to impose the user charges as mentioned below
 - Bigger Towns (Nagar Nigam and Nagar Palika):

- Above Poverty Line Households: Rs 60-80 / month / household
- Below Poverty Line Households: Rs 30-40 / month / household
- Nagar Parishad
 - Above Poverty Line Households: Rs 40 / month / household
 - Below Poverty Line Households: Rs 20 / month / household
- **Implementation Modality:** The projects have been framed on Design, Build, Finance, Operate and Transfer (DBFOT) basis with a performance based O&M for 21 year concession period. Further the private operator is given the freedom to use appropriate technology for MSW processing, making the bids technology neutral.
- **Payment Guarantee Mechanisms by GoMP:** Full guarantee by GoMP will be provided for 'tipping fee' payment to Private Operator in case ULBs delay the payment of 'tipping fee' to the concessionaire, with a State intercept, wherein GoMP deducts the portion of payment from various devolutions already being done to ULBs and pay the concessionaire directly.
- **Information, Education and Communication (IEC) activities and Environment Health and Social (EHS) Campaigns:** The private operator will carry out IEC and EHS activities to educate citizens and ULB employees for their role in making the cities clean.
- **Robust monitoring framework:** A Monitoring Committee, comprising of Commissioners/CMOs of all participating ULBs, will be constituted to monitor the day to day activities, with the help of an agency (IE) selected through transparent bidding process.

Image: Images portray the system under proposed ISWM Projects



IMPACT OF SWM PROJECTS ON SERVICE LEVEL BENCHMARKS

The table below shows the impact that the proposed projects will bring after implementation in comparison to the Service Level Benchmarks laid down by Govt. of India.

Table: Impact of SWM Projects on Service Level Benchmarks

Parameters	SLBs	Effect on Project Scope
Household level coverage of solid waste management services	100%	100% Coverage of the project area in all ULBs.
Efficiency of collection of Municipal solid waste	100%	100% Door to door collection and transportation in covered vehicles, preventing <ul style="list-style-type: none"> • Spillage and consumption by stray animals • Any MSW spillage/loss while transportation
Extent of segregation of Municipal solid waste	100%	100% segregation of waste collected from all the ULBs through automatic segregators, along with deodorizing and waste spillage control mechanisms.
Extent of Municipal solid waste recovered	80%	Recyclable components will be reused, bio-degradable will be scientifically processed and recovered as either manure, RDF etc., and the inert will be disposed in landfill site, hence encouraging more than 80% recovery and reuse of waste. In bigger clusters where waste quantity is large energy shall be produced.
Extent of scientific disposal of Municipal solid waste	100%	100% scientific disposal of the inert waste in the allocated landfill site, with proper leachate collection & drainage system. Efficient gas collection system, odour control mechanism and proper green cover giving it an aesthetic look.
Efficiency in redressal of customer complaints	80%	A centrally located GPS tracker and customer care centre for quickly identifying the problematic area and service needs by directing the nearest vehicle/resource to the location, resulting in efficient and timely resolution of complaints.
Extent of cost recovery	100%	The cost recovery will be addressed through levying

in SWM services		of affordable user charges on citizens. (Rs 60-80 for APL & Rs 30-40 for BPL in Municipal Corporations and Municipal Councils and Rs 40 for APL and Rs 20 for BPL in Nagar Parishads)
Efficiency in collection of SWM charges	90%	This will be achieved by rendering high quality service for initial years and once this is institutionalized, it is expected that user charges recovery will not be an issue.

IMPACT ON SLBS

Hazardous & e-waste disposal facilities: Four hazardous and e-waste waste facilities are planned at zone level i.e. in Bhopal, Indore, Jabalpur, and Gwalior. The residential/ industrial hazardous waste and e-waste will be transported to these facilities and will be processed and disposed by relevant technologies. These four projects will be planned as PPP projects with private operator responsible for collection, transportation, processing and disposal of waste.

3.2 SHORT TERM PLAN

Selecting concessionaire, implementing the project and making it completely operational was time consuming and required at least 2-3 years.

Therefore, the State Government decided to give grant to ULBs so that vehicles for door-to-door collection can be purchased and deployed for achieving 100% door-to-door collection in all the 378 ULBs.

For bigger ULBs, grant for procuring Refuse Compactors and other required equipment were also sanctioned. Bigger corporations were asked to implement 100% door-to-door collection by supporting from their own resources.

1,782 Rickshaws, 2,296 Auto Tippers, 63 Backhoe Loaders and 17 Refuse Compactors were deployed for carrying out primary and secondary collection thus achieving 100% collection efficiently. All the ULBs are conducting IEC activities for the citizens, explaining importance of source segregation and not littering of waste on streets and public places.

As far as waste treatment and disposal is concerned, a big gap still persisted. However few smaller ULBs took the initiative and started producing the compost. Larger ULBs started planning for the treatment. As far as landfill operations are concerned it is still at a preliminary stage.

Because of these initiatives by ULBs under the guidance of State's Urban Development Department, Indore and Bhopal stood first and second respectively in the last year's 'Swachh Survekshan' conducted by the Central Government. In addition to Indore and Bhopal, 22 more ULBs of Madhya Pradesh were ranked among the top 100 cleanest towns of India.

In this year's Swachh Survekshan once again Indore and Bhopal have stood First and Second in national rankings. 19 more ULBs are in top 100. All other ULBs of the State have performed creditably in the zonal rankings. Madhya Pradesh as a whole has stood 4th amongst all States of India.

Another important achievement has been the increase in awareness among citizens about the importance of sanitation and waste management.

Image: Photographs represent present status of waste management in ULBs (2017-18)

A. Door to Door Collection



B. Processing:



C. Awareness Campaigns:



4. IMPLEMENTATION OF CLUSTER BASED ISWM PROJECTS

INITIALLY IMPLEMENTED PROJECTS

The Feasibility Study Report (FSR) for the first two projects namely Katni and Sagar was prepared by ICF-GHK, the consulting agency for DFID aided MP Urban Infrastructure Investment Programme (MPUIIP) of Urban Administration and Development Directorate, after collection of data and field visits.

The concept of the project along with the Feasibility Study Report (FSR) was explained to the citizens in open workshops conducted at all ULBs by UADD officials and consultants. After getting approval of ULBs through a resolution, the RFP documents for both the projects were prepared by the consulting teams and the approval of these documents was done by State Level Empowered Committee (SLEC for PPP Projects) headed by Chief Secretary, GoMP.

Transparent bidding process was conducted for both the projects. UADD provided support to ULBs in bidding and an expert team consisting of consultants, UADD officials, experts and ULB officials did the evaluation of bids.

The **Katni** project has become fully operational. In **Sagar**, the primary and secondary collection has been in operation since one and half years; however delay in environmental clearance (EC) has resulted in waste processing being delayed. Now EC has been obtained and the project is expected to be fully operational by December 2018.

Due to high efficiency of waste collection, transportation from all the towns of both the project area, all the cities are clean, littering of waste is minimal and there has been considerable improvement in environmental conditions, which is also shown in the charts for Jabalpur and Sagar (in subsequent sections). The citizens of these cities are not only satisfied with the projects but also cooperating and putting efforts towards success of the project.

An agency, InfraEn, Bangalore has been appointed as the Independent Engineer for monitoring of implementation and Operation & Maintenance (O&M) activities of both the projects.

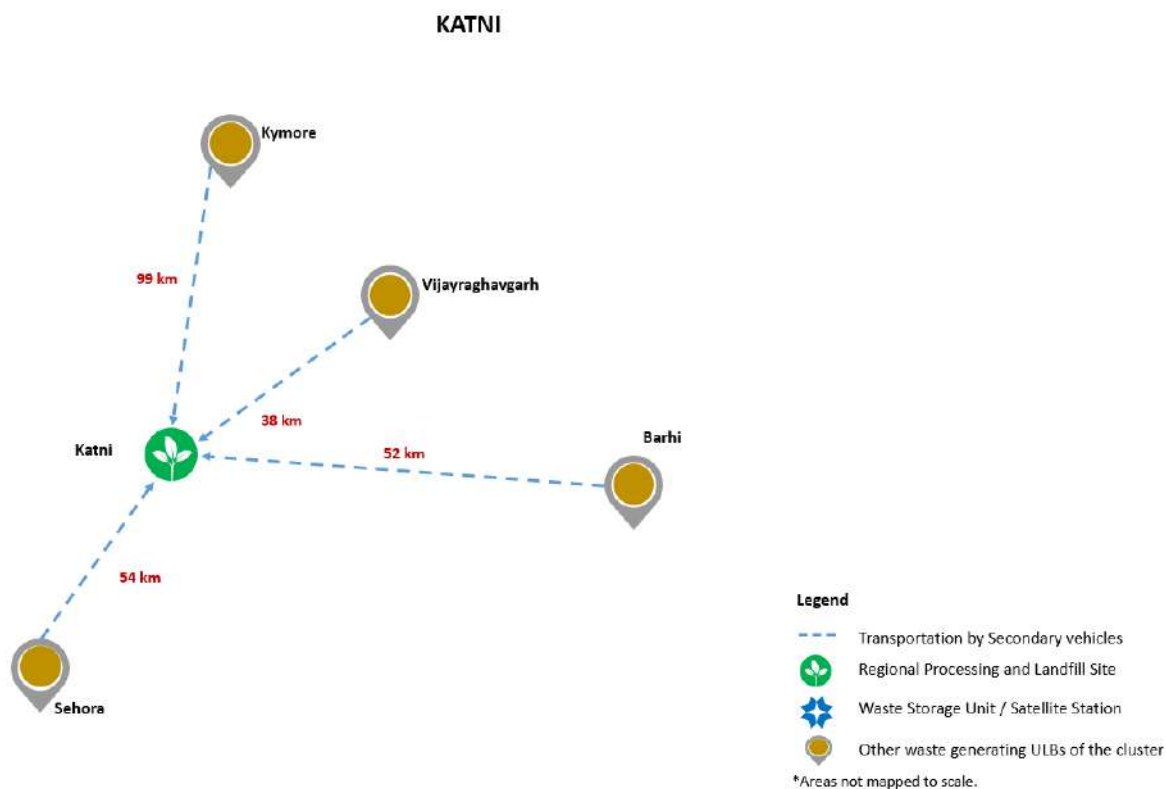
BENEFITS FROM THE INITIATIVE

- Private investment shall increase employment opportunities.
- The drains are not choked thus reducing the generation of mosquitoes.
- Due to cleanliness, environmental conditions have improved and towns have become cleaner.

A brief descriptions of the projects which are operational and were implementation is underway, is being given in the following pages -

CLUSTER: KATNI (WTC)

The image below shows the operational plan for Katni cluster. The proposed project caters to ~95 MT waste/day, collectively from Katni, Sihora, Kymore, Vijayraghavgarh and Barhi. The ISWM Facility is at Katni while the waste storage units are in Sihora, Kymore, Vijaygarhgarh and Barhi for temporary storage of waste (2-3 days) before transporting to ISWM Facility in Katni to minimize the transportation expenses.



CURRENT SCENARIO: KATNI – IN IMAGES



KEY FEATURES: KATNI

Coverage			
State	Madhya Pradesh, India	District	Katni and Jabalpur
Towns:	Katni, Sihora, Kymore, Sihora and Vijayraghavgarh	Population	320,000 (2014)
Total MSW Generated (per day) ~ 95 MT			
Salient Project Features			
Project Components	Door to Door Collection, Transportation, Segregation, Scientific treatment and safe disposal as per MSW Rules 2000 / SWM 2016; User Charge Billing and conducting IEC activities.	Project Cost (Approx.)	INR 35.39 Crores
Implementation Modality	Public Private Partnership – Design, part-Finance, Build, Operate & Transfer	Concession Period	21 years including implementation
Institutional Arrangement	All five ULBs entered into an inter ULB agreement authorizing the bigger ULB to act as lead member of the cluster.	Operational modality	<p>A. A monitoring committee comprising of all Chief Executive Officers of ULBs was authorized through a resolution by ULBs to take all decisions which shall be implemented by the CEO of lead member i.e. Katni.</p> <p>B. To help and monitor day to day activities of</p>

			concessionaire, an agency to be appointed to act as Independent Engineer for the full Concession period.
Project OPEX	Private Operator	Payment Guarantee on Behalf of ULBs	Payment Guarantee from GoMP for payment of tipping fee to Concessionaire.
Waste Processing location	Katni	Land Fill Site (free of all encumbrances)	6.3 Hectare land in Katni
Potential Revenue Streams for Private Operator	Tipping Fee from implementing agency, Sale of products / by-products		

Project has become fully operational since December 2017 and people of towns are benefitted because of cleanliness of the town.

CLUSTER: JABALPUR (WTE)

Collection, transportation, treatment and disposal of waste from the city have begun, and energy is being produced from the waste. The project is fully operational since December 2016 and around 7-8 MW of power is being generated daily.

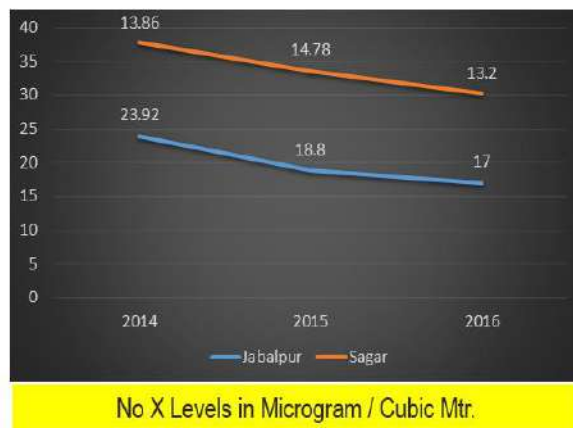
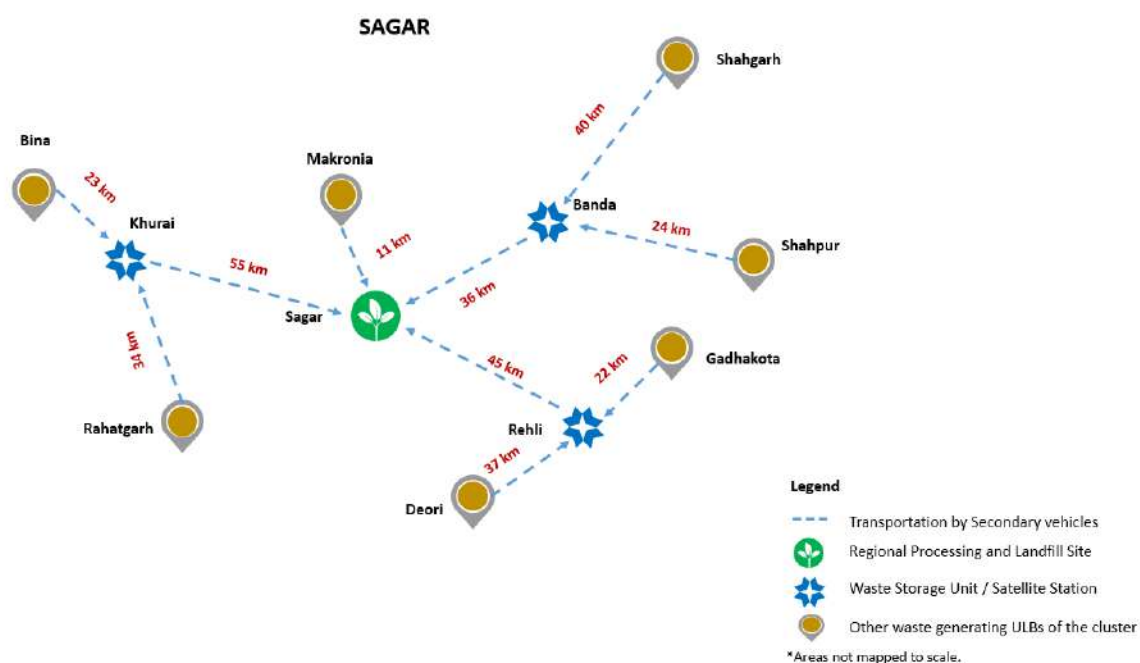


Image: RSPM and NOx Levels in Jabalpur and Sagar

CLUSTER: SAGAR (WTC)

Further, for a cluster with ISWM Facility and Satellite Segregation-cum-Processing units, the image below shows the operational plan for Sagar cluster. The Sagar cluster covers the MSW management in 11 ULBs. In this cluster, an Integrated Solid Waste Management Facility has been planned in Sagar. This ISWM Facility will cater to the waste from Sagar. Further, satellite stations / waste storage facilities have been proposed at Khurai, Rehli and Banda where waste from the neighbouring ULBs will be collected and will be transported to Sagar for processing and scientific disposal. Waste storage units may be planned at each ULBs for temporary storage of waste before transporting it to ISWM facility/ Satellite unit. The estimated cost of the project is 70.54 crore.



C&T is operational in the project area and other components are in advance stages of implementation. The project may become fully operational by December 2018.

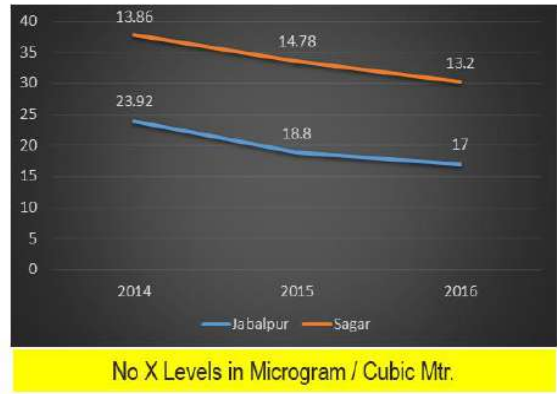
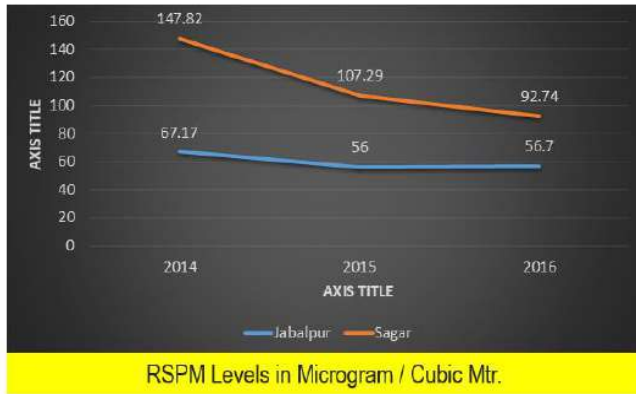
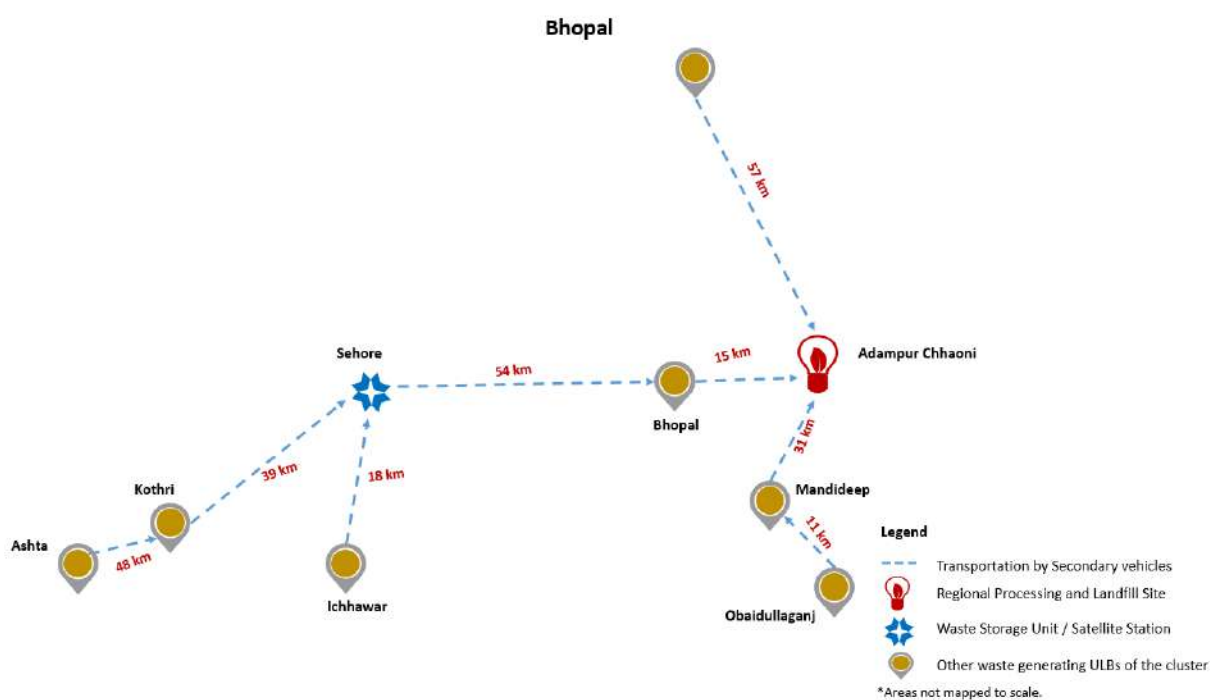


Image: RSPM and NOx Levels in Jabalpur and Sagar

CLUSTER: BHOPAL (WTE)

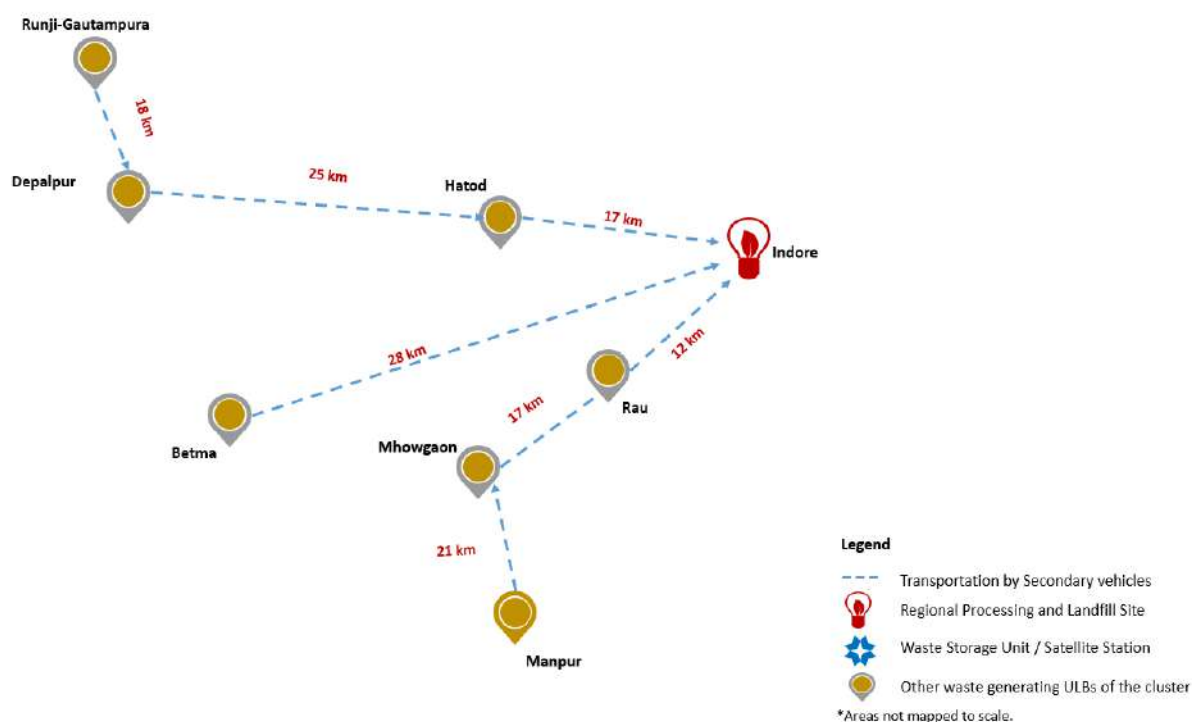
- Towns: Ashta, Berasia, Bhopal, Ichhawar, Kothri, Mandideep, Obedullaganj, Sehore
- Est. Project Cost. (Rs. Cr): 465.76
- Total MSW Generated (TPD): 1,060
- Concession Period: 21 years including implementation
- Implementation Modality: Public Private Partnership
- Institutional arrangement: An inter ULB agreement authorizing the biggest ULB to act as lead member of the cluster.
- Technology for Waste Treatment: Waste to Energy
- Location of ISWM Facility including Landfill site: Adampur Chawni



The project is under implementation.

CLUSTER: INDORE (WTE)

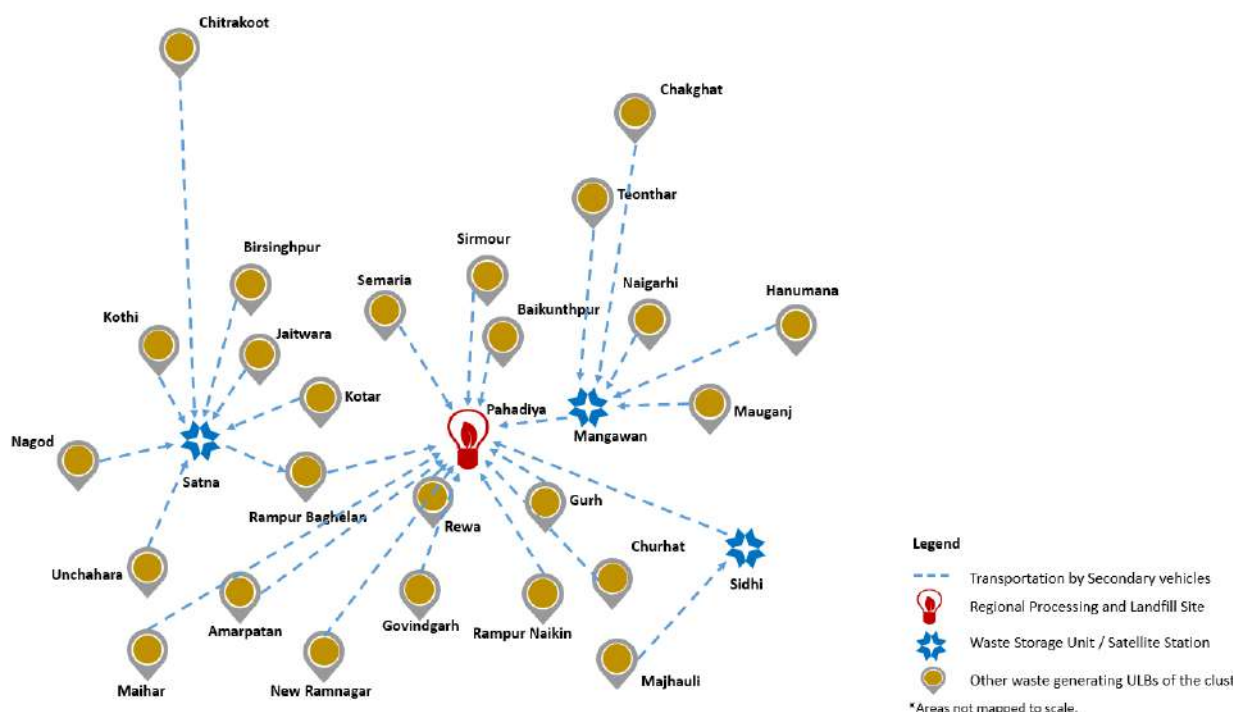
- Towns: Betma, Depalpur, Hatod, Indore, Manpur, Mhowgaon, Rau, Runji-Gautampura
- Est. Project Cost. (Rs. Cr): 470.0
- Total MSW Generated (TPD): 1,010
- Concession Period: 21 years including implementation
- Implementation Modality: Public Private Partnership
- Institutional arrangement: An inter ULB agreement authorizing the biggest ULB to act as lead member of the cluster.
- Technology for Waste Treatment: Waste to Energy
- Location of ISWM Facility including Landfill site: Vil. Devguradiya



The project is under implementation.

CLUSTER: REWA (WTE)

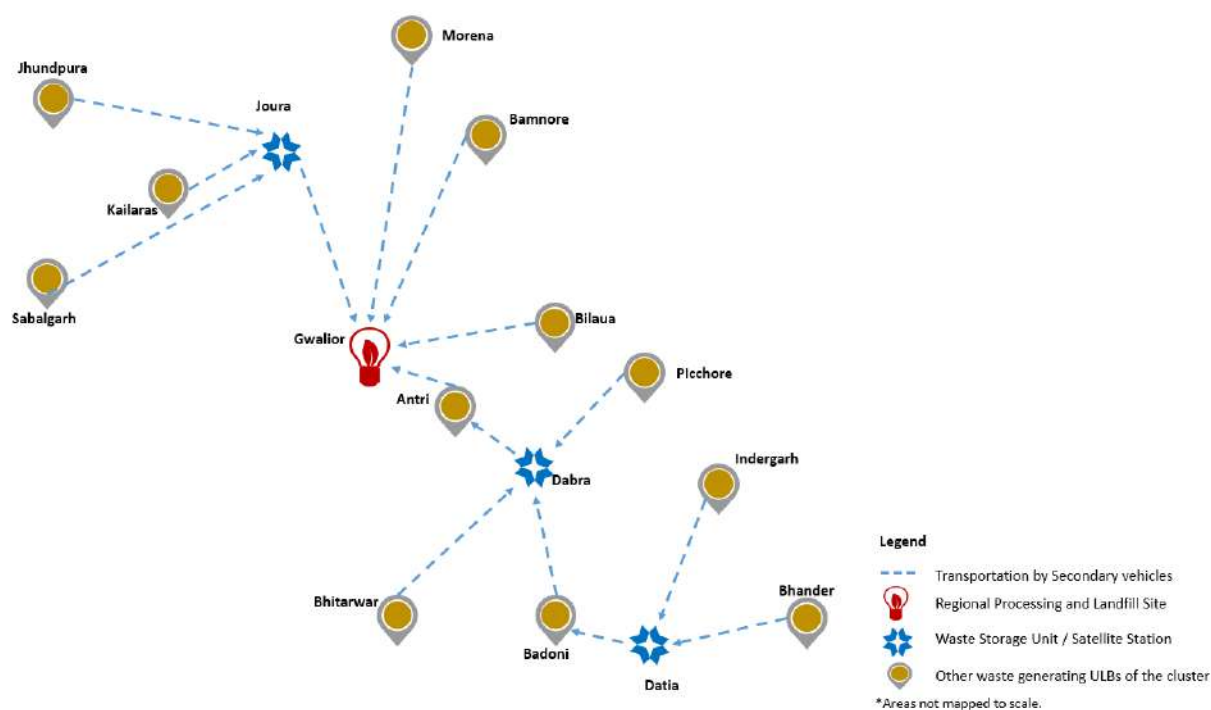
- Towns: Amarpatan, Baikunthpur, Birsinghpur, Chakghat, Chitrakoot, Churhat, Govindgarh, Gurh, Hanumana, Jaitwara, Kotar, Kothi, Maihar, Majhauili, Mangawan, Mauganj, Nagod, Naigarhi, New Ramnagar, Rampur Baghelan, Rampur Naikin, Rewa, Satna, Semaria, Sidhi, Sirmour, Teonthar, Unchahara
- Est. Project Cost. (Rs. Cr): 158.0
- Total MSW Generated (TPD): 340
- Concession Period: 21 years including implementation
- Implementation Modality: Public Private Partnership
- Institutional arrangement: An inter ULB agreement authorizing the biggest ULB to act as lead member of the cluster.
- Technology for Waste Treatment: Waste to Energy
- Location of ISWM Facility including Landfill site: Vil. Padhadiya



The project is under implementation.

CLUSTER: GWALIOR (WTE)

- Towns: Antari, Badoni, Bhandar, Bhitwar, Bilaua, Dabra, Datia, Gwalior, Indergarh, Pichhore, Morena, Jhundpura, Sabalgarh, Bamor, Joura, Kailaras
- Est. Project Cost. (Rs. Cr): 254.0 Cr
- Total MSW Generated (TPD): 606
- Concession Period: 21 years including implementation
- Implementation Modality: Public Private Partnership
- Institutional arrangement: An inter ULB agreement authorizing the biggest ULB to act as lead member of the cluster.
- Technology for Waste Treatment: Waste to Energy
- Location of ISWM Facility including Landfill site: Vil. Kedarpur



The project is under implementation.

OTHER ISWM PROJECTS

The feasibility study reports for Katni, Sagar, Bhopal and Rewa were prepared by the department with the support of DFID funded consulting teams. Later on, for remaining clusters, FSRs were prepared by various consulting agencies deployed by the State Mission Directorate - UADD for SBM.

Out of these 26 projects, energy may be generated in five projects (67-73 MW) and compost and other products may be produced in the remaining 21 projects. The estimated cost of the projects is 2,950.00 crore (approx.). Out of the total costs, more than 1,300 crore of private investments shall be done.

This innovative approach of the State Government was appreciated by the Central government by selecting it among the top 12 innovative projects (out of 830 entries across all sectors in a competition conducted by Prime Minister Office).

The State Government intends to operationalize the Integrated Solid Waste Management Projects in all ULBs by the end of December 2019. This will enable Integrated Solid Waste Management to be implemented in Urban Madhya Pradesh in an effective manner encompassing all components of Solid Waste Management as per SWM rules 2016.

This will result in enhancing cleanliness in the towns thus reducing the number of cases of vector-borne diseases which will eventually improve the quality of life.

Madhya Pradesh may become one of the cleanest States in India after all the cluster-based ISWM projects become operational by the end of December 2019, thus achieving a major objective of Swachh Bharat Mission launched in October 2014.

5. INSTITUTIONAL MECHANISM FOR IMPLEMENTATION OF PROPOSED ISWM PROJECTS

For each of the proposed cluster, an inter-ULB agreement is being signed among the participating ULBs, wherein the ULB contributing the maximum amount of waste and having the sanitary landfill site shall act as the lead ULB and take all steps for implementation of integrated solid waste management projects. The Lead ULB shall perform the following roles and responsibilities for successful execution of the project.

- Providing unencumbered land for landfill site.
- Facilitating the concessionaire with all the necessary clearances and approvals required for the implementation of the project.
- **Appoint Independent Engineer Unit** and arrange for payment of professional fee as per the monthly invoices.
- Interfacing between GoMP and participating ULBs.
- Managing special account created for SWM for all project related transactions with GoMP and participating ULBs.
- Managing escrow account with the concessionaire.
- Performance monitoring of concessionaire and the Management Unit.
- Convening regular meetings of **Monitoring Committee**.

PROJECT MANAGEMENT STRUCTURE

The Management structure comprises the following:

- 1) Monitoring Committee (MC)** – comprising the Chief Executive Officers of Parties to supervise contract management and monitor the performance of Concessionaire and Independent Engineer.
- 2) Independent Engineer (IE)** – a private consultancy organization identified through transparent competitive bidding process by Lead ULBs, for supervision of implementation, operation and maintenance of the Project on a daily basis.

RESPONSIBILITY OF MC

1) During Project Preparation Phase

- a) To ensure that lead ULBs share the signed Concession Agreement with the Parties.
- b) To ensure that Lead ULB shares the signed Contract Documents of IE and IE procured through transparent process.

2) Project Implementation Phase

During the project implementation phase, MC shall do the following:

- a) Meet at least once in a month or more to review the project implementation process.
- b) Issue necessary instruction to Parties to this Agreement for compliance with the provision of Concession agreement from time to time.
- c) Issue necessary instructions/notices to Concessionaire in consultation with IE to ensure compliance with the provisions of this Agreement and Concession Agreement.
- d) Review the appraisal report prepared by IE of the Project Implementation and Operation Plan (PIOP) prepared by the Concessionaire and decide the actions to be initiated based on the recommendations of IE in line with the provision of Concession Agreement for its acceptability and financial implications.
- e) To approve all the payments to be made to concessionaire after IE's recommendations.

3) Project Operation & Maintenance (O&M) Phase

- a) During project operation & maintenance Phase, MC shall meet once in a month and shall decide on following matters:
 - Providing concurrence on actual MSW transported by Concessionaire from the various ULBs Governed by Parties and deviation thereon.
 - Final Payment to be made by Parties and to be deposited in Escrow Account for onward payment to Concessionaire.
 - Taking appropriate action in case of default by either of Party.
 - Penalty or Incentive to be provided to Concessionaire as the case may be

- b) MC can revise the Service Delivery Target provided, if it has been requested by the Party, however those Service Delivery Target cannot be changed if MC opines that those suggested changes will affect the Project performance; and to ascertain the acceptability of suggested changes IE may hire Expert services at its own cost;

RESPONSIBILITY OF INDEPENDENT ENGINEER (IE) AGENCY

IE responsibility shall be the following:

1) DURING PROJECT IMPLEMENTATION PHASE

IE shall undertake detailed appraisal of DPR submitted by Concessionaire and as the case may be, shall advice MC to issue instruction for corrective action to be taken by Concessionaire. IE may follow up for compliance of such instruction and action taken by Concessionaire. IE shall also monitor the implementation of the project as per approved DPR throughout the implementation period.

2) PROJECT OPERATION & MAINTENANCE (O&M) PHASE

- a) IE will undertake routine monitoring of project performance against the Service Level Benchmark (SLB) set in Concession Agreement and achievement or non-achievement of those SLB shall be reported to MC; thus in turn penalty/incentive shall be imposed by MC in consultation with IE as per the Penalty or Incentive Structure set out in Concession Agreement.
- b) IE will review the financial plan, which would include capital investment required for improvement in service delivery, sources of proposed investments funding, estimates of revenue and expenditure for the O&M activities including the options for revenue improvement and expenditure minimization;
- c) IE shall advice MC to set out the payment mechanism thereon to Concessionaire for capital investments, O&M expanses and Tipping Fee payable;

6. PRESENT STATUS OF PROJECTS -

The following table provides status as well as timelines for each of the clusters.

Sr.No	Name of Cluster	No. of ULBs	Est. Waste Generation (TPD)	Type of Processing	Status	Timeline
1	Katni	5	95	Compost	Fully Operational	Since December 2017
2	Sagar	11	185	Compost	Under Implementation	Environmental Clearance received. To be fully operational by December 2018
3	Jabalpur (City)	1	400	Energy	Commissioned	Since December 2016
4	Ujjain (Town)	1	160	Compost	Fully Operational	Since 2016
5	Bhopal	8	1,060	Energy	Under Implementation	To be operational by December 2019
6	Rewa	28	340	Energy	Under Implementation	To be operational by October 2019
7	Indore	8	1,010	Energy	Under Implementation	To be operational by April 2020
8	Gwalior	16	606	Energy	Under Implementation	To be operational by October 2019
9	Khandwa	10	175	Compost	LOI Issued	To be operational by December 2019
10	Jabalpur Cluster	15	108	Compost	LOI Issued	To be operational by October 2019
11	Neemuch	19	103	Compost	LOI Issued	To be operational by December 2019
12	Singrauli	1	91	Compost	LOI Issued	To be operational by December 2019
13	Dewas	24	245	Compost	Retendered Live Tender	To be operational by December 2019
14	Hoshangabad	14	165	Compost	Retendered Live Tender	To be operational by December 2019
15	Balaghat	13	110	Compost	Live Tender	To be operational by December 2019
16	Barwani	22	189	Compost	Live Tender	To be operational by December 2019

17	Betul	8	83	Compost	Live Tender	To be operational by December 2019
18	Bhind	14	156	Compost	Live Tender	To be operational by December 2019
19	Chhatarpur	33	212	Compost	Live Tender	To be operational by December 2019
20	Chhindwara	20	167	Compost	Live Tender	To be operational by December 2019
21	Damoh	7	75	Compost	Live Tender	To be operational by December 2019
22	Guna	10	151	Compost	Live Tender	To be operational by December 2019
23	Ratlam	22	308	Energy / Fuel	Live Tender	To be operational by June 2020
24	Shahdol	16	120	Compost	Live Tender	To be operational by December 2019
25	Shajapur	26	165	Compost	Live Tender	To be operational by December 2019
26	Shivpuri	11	124	Compost	Live Tender	To be operational by December 2019
27	Vidisha	15	167	Compost	Live Tender	To be operational by December 2019
Total	378	6,770				

7. ANNEXURE A – CLUSTER LEVEL DETAILS

The compositions of Clusters, Population (Projected from Census 2011 data) and MSW generation is given herewith.

1 HOSHANGABAD CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
1 Hoshangabad Cluster	Babai	18,078	5
	Budni	18,151	5
	Harda	80,201	23
	Hoshangabad	127,414	37
	Itarsi	107,265	31
	Khirkiya	24,553	7
	Nasrullaganj	25,688	7
	Pipariya	52,727	15
	Rehti	12,539	4
	Seoni-Malwa	32,505	9
	Shahganj	9,190	3
	Sohagpur	27,040	8
	Timarni	24,145	7
	Bankhedi	13,677	4
	Total	573,173	165

2 VIDISHA CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
2 Vidisha Cluster	Badi	21,169	6
	Baraily	37,432	11
	Basoda	84,543	24
	Begamganj	36,750	10
	Gairatganj	19,637	6
	Kurwai	16,724	5
	Lateri	20,349	6
	Raisen	47,690	14
	Sanchi	9,072	3
	Shamshabad	12,234	3
	Silwani	20,111	6
	Sironj	56,651	16
	Sultanpur	11,088	3
	Udaipura	19,693	6
	Vidisha	168,410	48
Total	581,553	167	

3 BHOPAL CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
3 Bhopal Cluster	Ashta	57,433	27
	Berasia	33,424	16
	Bhopal	1,941,873	907
	Ichhawar	16,437	8
	Kothri	11,367	5
	Mandideep	64,420	30
	Obedullaganj	24,670	12
	Sehore	117,835	55
	Total	2,267,459	1,060

4 SHAJAPUR CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
4 Shajapur Cluster	Agar	40,946	11
	Akodia	12,583	3
	Badagaon (465445)*	7,794	2
	Badod	14,939	4
	Biaora	53,015	14
	Boda	10,676	3
	Chhapiheda	9,180	3
	Jirapur	23,459	6
	Kanad	11,293	3
	Khilchipur		

		20,440	6
	Khujner	11,647	3
	Kurawar	24,215	7
	Machalpur	10,233	3
	Nalkheda	18,023	5
	Narsinghgarh	34,912	10
	Pachore	29,585	8
	Pankhedi (Kalapipal)	3,876	1
	Polaykalan	13,248	4
	Rajgarh (465661)*	32,101	9
	Sarangpur	40,426	11
	Shajapur	74,796	20
	Shujalpur	55,317	15
	Soyatkalan	15,962	4
	Susner	17,745	5
	Suthaliya	11,442	3
	Talen	11,427	3
	Total	609,280	166

* ULBs with similar names are now differentiated through PIN Codes in round brackets.

5 BETUL CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
5 Betul Cluster	Amla	32,629	9
	Athner	12,867	3
	Betul	111,585	29
	Betul-Bazar	11,479	3
	Bhainsdehi	12,917	3
	Chicholi	10,024	3
	Multai	32,371	9
	Sarni	93,023	24
	Total	316,895	83

6 GWALIOR CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
6 Gwalior Cluster	Antari	10,744	4
	Badoni	11,133	4
	Bhander	27,217	9
	Bhitarwar	20,622	7
	Bilaua	13,923	5
	Dabra	66,172	22
	Datia	108,295	36
	Gwalior	1,138,655	380
	Indergarh	24,886	8
	Pichhore (475115)		

		13,418	4
	Bamor	35,461	12
	Jhundpura	10,586	4
	Joura	45,520	15
	Kailaras	27,991	9
	Sabalgarh	43,555	15
	Morena	216,498	72
	Total	1,814,676	606

7 BHIND CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
7 Bhind Cluster	Akoda	13,535	4
	Alampur	11,540	3
	Ambah	50,946	14
	Bhind	213,370	58
	Daboh	19,543	5
	Gohad	63,647	17
	Gormi	22,506	6
	Lahar	38,524	10
	Mau	21,756	6
	Mehgaon	23,039	6
	Mihona	18,288	5
	Phupkalan	13,668	4
	Sewda	23,140	6
	Porsa	42,838	12
	Total	576,340	156

8 SHIVPURI CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
8 Shivpuri Cluster	Badarwas	14,655	4
	Badoda	19,910	6
	Karera	30,998	9
	Khaniyadhana	17,145	5
	Kolaras	21,361	6
	Narwar	20,934	6
	Pichhore (473995)	19,575	5
	Sheopur	77,699	22
	Shivpuri	194,355	55
	Vijaypur	18,319	5
	Bairad	4,098	1
	Total	439,049	124

9 GUNA CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
9 Guna Cluster	Aron	30,248	9
	Ashoknagar	88,365	26
	Chachaura-Binaganj	23,606	7
	Chanderi	35,724	11
	Guna	195,389	57
	Isagarh	13,588	4
	Kumbhraj	21,281	6

	Mungaoli	28,284	8
	Raghogarh -Vijaypur	67,129	20
	Shadora	11,469	3
	Total	515,083	151

10 INDORE CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
10 Indore Cluster	Betma	17,277	8
	Depalpur	18,870	8
	Hatod	11,258	5
	Indore	2,151,592	947
	Manpur	8,230	4
	Mhowgaon	32,410	14
	Rau	38,935	17
	Runji-Gautampura	15,749	7
	Total	2,294,321	1,010

11 KHANDWA CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
11 Khandwa Cluster	Bhikangaon	17,513	5
	Burhanpur	227,733	64
	Chhanera	23,814	7
	Khandwa	216,774	61

	Mundi	13,919	4
	Nepanagar	32,053	9
	Omkareshwar	10,867	3
	Pandhana	14,788	4
	Sanawad	41,835	12
	Shahpur (450445)	21,294	6
	Total	620,590	175

12 BARWANI CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
12 Barwani Cluster	Anjad	28,389	9
	Alirajpur	30,775	9
	Barwaha	28,573	9
	Barwani	59,938	18
	Bhabra	11,844	4
	Dahi	9,189	3
	Dhamnod (454552)	34,657	10
	Dharampuri	17,670	5
	Jobat	12,933	4
	Karahi & Padlya Khurd	8,315	2
	Kasrawad	24,567	7
	Khargone	125,429	38
	Khetia	17,002	5
	Kukshi	30,594	9
	Maheshwar	26,361	8
	Manawar	32,821	10

	Mandav	11,508	3
	Mandleshwar	13,329	4
	Palsud	10,921	3
	Pansemal	13,138	4
	Rajpur	22,620	7
	Sendhwa	60,997	18
	Total	631,570	189

13 DEWAS CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
13 Dewas Cluster	Bagli	11,134	3
	Bhaurasa	13,138	4
	Dewas	312,681	96
	Hatpiplya	18,811	6
	Jawar	8,862	3
	Kannod	19,162	6
	Kantaphod	11,236	3
	Karnawad	12,166	4
	Khategaon	27,443	8
	Loharda	9,937	3
	Maksi	21,693	7
	Nemawar	6,456	2
	Pipalrawan	10,423	3
	Satwas	15,235	5
	Sawer	17,440	5
	Sonkatch	17,867	5

	Khachrodpop	34,191	10
	Nagda	100,039	31
	Unhel	14,744	5
	Mahidpur	31,650	10
	Makdon	11,658	4
	Tarana	24,908	8
	Badnagar	36,438	11
	Tonk Khurd	8,616	3
	Total	795,928	245

14 KATNI CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
14 Katni Cluster	Barhi	15,060	4
	Katni (MURwara)	239,609	68
	Kymore	20,888	6
	Sihora	47,567	14
	Vijayraghavgarh	9,040	3
	Total	332,164	95

15 BALAGHAT CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
15 Balaghat Cluster	Baihar	17,980	6
	Balaghat	90,992	28
	Bamhani	11,086	3
	Bichhiya	11,260	3
	Dindori	23,026	7
	Katangi (481445)	17,436	5
	Lanji	14,641	5
	Malajkhand	36,906	11
	Mandla	59,537	18
	Nainpur	26,904	8
	Niwas	8,907	3
	Shahpura (481990)	11,873	4
	Waraseoni	29,690	9
	Total	360,238	110

16 CHHINDWARA CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
16 Chhindwara Cluster	Amarwara	15,271	4
	Badkuhi	10,685	3
	Barghat	13,067	3
	Bichua	1,445	-
	Chand	13,296	4
	Chandameta- Butaria	17,815	5
	Chaurai Khas	13,991	4
	Chhindwara	189,036	50
	DaMUa	26,633	7
	Dongar Parasia	46,204	12
	Harrai	11,879	3
	Jamai	24,387	6
	Lakhnadon	18,684	5
	Lodhikheda	10,745	3
	Mohgaon	10,701	3
	Neuton Chikhli Kalan	10,626	3
	Pandhurna	49,112	13
	Piplanarayanwar	9,282	2
	Sausar	29,653	8
	Seoni	110,519	29
	Total	633,031	167

17 JABALPUR CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
17 Jabalpur Cluster	Barela	13,628	4
	Bhedaghat	7,189	2
	Chichali	10,212	3
	Gadarwara	51,407	16
	Gotegaon	30,317	10
	Kareli	32,320	10
	Katangi (483105)*	20,561	6
	Majholi	14,265	4
	Narsinghpur	64,757	20
	Panagar	30,163	10
	Patan	15,792	5
	Saikheda	11,648	4
	Salichauka (Babai Kalan)	14,280	5
	Shahpura (483119)*	14,688	5
	Tendukheda (487770)*	14,122	4
	Total	345,349	108

* ULBs with similar names are now differentiated through PIN Codes in round brackets.

18 NEEMUCH CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
18 Neemuch Cluster	Bhanpura	21,013	6
	Garoth	15,122	4
	Shamgarh	24,637	7
	Suwasara	13,304	4
	Malhagarh	8,332	2
	Narayangarh	10,191	3
	Piplya Mandi	15,070	4
	Singroli	9,523	3
	Ratangarh	7,994	2
	Diken	7,951	2
	Athana	6,456	2
	Jawad	17,129	5
	Nayagaon	6,699	2
	Sarwania Maharaj	6,737	2
	Jiran	11,518	3
	Neemuch	128,561	37
	Kukdeshwar	11,956	3
	Manasa	26,551	7
	Rampura	18,364	5
	Total	367,108	103

19 RATLAM CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
19 Ratlam Cluster	Alot	26,041	8
	Badawada	9,395	3
	Dhamnoda (457001)	9,007	3
	Jaora	80,891	24
	Jhabua	38,609	11
	Meghnagar	13,962	4
	Namli	10,555	3
	Petlawad	16,386	5
	Piploda	8,957	3
	Ranapur	13,359	4
	Ratlam	286,077	85
	Sailana	12,947	4
	Tal	16,104	5
	Thandla	17,015	5
	Mandsaur	152,984	46
	Nagri	7,596	2
	Sitamau	15,179	5
	Pithampur	136,282	41
	Dhar	101,420	30
	Rajgarh (457001)	25,708	8
	Sadarapur	7,876	2
	Badnawar	22,588	7
	Total	1,028,938	308

20 REWA CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
20 Rewa Cluster	Amarpatan	20,960	7
	Baikunthpur	11,103	4
	Birsinghpur	15,485	5
	Chakghat	11,531	4
	Chitrakoot	25,179	8
	Churhat	16,157	5
	Govindgarh	11,390	4
	Gurh	15,775	5
	Hanumana	18,111	6
	Jaitwara	10,459	3
	Kotar	8,121	3
	Kothi	9,495	3
	Maihar	43,403	14
	Majhauri	12,842	4
	Mangawan	14,794	5
	Mauganj	28,531	9
	Nagod	24,371	8
	Naigarhi	11,235	4
	New Ramnagar	23,349	8
	Rampur Baghelan	14,728	5
	Rampur Naikin	12,890	4
	Rewa	254,480	83
	Satna	305,583	99

	Semaria	14,520	5
	Sidhi	58,671	19
	Sirmour	12,827	4
	Teonthar	18,400	6
	Unchahara	19,915	6
	Total	1,044,305	340

21 SHAHDOL CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
21 Shahdol Cluster	Amarkantak	9,088	2
	Anuppur	21,489	6
	Beohari	26,506	7
	Bijuri	35,293	10
	Burhar	20,830	6
	Chandia	17,160	5
	Dhanpuri	48,763	13
	Jaisinghnagar	8,891	2
	Jaithari	9,067	2
	Khand	11,504	3
	Kotma	32,077	9
	Nowrozabad	23,631	6
	Pali	24,107	6
	Pasan	30,720	8
	Shahdol	93,606	25
	Umaria	35,759	10
	Total	448,491	120

22 SINGRAULI CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
22 Singrauli Cluster	Singrauli	237,853	91
	Total	237,853	91

23 SAGAR CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
23 Sagar Cluster	Banda	33,393	10
	Bina- Etawa	69,684	20
	Deori	27,680	8
	Garhakota	35,340	10
	Khurai	55,191	16
	Rahatgarh	34,056	10
	Rehli	32,752	9
	Sagar	296,490	86
	Shahgarh	17,602	5
	Shahpur (470669)*	14,760	4
	Makronia	23,861	7
	Total	640,809	185

* ULBs with similar names are now differentiated through PIN Codes in round brackets.

24 DAMOH CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
24 Damoh Cluster	Damoh	150,710	43
	Hatta	35,059	10
	Hindoria	17,279	5
	Patera	10,720	3
	Patharia	22,706	7
	Buxwaha	10,216	3
	Tendukheda (470880)	15,549	4
	Total	262,239	75

25 CHHATARPUR CLUSTER

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
25 Chhatarpur Cluster	Bada Malhera	19,800	5
	Badagaon (471405)	10,024	2
	Baldeogarh	9,804	2
	Barigarh	9,630	2
	Bijawar	22,152	5
	AJAY GARH	16,656	4
	Amanganj	13,886	3
	Devendra nagar	12,785	3
	Kakarhati	8,452	2

	Pawai	14,465	3
	Panna	159,091	38
	Chandla	13,864	3
	Chhatarpur	153,482	36
	Garhi - Malhera	14,713	3
	Ghuwara	14,364	3
	Harpalpur	20,009	5
	Jatara	18,897	4
	Jeron Khalsa	10,179	2
	Kari	11,241	3
	Khajuraho	26,437	6
	Khargapur	15,996	4
	Laundi	23,760	6
	Lidhora Khas	14,010	3
	Maharajpur	25,192	6
	Niwari	25,619	6
	Nowgong	43,822	10
	Orchha	12,431	3
	Palera	18,890	4
	Prithvipur	29,031	7
	Rajnagar	15,392	4
	Satai	11,438	3
	Tarichar Kalan	8,287	2
	Tikamgarh	85,426	20
	Total	909,225	212

26 JABALPUR CITY

Name of Cluster	Town	Population (2015)	MSW Generation in TPD (2015)
26 Jabalpur City	Jabalpur	1,154,715	400
<p>Jabalpur City Project is Standalone project only for Jabalpur City. Cities of Jabalpur Cluster are formed into Jabalpur Cluster and Bid is invited</p>			

GLOSSARY

S. No.	Term	Explanation
1	APL	Above Poverty Line
2	BPL	Below Poverty Line
3	CAGR	Compound Annual Growth Rate
4	CMO	Chief Municipal Officer
5	CPCB	Central Pollution Control Board
6	DBFOT	Design, Build, Finance, Operate and Transfer
7	DFID	Department for International Development
8	DPR	Detailed Project Report
9	DTDC	Door to Door Collection
10	EC	environmental clearance
11	EHS	Environment Health and Social
12	FSR	Feasibility Study Report
13	GoI	Government of India
14	GoMP	Government of Madhya Pradesh
15	IE	Independent Engineer
16	IEC	Information, Education and Communication
17	ISWM	Integrated Solid Waste Management
18	MC	Monitoring Committee
19	MPUIIP	MP Urban Infrastructure Investment Programme
20	MSW	Municipal Solid Waste
21	NGT	National Green Tribunal
22	NN	Nagar Nigam
23	O&M	Operations & Maintenance
24	PIOP	Project Implementation and Operation Plan
25	PPP	Public Private Partnership
26	RDF	Refuse Derived Fuel
27	SBM	Swaccha Bharat Mission
28	SLB	Service Level Benchmark
29	SLEC	State Level Empowered Committee
30	SPCB	State Pollution Control Board
31	SWM	Solid Waste Management
32	TPD	Tonne Per Day
33	UADD	Directorate of Urban Administration & Development
34	ULBs	Urban Local Bodies
35	VGF	Viability Gap Funding
36	WTC	Waste to Compost
37	WTE	Waste to Energy

Madhya Pradesh State Environment Policy 1999



Department of Environment



Government of
MADHYA PRADESH



Preface

Having the largest geographical area in the country, forest cover and natural resources in abundance, Madhya Pradesh has often been called a rich State with poor people. In order to alleviate poverty and backwardness of the State, development activities are being pursued with vigor. Therefore, over the years, there has been considerable pressure on the environment, the alarming consequences of which are becoming evident in increasing proportions in certain areas of the State.

Since the adoption of Madhya Pradesh State Environment Policy in 1982, dimensions of environmental concerns have widened significantly and now it is imperative that a comprehensive State Environment Policy be evolved to facilitate development efforts in a liberalized economic environment, yet in a manner which is not detrimental to the environment.

Hopefully, the policy will pave the way for sustainable development by laying down guidelines which will help in weaving environmental considerations into the common man's life style and process of development.

(Digvijay Singh)
Chief Minister Madhya Pradesh

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Preamble

- 1.1 Life obtains its sustenance from the environment. The quality of life is linked with the quality of environment. Therefore, it is necessary to ensure that the demand on the environment does not exceed its present and future carrying capacity. Such a concept of environmental conservation has been an integral part of Indian culture since time immemorial.
- 1.2 Provision for environmental protection -has been laid down in the Directive Principles of State Policy in the Constitution of India by assigning the duties for the State and all citizens through Article 48A and Article 51A (g) which state that the `State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife in the country' and `to protect and improve the natural environment including forests, lakes and rivers and wildlife, and to have compassion for the living creatures'.
- 1.3 The progressive pressure on the environment witnessed in the recent past has worsened the standard of living of the vast multitude of people who are directly dependent on natural resources. In this context, it is imperative to give a new dimension to the environmental conservation programme incorporating action plans in compliance of national and international commitments.
- 1.4 The State Environment Policy seeks to lay down guidelines that will facilitate development while ensuring environmental conservation yet without hampering the present and future development imperatives.
- 1.5 It shall be the endeavour of the State and its subordinate State agencies to implement the policy document being, enunciated.

2.0 Challenges & Threats

- 2.1 Accelerated pace of development in developing economies is largely dependent on rapid consumption of natural resources. Thus, the development process itself is often responsible for most of the visible environmental problems. Such a process is catalyzed by those sections of society who are economically more advanced. However, the problems arising from conditions of poverty and development are probably more critical for a country like India, as these relate to a large section of the country's population. The challenge is that of adapting to modes of sustainable development.

- 2.2 Population is an important resource for development, yet it is a major source of environmental degradation when it exceeds the threshold limits of the support systems, i.e. its carrying capacity. Madhya Pradesh has 66.14 million population, which is 7.8% of the total population of India. During 1981-91, the growth rates of urban and rural areas in the State were higher than the all India average. Growth rate for urban and rural population were 44.98 and 22.11% respectively as against all India figures of 36.19 and 19.71%. Though the present population density of M P is still lower than the national average, the alarming growth rate calls for immediate action on environmental issues driven by increasing human number.
- 2.3 Though the recorded forest area of the State is 34.84% of its total geographical area, as against 19.5% for the country, the forest area has decreased at the rate of 473 sq.km. per year from 1956 to 1994. Besides rapid degradation, the uneven distribution of forests in the State (Northern and Western parts have very poor forest cover) also calls for a rational forest management strategy.
- 2.4 It has been forecast that bio-diversity based industrial activities such as pharmaceuticals, cosmetics, seeds, food processing, waste treatment etc. would come to account for a third or more of the world economy in the 21st Century. India, being one of the world's top 12 mega-diversity countries, is likely to experience growth of such industries led by multinational corporations, who might patent, exploit and may even cause extinction of endemic species. Though there is no designated hot spot of bio-diversity in Madhya Pradesh, there are a number of potential Biosphere Reserves fit for in situ conservation of its biological wealth -i.e. flora and fauna. Therefore; the region too is likely to experience bio-diversity based industrial growth in future. Such growth may not only affect biological wealth but also the local people, whose sustenance largely depend on the availability of such resources. Since the forests are the main store-house of gene pool, there is greater need for both intensive and extensive efforts for bio-diversity conservation in consonance with National commitment under Bio-diversity Convention (1992), National Forest Policy (1988 and DNCED - 1992 Agreement on Principles of Sustainable Development of Forests.
- 2.5 Nearly 44.33% of-the land of the entire State is utilized for agriculture with a few variations every year which to a large extent depends upon the onset of monsoon and rainfall variability. Agriculture dominates the State's economy as it provides more than 40.0 % of the net domestic product of the State, and employment to 76.2°/a of the working population. However, migration of rural population for gainful employment is. causing the expansion of

cities requiring diversion of agricultural land. In addition, the development projects also require diversion of productive agricultural land thus reducing gross agricultural production. To increase food production, intensive agriculture based on high yielding varieties, chemical fertilizers and pesticides is being increasingly practiced. However, these practices have brought in various problems, which include salinity of land, pesticide resistance in insect pests and pollution of water resources. Therefore, there is need for ecological agriculture based on environment-friendly frontier technologies, i.e., agriculture based on bio-fertilizer, bio-pesticides which are specific and biodegradable, proper water management practices etc.

- 2.6 The State has about 3.45% of cultivable wasteland and another 9.96% of the total area is not available for cultivation. These include degraded forests, ravines, mined-out and water-logged areas. A significant portion of this land could be put to productive purposes through reclamation and integrated land management practices, i.e. through soil and water conservation techniques and afforestation, possibly through joint forest management.
- 2.7 Madhya Pradesh has 48.2 million domesticated animal population, which constitute about 9.24 % of the total domesticated animal population of the country. But only 6.1% of the geographical area of the State is under pasture, which is not enough to sustain this animal population. Moreover, while the animal population is increasing, the grazing land has reduced to 27.09 lakh ha in 1992-93 on account of diversion for agriculture, industries, townships, roads and railways. Consequently about 22 million cattle is reported to graze in the forest areas also. Influx of cattles from neighbouring states during the scarcity period aggravates the problem. These problems have to be tackled through regulated entry of cattles from neighbouring states in drought prone areas as well as through a carrying capacity based animal husbandry programme.
- 2.8 Madhya Pradesh is the second richest state in mineral resources. The exploitation of mineral resources is the economic backbone of the State as well as a major cause of environmental degradation like loss of forest cover and cropland, accelerated erosion, silting of water bodies, air and water pollution etc.

The mineral exploitation in the State has induced a steady environmental degradation over the last 100 years. As on 01-01-94 there were 1273 mineral concessions spread over an area of 1.92 lakh ha of leasehold. Over the years, the value of minerals produced increased manifold, i.e. from Rs.13.06 crores in 1956 to 3312.32

- crores in 1993-94. The major players in the exploitation of mineral resources in the State, for coal, iron-ore, copper, bauxite, etc are Govt.of India under takings. The open cat mining by them in places like Korba, Bailadila and Malanjkhand has caused large scale destruction of some of the best forests of the country. Such adverse impact of mineral exploitation needs to be compensated for on polluter pays principle, wherein State should have a major say in determining such compensations.
- 2.9 The State Housing Policy has provided for sustainable development of urban centres with proper civic facilities. However, relative poverty, unemployment, a rapid growth of population, high cost of land and buildings and restrictive controls on development which led to a mismatch between affordability for housing and supply of housing have compelled a large number of urban people to live in substandard housing and slums with unhealthy living conditions. These settlements are devoid of adequate and safe water supply, sewage and drainage and waste disposal facilities.
- 2.10 The State with 5 major river systems, viz Narmada, Tapti, Mahanadi, Chambal and Indravati, has one of the best watersheds of the country. Its wetlands have traditionally been the life line of agrarian societies, specially in Chhattisgarh areas. Unfortunately, our unique wetlands are facing tremendous ecological stress primarily because they are visualized only as a source of water, ignoring their vitality as a holistic biotic system. Incidentally, some of the pockets of major mineral resources are located in the highly fragile origin points of our rivers. Bauxite mining has led to the rapid denudation of the Maikal ranges, the most important watershed in the country, from where rise the Narmada, the Sone(which contributes the largest volume of water to the Ganges) and the Hasdeo, a tributary of the Mahanadi. Extensive deforestation in the hilly regions of the State with consequent erosion of valuable top soil, is not only threatening the livelihood and security of inhabitants of these areas, but is also causing serious damage down stream. Chambal and Tawa Command Areas area facing water logging because of an inadequately planned irrigation system, while the water table is receding because of over exploitation of ground water in several areas of Malwa and Nimar. Urban water bodies which have been climatizers, are degenerating due to anthropogenic pressures. By virtue of its central location, the State is bound to face the issues of exploitation and degradation of inter-state river systems also.
- 2.11 Industrialization in Madhya Pradesh has mainly been driven by its mineral resource. Mining and processing activities have caused severe environmental problems. Besides, Agro-based industries,

like distilleries, paper and pulp, etc are the main source of pollution of water bodies. The foot-loose industries are also endemically located in areas like Indore, Raipur, Gwalior, Bhopal and Jabalpur. Industrialization is also the driving force behind urbanization, over congestion and excessive pollution, and diversion of population and economic resources from the rural areas on the other hand. Madhya Pradesh has witnessed the worst chemical disaster in the form of Bhopal has tragedy which has been instrumental in creating tremendous environmental awareness all over the world. The problem of common man is compounded in this whole scenario of energy, environment and development imbalance, calling for integration of environmental consideration with industrial development.

- 2.12 The decennial growth rate (44.98%) of the urban population of the state during 1981-91 was more than the national figure of 37.19%, which is more than double the rate of rural population growth (22.11%). The growth rate in industrialized districts like Indore has been almost 300% higher, i.e., 470 person per sq.km than the average density of the State (i.e. 149 per sq.km). The growth of population in urban areas is driven mainly by the influx of migratory population from villages for gainful employment. Such a rapid growth of town leads to slum expansion, congestion, loss of greenery and urban water bodies, unsanitary conditions, solid waste generation, inadequacy of basic amenities, etc. The problem needs to be addressed at the recipient point through well planned urban infrastructural development and at the source of influx through rural employment generation.
- 2.13 The State being the highest producer of coal in the country, has a major role to play in fossil fuel based energy production and mitigation of consequent contribution to global warming.
- 2.14 Though the state policy for rehabilitation of oustees has addressed the issue on economic and anthropogenic basis, there can not be one to one relationship between the ecology and economy of one habitat to another. Hence, the issue of rehabilitation must be considered with relation to over all environmental and social impact analysis.
- 2.15 The current trend of over exploitation and ecological degradation calls for curb on population growth, both human and livestock to contain the debilitating impact of demographic pressure on ecosystems. The environmental problems induced by poverty call for accelerated pace of development; however, the sustainability of the development process can hardly be ignored. The causes and effects of environmental degradation are often interwoven in

complex webs of social, technological and environmental factors. And as such it is difficult to clearly delineate the causes and consequences of environmental degradation in terms of a simple one to one relationship.

3.0 Action Taken

Consequent upon the enhanced awareness after Stockholm Conference on Human Environment in 1972, various regulatory and promotional measures have been taken for environmental protection and sustainable development in the country and in the State, the major ones of which are listed below. The responsibility of implementing most of the Central Acts lies on the State Government.

3.1 Policies

- i. The National Forest Policy, 1988
- ii. The National Water Policy, 1990
- iii. Indian National Policy Statement for Abatement of Pollution, 1992
- iv. National Conservation Strategy and Statement on Environment and Development, 1992
- v. Madhya Pradesh Industrial Policy and Action Plan, 1994
- vi. Madhya Pradesh Housing Policy, 1995
- vii. Madhya Pradesh Mineral Policy, 1995
- viii. Madhya Pradesh Tourism Policy, 1995
- ix. Madhya Pradesh Rehabilitation Policy (Guiding Principles of State Policy for Equitable and Sustainable Development), 1996.

3.2 Legal

- i. The Indian Forest Act, 1927
- ii. The Motor Vehicles Act, 1939, amended in 1988
- iii. Factories Act, 1948, amended in 1987
- iv. The M P Public Health Act, 1949
- v. The M P Control of Music & Noise Act, 1951

- vi. The M P Municipal Corporation Act, 1956; The Municipalities Act, 1961; and the M P Nagar Palik Vidhi (Sansodhan) Adhiniyam, 1995
- vii. Mines and Minerals (Regulation and Development) Act 1957, amended in 1986
- viii. The Wild-life (Protection) Act, 1972, amended in 1983, 1986 and 1991
- ix. The M P Nagar Tatha Gram Nivesh Adhiniyam, 1973 amended in 1994
- x. The Water (Prevention and Control of Pollution) Act, 1974, amended in 1988
- xi. The M P Slum Area (Improvement & Clearance) Act, 1976
- xii. The Water (Prevention and Control of Pollution) Cess Act, 1977, amended in 1991
- xiii. The Forest (Conservation) Act, 1980, amended in 1988
- xiv. The Air (Conservation) Act, 1980, amended in 1988
- xv. The Air (Prevention and Control of Pollution) Act, 1981, amended in 1987
- xvi. The Environment (Protection) Act, 1986
- xvii. The Public Liability Insurance Act, 1991, amended in 1992
- xviii. National Environmental Tribunal Act, 1995.

3.3 Institutions

- i. State Environmental Council
- ii. Department of Housing & Environment
- iii. Environmental Planning & Coordination Organisation
- iv. Directorate of Town & Country Planning
- v. M P Pollution Control Board
- vi. Disaster Management Institute
- vii. Department of Forest

- viii. Department of Agriculture
- ix. M P Council of Science & Technology
- x. State Wildlife Advisory Board
- xi. Urja Vikas Nigam
- xii. Rajeev Gandhi Sanitation Mission
- xiii. Rural Development Department-Development of Watershed Area & Wasteland
- xiv. Regional Museum of Natural History
- xv. Water and Land Management Institute
- xvi. State Forest Research Institute
- xvii. Department of Water Resources Development
- xviii. Department of Public Health Engineering

3.4 **Natural Resource Conservation**

- I. Participation in National Wetland Conservation programme by formulation and implementation of Wetland Conservation scheme for urban water bodies through out the State, including implementation of Bhoj Wetland Project, funded through OECF loan.
- II. Watershed and Wasteland development through public participation under Employment Assurance Scheme (EAS) & under Drought Prone Area Programme of Rural Development Department.
- III. Restriction of diversion of forest land for non-forest purposes under the Forest (Conservation) Act, 1980.
- IV. Implementation of Joint Forest Management and Bio-diversity conservation programme in the State as per commitment under New Forest Policy, 1988.
- V. Establishment of network of 11 National Parks and 34 Sanctuaries including 5 Tiger Reserves and formulation of project documents for potential Biosphere Reserves.
- VI. Implementation scheme for Urban forestry and degraded forests

- VII. Environmental Impact Analysis and rehabilitation of oustees of River Valley Projects.
- VIII. Identification and development of wastelands
- IX. Eco-development of ravines
- X. Implementation of the provisions of Mines & Minerals (Regulation & Development) Act, 1957 (amended in 1986) related to environmental protection including Environmental Management Plan (EMP).
- XI. Flood and Drought prone area programmes
- XII. Preparation of comprehensive document on Environmental Status of the State.

3.5 Measures for Impact Reduction of Development of Projects & Pollution Control

- I. Publication of Environmental Guidelines for siting of polluting industries
- II. Establishment of procedure for Environmental Impact
- III. Enforcement of standards and system for environmental audit for polluting and hazardous industries
- IV. On-site and off-site emergency plans for hazardous industries
- V. Implementation of National River Action Plan to prevent pollution of the major rivers and to restore their water quality.
- VI. Identification of environmental pressure areas and points
- VII. Fiscal incentives for adoption of low waste and no-waste technologies
- VIII. Declaration of whole of the State as pollution control area
- IX. Establishment of water and air quality monitoring stations in selected areas.
- X. Documentation of status of pollution and impact there of.

3.6 Training, Awareness & Other Activities

- i. Implementation of National Environmental Awareness Campaign in the State as Regional Resource agency of Govt. of India
- ii. Training programmes, workshops and seminars for building up professional competence and for creation of awareness
- iii. Constitution of District Paryavaran Vahinis and Environmental Conservation Corps as voluntary action groups
- iv. Surveys and Research
- v. Preparation of Environmental Status Report of the State periodically
- vi. Conservation of sensitive areas around historical monuments
- vii. Promotion of Non-conventional energy

4.0 Goal

Integrated conservation and improvement of environment to ensure sustainable development.

5.0 Agenda

- i Each sectoral policy will promote the cause of environmental conservation and no sectoral policy will be in conflict with the State Environment Policy.
- ii Development projects will ensure environmental conservation.
- iii Promote positive intervention through public awareness and participation.
- iv Encourage Research and Development in eco-technology and environmental conservation.
- v Develop man-power and appropriate organizational structure for integrated environmental management.
- vi Integrated management of ecosystem to ensure conservation of biological diversity, gene-pool and other resources, viz., land, air and water.

6.0 Strategies for Action

6.1 Check on Demographic Growth

Promote family welfare and female literacy programmes with emphasis on environmental sanitation, health, hygiene and social status of women.

6.2 Natural Resources Conservation (Life Support System)

6.2.1 Water

- i. Encourage recycling of waste water and optimise conjunctive use of ground and surface water.
- ii. Water budgeting for rational allocation for domestic, agricultural, industrial and other uses; and for rural and urban populations.
- iii. Measures against over exploitation of surface and ground water.
- iv. Building of a network for assessment and monitoring of surface and ground water quality.
- v. Conservation of wetlands for ensuring sustainable ecological and economic benefits.
- vi. Ensure a system for integrated management of water resources.
- vii. Measures against disposal of dead bodies and inflow of chemical fertilizers and pesticides into the water bodies.
- viii. Encourage and improve traditional methods of rain-water harvesting and storage
- ix. Maintenance of green buffer zone at the fringe of water bodies
- x. Ensure minimum required flow in the down-stream of dams

6.2.2 Land

- i. Adoption of a rational land use policy.
- ii. Diversion of agricultural land for non-agricultural purposes only when it is absolutely necessary.
- iii. Improvement of water-logged and salt-affected lands and command area.

- iv. Regulate over-grazing and ensure stall feeding in critical areas for minimizing the impact of over-grazing and consequent land degradation.
- v. Conservation of pasture lands.
- vi. Ensure public participation in landuse planning, wasteland regeneration, afforestation, soil conservation programmes etc.
- vii. Measures to ensure sustainable use of community land.
- viii. Restoration and reclamation of degraded areas including ravines, weed infested areas, mined areas, over-grazed lands and degraded forests

6.2.3 Biomass & Biodiversity

- i Inventorisation of eco-sensitive zones, biological resources and ethnobiological systems.
- ii Creation of protected area network, maintenance of forest corridors between them, and proper rehabilitation of affected rural/tribal population.
- iii Regulatory protection of genetic resources with emphasis on indigenous, threatened and endangered species, to be supported by the establishment of a Regional Genetic Resource Centre.
- iv Discourage monoculture practices and restrict introduction of exotic species without adequate investigation.
- v Encourage biological regeneration of non-forest waste land areas by private sector and Panchayat institutions especially for fuel wood, fodder and timber for rural masses.
- vi Incentive for development of alternatives to reduce dependence on fuel wood and for raising bamboo and other species providing small timber for local home construction and agricultural implements
- vii Encourage only those wood based industries which can develop their raw material through waste land regeneration.
- viii Research and Development for improvement of biological productivity, both terrestrial and aquatic and for development of alternatives to reduce dependence on wood.

- ix Encourage research on conservation , propagation and use of **Neem**.
- x Participation in biological conservation programme under Convention on Biological Diversity.
- xi Encourage **eco-tourism** in protected areas.

6.2.4 Atmosphere

- i Active participation in national programmes under Convention on Global Climate Change.
- ii Rigorous regulatory control on the emissions from industrial and transportation sectors.
- iii Extensive plantation in urban and industrial air-polluted zones.

7.0 Environmental Perspectives in Development Activities

7.1 Agrarian Systems (Agriculture, Irrigation and Animal husbandry)

- i Promotion of sustainable farming, including organic farming, crop rotation, use of bio-fertilizer and bio-pesticides, etc.
- ii Adoption of a system of land capability classification for different use.
- iii Strengthening Panchayat Raj Institution for optimal resource management and for contingency planning for drought and flood.
- iv Develop a system of microlevel integrated watershed management
- v Priority to decentralized network of small irrigation projects through the involvement of Panchayat Raj Institutions.
- vi Environmental Impact Assessment (EIA) and continuous monitoring of major and medium irrigation projects
- vii Prior public hearing for major dams.
- viii Encourage use of non-conventional energy in agricultural sector

Encourage qualitative improvement of domestic cattle and planning animal husbandry programmes on the basis of carrying capacity of the area.

7.2 Forestry

The National Forest Policy (1988) outlines the broad guidelines for conservation based management of forests. However, Madhya Pradesh being one of the richest States with respect to forest resources, the State shall endeavour to join hands with the country to address the issues pointed out in the UN Agreement on Principles of Sustainable Management of Forests and National Forest Policy. The action points are as follows:-

- i Ensure participation of local people in forest management through Panchayat Raj institution/Village Forest Protection Committees constituted under Joint Forest Management programme and provide legal mechanism for protection of their traditional rights and concessions.
- ii Local communities will be given more secure and meaningful rights over public lands and waters in their own localities following the lead of joint forest management programme.
- iii Restriction on diversion of forest land with mandatory provision for compensatory afforestation whenever necessary, and creation of land banks for afforestation.
- iv Establishment of fodder banks at the fringe of forests to promote stall feeding of cattles
- v Develop time bound programme for bridging the gap between demand and supply of fuel wood.
- vi Interpretation Centres at the forests of topical interest, including specially protected areas.
- vii Take up massive wasteland afforestation programme through Panchayat Raj Institutions and NGOs on benefit sharing basis under the Waste Land Management Board.
- viii In-situ and ex-situ conservation of medicinal and aromatic plants.
- ix Eco-cost benefit analysis (Socio-economic and environmental) of all forestry projects.

- x Encourage afforestation in private sector under agroforestry, social forestry and sectoral forestry.

7.3 Energy

- i Encourage fuel efficient devices, environmentally benign technology and environment friendly substitutes to reduce atmospheric pollutants.
- ii Decentralised small projects for rural sectors and promotion of non-conventional renewable energy generation systems.
- iii Incentives for conservation and punitive measures for abuse of energy.
- iv Introduction of energy audit systems in industrial and commercial establishments and public buildings.

7.4 Industry

- i Promotion of no-waste/low waste/recycling based environmentally clean technologies for industries
- ii Operationalisation of "polluter pays" principle.
- iii Environmentally compatible siting of industries.
- iv Identification of areas for establishment of polluting industries.
- v Establish common effluent treatment and common incineration systems in cluster of small scale industries, while major and medium industries should be required to install adequate pollution control systems on their own.
- vi Enforcement of pollution control norms and introduction of environmental audit, on site emergency planning and public liability insurance
- vii Integrate public awareness programmes for environmental safety and hazards from industries with mandatory environmental clearance.
- viii Prior public hearing for siting of major hazardous and polluting industries.
- ix Setting up of Environmental Cells in industries and ensure their close liaison with regulatory agencies.

- x Introduce a system of Environmental Impact Assessment (EIA) through an Impact Assessment Agency for medium and environmentally sensitive small scale industries, on the lines of EIA notification of Govt. of India (for major polluting units).
- xi Mandatory provisions for EIA of major and polluting industrial projects and ensure the use of such EIA reports as a resource for regional and micro-level planning.
- xii Incentives and punitive measures to ensure fly-ash utilization.

7.5 Transportation

- i Improvement in mass transportation system to reduce increasing use of fuel, traffic congestion and pollution.
- ii Regulation of environmental safety in transportation of hazardous substances.
- iii Encourage R&D in private sector for replacement of conventional fossil fuel in transportation.
- iv Enforcement of smoke standards for containing vehicular exhaust.
- v Proper maintenance of roads.

7.6 Mining

- i Ensure time bound rehabilitation of mined out areas for productive use and implementation of Environmental Management Plans (EMP) with public participation
- ii Ensure effective implementation of EMP through a system of periodical monitoring by the nodal agency.
- iii Integration of EIA in mining projects of more than 50 ha and all projects in environmentally sensitive areas.
- iv Imposition of environmental conditions to ensure systematic extraction of minerals alongwith environmental conservation.
- v Discourage selective mining of high grade ores and encourage recovery of associated low grade ores also.
- vi Encourage on-site mineral beneficiation to reduce impact of transportation, processing and utilization.

- vii Adoption of environmentally compatible technology and strengthening of enforcement machinery.
- viii Regular monitoring of major mining areas.
- ix Compensatory afforestation in sites nearest to the site of mining.
- x Utilization of suitable abandoned pits for recharge of ground water.
- xi Identification and notification of ecologically sensitive/fragile areas and places of cultural heritage to regulate mining activities.
- xii Economic evaluation of environmental damage caused by major mining operations for enforcing the "Polluter pays" Principle .

7.7 Human Settlements

- i Ensure sustainable development of urban centres as envisaged in the State Housing Policy through environmental/social impact analysis based development planning.
- ii Ensure proper management of domestic, commercial and bio-medical solid wastes.
- iii Encourage participation of private sector in the collection, treatment and disposal of liquid and solid wastes to support the essential services being provided by the Government sector.
- iv Create and strengthen health care facilities and environmental sanitation to contain spread of communicable diseases.
- v Time-bound formulation and publication of comprehensive perspective plans for all ten delineated resource regions under the Town & Country Planning Act, 1973. Remote sensing and other advanced technologies will be used for this purpose.
- vi Conservation and restoration of natural, the built and the material heritage of the State.
- vii Conservation of urban water bodies.
- viii Incentives for industrial and job locations in areas other than urban centres and creation of gainful employment opportunities and infrastructure in rural areas, to discourage migration from rural areas.

- ix Establish satellite towns for decentralization of urbanization and to ensure the limit of designed population.
- x Improve infrastructure facilities and adopt decentralised modular service networks for water supply and sewerage rather than mega systems.
- xi Promote use of indigenous building materials and appropriate construction technologies.
- xii Assessment of impact of growth of human settlement subsequent to industrial growth.
- xiii Measures to contain the misuse of drinking water.
- xiv Establish norms for provision for adequate green and open spaces in urban areas.

8.0 Public Participation

- i Suitable measures to ensure conservation and management of Common Property Resources for their sustainable use through community control or through Panchayat Raj Institutions.
- ii Documentation of traditional knowledge systems and rights with a view to protect them.
- iii Introduce a system of natural resource accounting and participatory EIA of all development projects through mandatory public hearings, debates, joint planning and management.
- iv Popularise solid waste management technologies such as recycling, reuse, composting, energy generation etc. through public participation.
- v Ensure women's participation in all the participatory programmes.
- vi Ensure right to information.

9.0 Man Power Planning & Organizational Back-up

- i Create a cadre of trained environmental managers.
- ii Ensure creation of an Environmental Cell in every Government Department associated with resource utilization and development planning, and an Environmental Awareness Cell

in every major development project which affects a large number of people.

- iii Create a Consortium of Voluntary Environmental Action Groups (CVEAG).
- iv Strengthen M P Pollution Control Board & Environmental Planning & Coordination Organization (EPCO) with a view to ensuring enforcement of legal provisions for the monitoring and control of pollution.
- v For strengthening the system of environmental awareness, research and training, **Environmental Planning and coordination Organisation (EPCO)** will be designated as **'State Eco-Centre'** with the responsibility to coordinate among various State Government Departments, CVEAG, and Field Level people's groups for effective implementation of environmental management programmes through planning, supervision, guidance, funding and feed back..
- vi The **Environmental Planning & Coordination Organization (EPCO)** will prepare at least two Environmental Status Reports of the State during a Five year plan period and shall act as nodal agency for monitoring the implementation of the State Environment Policy.
- vii Ensure effective input of State Environmental Council in environmental conservation through frequent interaction with the members and create District Environmental Councils as an advisory body for assistance and guidance in planning.