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Mr. G.M. Kawoosa, Adv.
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Mr. Gaurav Dhingra, Adv. for State of UP
Ms. Sakshi Popli, Adv. for NDMC

Original Application No. 281 of 2016

Present: Applicant:
Respondent No. 1 & 2:

Mr. Tarunvir Singh Khehar and Ms. Guneet Khehar, Mr. Charanjit Singh, Advs. for GNCTD
Ms. Deep Shikha Bharti, Adv. for Ministry of Environment, Forest and Climate Change
Mr. Balendu Shekhar Adv. for EDMC
Mr. Biraja Mohapatral, Adv. and Mr. Dinesh Jindal, LO, Delhi Pollution Control Committee
Mr. Rakesh Vaid, Acting President
Ms. Puja Kalra, Adv.
Mr. Raman Yadav, Adv.

Date and Remarks	Orders of the Tribunal
<p>Item Nos. 01 & 02</p> <p>January 12, 2017</p>	<p>All the Corporations of Delhi, NCT Delhi, Delhi Pollution Control Committee and Central Pollution Control Board are present before the Tribunal along with the responsible officers from the Corporations/Authorities/Government. We have raised certain queries which have direct bearing of collection and disposal of municipal solid waste in Delhi. We are more than clear that indiscriminate dumping of municipal solid waste anywhere and everywhere in Delhi must be stopped forthwith. For this purpose there is statutory and constitutionary obligations upon all these authorities and bodies to ensure that municipal solid waste is not dumped anywhere and everywhere and it is collected, segregated, transported and disposed of in accordance with Municipal Solid Wastes (Management & Handling) Rules, 2000 and Solid Waste Management Rules, 2016. We are also unable to persuade ourselves that there is any reason or plausible explanation rendered by any of these officers present before the Tribunal as to why there should be strike by the</p>

the authorities to ensure that their employees receive their salaries without delay and default. The queries that we have raised to the Learned Counsel appearing for the various parties are directly concerned with the public health and environment of NCT Delhi. We have already noticed in our judgments that Delhi is generating municipal solid waste 14,100 MT per day and it is likely to increase every day with various developments in different parts of NCT Delhi. The concept of 'not in our backyard' must be put to an end. Every generator of waste has to comply with the duties prescribed under the Constitution of India, Article 51A (g) and Solid Waste Management Rules, 2016 in discharge of duties of public obligations. They must in effect fully participate and generators of waste, particularly mass generators of waste should effectually participate and discharge their responsibility for collection, transportation and disposal of municipal solid waste in Delhi. When we talk about development, which has to be sustainable development the precautionary principle mandates that all precaution must be taken which the public authorities would have taken, if not taken, to avoid adverse impacts on public health and environment. It needs no wonders to understand that any development, be it residential, industrial or commercial is bound to generate municipal waste and sewage. Thus, when plans are made for such development further planning by authority including Ministries, DDA and Delhi are statutorily required to ensure that proper processing

available and in place. Their planning would be basically faulty if any precaution is not taken which is essential for brining the development within the ambit and scope of sustainable development. Every generators is duty bound to pass to on to next generation the environment, if not in better condition, but atleast in condition in which they have received and enjoyed.

In light of the above, we direct issuance of Notice to show cause to all the State Governments/Union Territories as to why the Tribunal should not pass directions requiring authorities to strictly adhere to doctrine of sustainable development in its true spirit. Why any development project, industrial, residential and commercial be directed not to commence its work until and unless development plan duly provide for collection, processing and disposal of municipal solid waste in accordance with law. It also provides for ensuring that the sewage and other effluents discharged from the complexes does not contain excess in pollution and to ensure that its effluent is not violative of the prescribed parameters.

Let the reply to the show cause notice be filed before the next date of hearing. The Registry will ensure intimation to all the Learned Counsel appearing for Almitra H. Patel & Anr. Vs. Union of India & Ors. supra.

Notice returnable on 20th January, 2017.

List this case for tomorrow i.e. on 13th January, 2017 when all the officers concerned would be present and provide proper answer duly supported by record

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		<p>The order passed by the Hon'ble High Court should be duly placed on record.</p> <p>.....,CP (Swatanter Kumar)</p> <p>.....,JM (Raghuvendra S. Rathore)</p> <p>.....,EM (Bikram Singh Sajwan)</p>
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BEFORE THE NATIONAL GREEN TRIBUNAL,
PRINCIPAL BENCH, NEW DELHI

Original Application No. 199 of 2014

And

Original Application No. 61 of 2017
(Earlier OA No. 199 of 2014)

And

Original Application No. 281 of 2016
(M.A. No. 1007/2016)

IN THE MATTER OF:

Almitra H. Patel & Anr. Vs. Union of India & Ors.

&

Kudrat Sandhu Vs. Govt. of NCT & Ors.

CORAM : HON'BLE MR. JUSTICE SWATANTER KUMAR, CHAIRPERSON
HON'BLE MR. JUSTICE RAGHUVENDRA S. RATHORE, JUDICIAL MEMBER
HON'BLE DR. AJAY A DESHPANDE, EXPERT MEMBER

Present: Applicant :

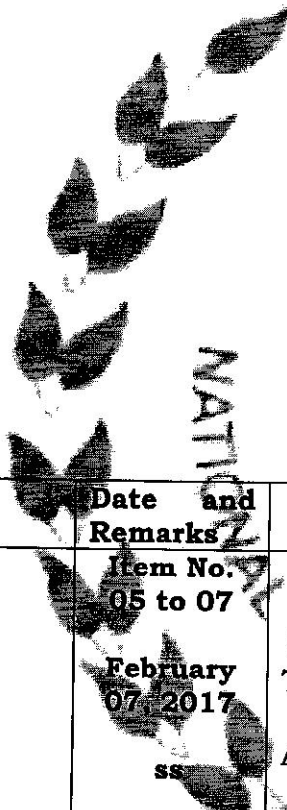
Respondent

Mr. Abhinay Sharma, Adv.
Mr. Gautam Singh and Mr. Rudreswar Singh, Adv.
for State of Bihar and Bihar SPCB
Ms. Priyanka Sinha, Adv. for State of Jharkhand
Ms. K. Enatoli Sema, Adv. for the State of Nagaland
and Pollution Control Board
Mr. R. Rakesh Sharma with Mr. S. Anand, Adv. for
State of TN & TNPCB
Mr. Pradeep Misra and Mr. Daleep Dhyani, Adv. For
Uttar Pradesh Pollution Control Board
Ms. Deep Shikha Bharati, Adv. for Ministry of
Environment, Forest and Climate Change
Mr. Shibashish Misra, Adv. for State of Odisha
Mr. Sunny Choudhary, Adv. for MPPCB
Dr. Abhishek Atrey and Mr. Vikas Malhotra, Adv. for
Ministry of Environment, Forest and Climate Change
Dr. Abhishek Atrey, Adv. for UT of Lakshadweep
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Mr. D.K. Thakur, AAG and Ms. Seema Sharma, DAG
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Mr. Raman Yadav and Mr. Dalsher Singh, Adv.
Mr. Ashish Negi, Adv. for Ms. Richa Kapoor, Adv. for
Punjab Pollution Control Board
Mr. Jogy Scaria, Adv. for Kerala State Pollution
Control Board
Mr. Nishe Rajen Shonker, Adv. for State of Kerala
Mr. Anil Grover, AAG with Mr. Rahul Khurana Adv.
for State of Haryana and Haryana Pollution Control
Board
Mr. P. Venket Reddy, Adv. with Mr. Prashant Tyagi,
Adv. for State of Telangana
Mr. S.S. Shamsbery, Mr. Amit Sharma and Mr. Ankit
Raj, Adv. for State of Rajasthan
Mr. Mukesh Verma and Mr. Bikash Kumar Sinha,
Adv.
Mr. Shiv Mangal Sharma, AAG and Mr. Saurabh
Rajpal, Adv.
Devendra Dedha, Adv. for PCB HP
Mr. Harish Sharma, Adv. for State of Chattisgarh
Mr. Edward Belho, AAG with Mr. K. Luikang Michael
and Ms. Elix Gangmei, Adv.
Ms. Pragyan Sharma, Ms. Anandita Kumari Rathore,
Adv. for State of Mizoram
Mr. Abhimanyu Garg and Ms. Presty Makkar, Adv. for

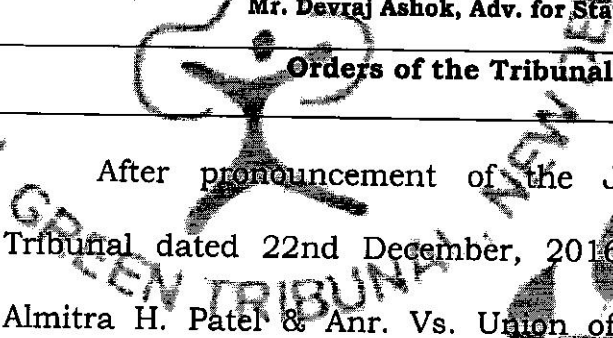
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Mr. Nikhil Nayyar and Ms. Smriti Shah, Advs. for APPCB & TSPCB
 Mr. Shubham Bhalla, Adv.
 Mr. A.K. Panda and Mr. M. Paikaray, Advs. for Odhisha SPCB
 Mr. Sachin, Adv. for Ms. Sakshi Popli, Adv. For NDMC
 Mr. Anil Soni, AAG and Mr. Naginder Benipal, Adv.
 Mr. Gopal Singha and Ms. Varsha Poddar, Advs.
 Mr. Tayenjam Momo Singh, Adv. for Meghalaya SPCB
 Mr. Anil Shrivastava, Mr. Rituraj Biswas and Ms Sujaya Bardhan, Advs.
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 Mr. G.M. Kawoosa, Adv. for State of J& K
 Mr. Rajiv Bansal, Mr. Kush Sharma and Mr. Arpita, Advs. for Delhi Development Authority
 Mr. Tarunvir Singh Khehar, Ms. Guneet Khehar and Mr. Charan Jeet Singh, Advs.
 Mr. Atmaram N.S. Nadkarni, ASG with Mr. S.S. Rebello, Debarshi Bhuyan, Mr. Jai Dehadrai and Mr. Ajit Yadav, Advs. for State of Goa
 Ms. Yogmaya Agnihotri, Adv. for CECB
 Mr. Sarthak Chaturvedi and Mr. Shubham Jaiswal, Advs. for Andaman & Nicobar Island
 Mr. V. K. Shukla, Adv. for State of M. P.
 Mrs. D. Bharathi Reddy, Adv. for State of Uttarakhand
 Mr. Joydeep Mazumdar, Mr. Debojyoti Bhattacharya and Mr. Parijat Sinha, Advs. for State of West Bengal
 Ms. Aprajita Mukherjee, Adv. for State of Meghalaya
 Mr. Balendu Shekhar, Adv. with East Delhi Municipal Corporation
 Mr. Raj Kumar, Adv. with Mr. Bhupender Kumar, Advs. for Central Pollution Control Board
 Mr. Jayesh Gaurav, Adv. for JSPCB
 Mr. Sapam Biswajit Meitel and Mr. Naresh Kumar Gaur, Adv. for State of Manipur & PCB
 Mr. Rajul Shrivastav, Adv. for State of MPPCB
 Mr. Biraja Mahopatra, Adv. and Mr. Dinesh Jindal, LO for Delhi Pollution Control Committee
 Mr. B.V. Niren, Adv. for MoUD
 Mr. Dhruv Pal, Adv. for State of Gujarat
 Mr. Devraj Ashok, Adv. for State of Karnataka

Date and Remarks	Orders of the Tribunal
Item No. 05 to 07 February 07, 2017 ss	<p style="text-align: center;">Orders of the Tribunal</p> <p>After pronouncement of the Judgment of the Tribunal dated 22nd December, 2016 in the Case of Almitra H. Patel & Anr. Vs. Union of India & Ors. in Original Application No. 199 of 2014, vide our order dated 12th January, 2017, we had issued Notice to all the State Governments, Union Territories, Pollution Control Boards, Local Authorities of the respective States to show cause why appropriate directions be not passed by the Tribunal to ensure compliance of the Judgment. Further these</p>



NATIONAL



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Item No.
05 to 07

February
07, 2017

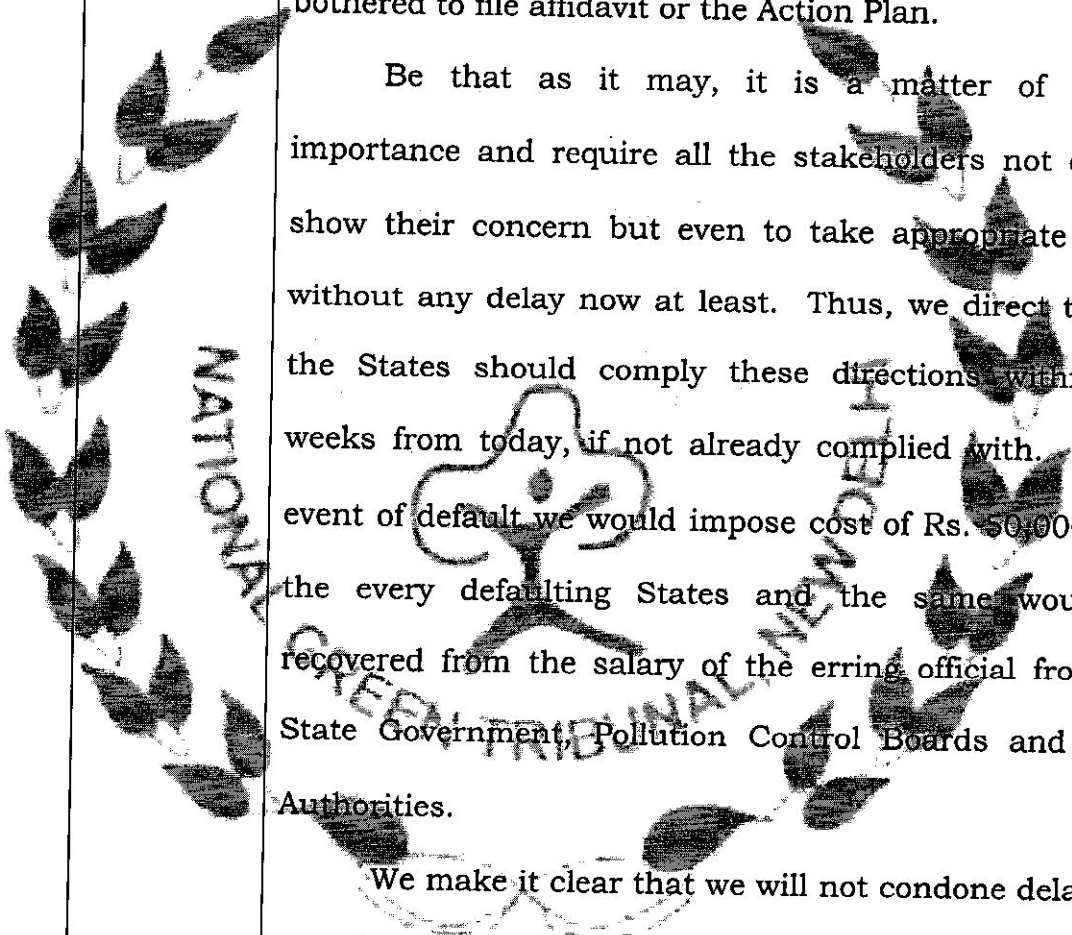
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environment and public health resulting therefrom would be prevented. All the States except the State of Goa and the State of Tripura have not filed the required affidavit and the Action Plan as contemplated under the order of the Tribunal, as it must all the States has not cared to file affidavit and Action Plan as direction.

As part of this Action Plan they would also required to submit a total solid waste generated and how that solid waste was required to be treated in a time bound manner in regard to this directions. None of the States have bothered to file affidavit or the Action Plan.

Be that as it may, it is a matter of utmost importance and require all the stakeholders not only to show their concern but even to take appropriate action without any delay now at least. Thus, we direct that all the States should comply these directions within two weeks from today, if not already complied with. In the event of default we would impose cost of Rs. 50,000/- on the every defaulting States and the same would be recovered from the salary of the erring official from the State Government, Pollution Control Boards and Local Authorities.

We make it clear that we will not condone delay and any default now under any circumstances. Let copy of this order be sent to Chief Secretaries of the State/Administrators of the Union Territories immediately by the Registry. The Learned Counsel appearing for the States have obviously been put at notice on behalf of their



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	<p>Item No. 05 to 07</p> <p>February 07, 2017</p> <p>ss</p>	<p>appearing for Central Pollution Control Board and Ministry of Environment, Forest and Climate Change who will comment over them, collectively on all these affidavits and Action Plans before the next date of hearing.</p> <p>List this matter for hearing on 01st March, 2017.</p> <p>.....,CP (Swatanter Kumar)</p> <p>.....,JM (Raghuvendra S. Rathore)</p> <p>.....,EM (Dr. Ajay A. Deshpande)</p>
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ANNEXURE-CA-3

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ACTION PLAN
FOR
MUNICIPAL SOLID WASTE MANAGEMENT
IN MADHYA PRADESH
(Revised February 2017)



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

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1. Background & Introduction

Madhya Pradesh is a state with a population of 72.5 million covering 9.5% of the total area of the country (308,000 Sq.). The urban population of the state is across 378 ULBs which has increased to 20 million in 2011 from 16.1 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 object and 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. Directions of 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 required to submit a total solid waste generated and how that solid waste was required to be treated in a time bound manner in regard to this directions."*

3. Need for Municipal Solid Waste Management

Solid Waste Management 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 by 12th Schedule of 74th Amendment of the Constitution. Supreme Court direct all the ULBs to manage Municipal Solid Waste in accordance with "MSW Management and Handling Rules 2000", hence all ULBs are obliged to carry collection, transportation, segregation, processing and scientific disposal of MSW as per the mandated rules. 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 has stipulated ULBs to follow NGT's all environmental rules and norms in order to avoid adverse environmental effects of MSW activities. 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 MSW Rules 2000 and in accordance with SLB for MSW.
- **100% Segregation** of waste at source in accordance with SLB for MSW
- **Covered Bins** for secondary collection in compliance with MSW Rules 2000
- **Secondary collection and transportation** in covered vehicles in compliance with MSW Rules 2000
- **Covered waste transfer/storage stations** in compliance with MSW Rules 2000 and CPCB/SPCB norms, if required.
- **More than 80% Waste recovery/recycling** in accordance with SLB for MSW
- **Scientific processing** in compliance with MSW Rules 2000 and CPCB/SPCB norms
- **Scientific disposal** of inert in compliance with MSW Rules 2000 and CPCB/SPCB norms
- **100% cost recovery of O & M expenses from user charges as mandatory urban reform stipulates and 90% collection efficiency of user charges** in accordance with SLB for MSW.

4. Past prevailing situation of MSWM & Practice

The Solid Waste Management in all ULBs should have started as directed by the Honourable 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 have been 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.

5. Initiative of State Government for Integrated Solid Waste Management (ISWM)

The State Govt. has been issuing regular instructions to ULBs for implementing SWM as per provisions of MSW Rules 2000/2016. It also got Govt. land allotted to all ULBs for processing / landfill facility, all large towns i.e. above 50000 populations. The State Govt. had been providing support to ULBs through grants from **Mukya Mantri Swachta Mission** as initiative of State Govt. for sanitation, for purchasing of equipments and vehicles for Solid Waste

Management. Now this scheme has been merged with **Swachchha Bharat Mission (SBM)** launched by Govt. of India.

At some places waste processing for composting is being done by engaging private operators for waste processing. But in none of the places Integrated Solid Waste Management has been implemented fully as per MSW rules.

Many ULBs of the State are regularly conducting IEC activities for citizens and explaining them the importance of collecting waste in a segregated manner.

Below: Photographs represent status of waste management in ULB's:



The State Govt. has also instructed all ULBs to start door to door collection (DTDC) in every ward of the town which is being followed across all ULBs. Many NGOs are involved in door to door collection in some of the areas of many towns. Many Resident Welfare Associations are also engaged in door to door collection in their own colonies. Collection & Transportation is being done by urban local bodies. The status of door to door collection across the state is shown in table below.

Total No. of Wards	Ward with 100% door to door collection, Nos.
6999	4136

Many of the smaller ULBs have started 100% door to door collection (DTDC) and also treating waste through composting. However, as presently there is no Landfill site has been constructed, the scientific disposal of reject/inert is not being done

Below: Photographs depicting Door to Door Collection across the State:



6. Acton plan for Waste Management in the State –

Integrated Solid Waste Management on Cluster based Regional Landfill approach on PPP mode.

The urbanization pattern in MP is quite skewed, as shown in table below. Only 15 ULBs have population greater than 2 lakhs while 318 ULBs have population less than 50,000. The scientific solid waste management in ULBs, with population less than 1 lakh, would be uneconomical and would result in huge financial burden on the ULBs, apart from being operationally non viable for smaller ULBs because of very less quantity of waste being generated. Most of these ULBs further lack the financial as well as the technical capacity to carry out the solid waste management. Hence, cluster approach on regional landfill for implementing Solid Waste Management in the State looks to be the only solution.

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

6.1. Long term Plan – Cluster based Regional Landfill approach for Waste

Considering the prevalent situation of waste management across the state Government has decided to implement Integrated Solid Waste Management (ISWM) on regional landfill approach on cluster based model across all ULBs in the state, through Public Private Partnership (PPP) mode.

The clusterization has been designed considering two factors; first is optimizing the waste and second being the logistics. Clusters generating around 150 TPD and within a radius of 50-70 Km's has been formed.

Also, considering the lack of financial resources, technical knowhow and paucity of funds implementing projects through Public Private Partnership (PPP) mode has been envisaged.

- **Regional Integrated MSW facilities:** The whole state has been divided into ~26 clusters for MSW management (Details list towns in cluster is attached in Annexure-1).

1	Sagar Cluster (11 ULBS)	11	Chhatarpur Cluster (28 ULBS)	21	Mandsaur Cluster (22 ULBS)
2	Katni Cluster (05 ULBS)	12	Damoh Cluster (12 ULBS)	22	Vidisha Cluster (15 ULBS)
3	Jabalpur Cluster (01 ULBS)	13	Bhind Cluster (14 ULBS)	23	Shajapur Cluster (26 ULBS)
4	Bhopal Cluster (08 ULBS)	14	Narsinghpur Cluster (15 ULBS)	24	Ratlam Cluster (17 ULBS)
5	Rewa Cluster (28 ULBS)	15	Singrauli Cluster (01 ULBS)	25	Chhindwara Cluster (20 ULBS)
6	Indore Cluster (08 ULBS)	16	Betul Cluster (08 ULBS)	26	Pithampur Cluster (24 ULBS)
7	Gwalior Cluster (16 ULBS)	17	Balaghat Cluster (13 ULBS)		
8	Burhanpur Cluster (10 ULBS)	18	Shahdol Cluster (16 ULBS)		
9	Dewas Cluster (24 ULBS)	19	Shivpuri Cluster (10 ULBS)		
10	Hoshangabad Cluster (14 ULBS)	20	Guna Cluster (11 ULBS)		

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

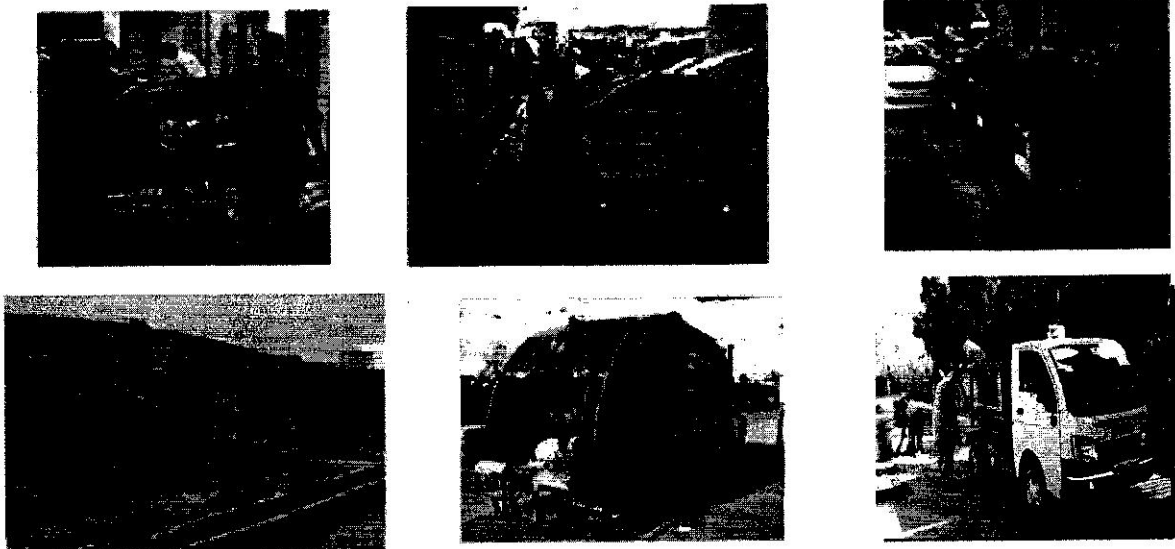
In each of the clusters, a regional Integrated Solid Waste Management (ISWM) Facility will be developed where waste collected and transported from all the ULBs will be processed and disposed in a scientific landfill site as per MSW Rules 2016 and other statutory requirements.

Further, satellite waste storage and satellite processing facilities may be developed in each of the clusters to minimize the transportation costs. Therefore, each cluster will have a combination of ISWM Facility, satellite segregation-cum-processing units (if required) and waste storage units.

PPP mode will allow state government to leverage on the technical as well as O&M expertise of private sector. A combination of grant from

GoMP and concessional loan will be provided to ULBs, based on their financial capacity. The private sector will contribute the remaining cost of infrastructure creation /equipment and will 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. The private operator shall conduct Information, Education and Communication activities throughout the concession period, so that the citizens adopt segregation at source and follow other instructions and pay user charges regularly. This will help in achieving the objectives and making projects sustainable.

Below: Images portray the system under proposed ISWM Projects



- **Hazardous & e-waste disposal facilities:** Four hazardous & e-waste waste facilities are planned at zonal 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.

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.

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 de-odorizing 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
Extent of scientific disposal of Municipal solid waste	100%	100% scientific disposal of the inert waste in the allocated landfill site, with <ul style="list-style-type: none"> • Proper leachate collection & drainage system, • Efficient gas collection system • Odour control mechanisms • 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

		location, resulting in efficient and timely complain attendance.
Extent of cost recovery in SWM services	100%	The cost recovery will be addressed through levying 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.

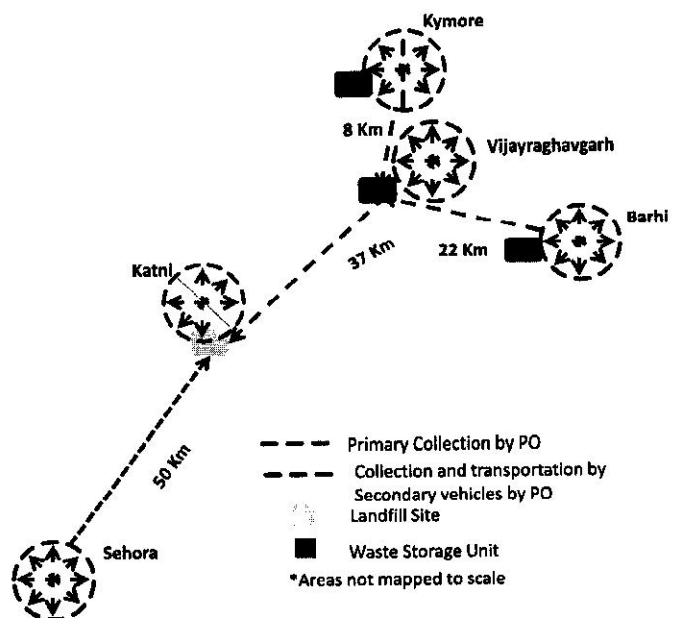
In addition to the above, the following additional points have been considered while designing the projects.

- **Clear work definition with existing workers:** Existing sweepers will be used for sweeping, road cleaning and other specific 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 an O&M intensive project where service delivery is the key deliverable, continuously and throughout the concession period, there is a high risk in forecasting the future and thus private operators accordingly place a high factor of safety in pricing the implicit risk, therefore instead of viable gap funding, bidding parameter a tipping fee based bidding model has been adopted. Tipping Fee model allows the private operator to leverage on the O&M strength as well as bring in sustainable technological solutions.
- **Financial Structure:** A mix of grant from GoMP + concessional loan to ULBs and private sector investment has been proposed in these projects.
- **Affordable user charges:** The acceptable user charges of Rs/month/household of Rs 60-80 for Above Poverty Line households and Rs 30-40 for Below Poverty Line households to be levied in bigger towns and Rs 40-20 for APL and BPL in all Nagar Parishads of the State.

- **Implementation Modality:** The projects have been framed on Design part Finance Built Operate and Transfer 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.
- **Information, Education and Communication (IEC) activities and Environment Health and Social 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:** Apart from the Independent Engineer, a Monitoring Committee, composed of CMOs of all ULBs as well as 4-5 sanitary officers from each ULB, will be constituted to monitor the day to day activities.

6.2. IMPLEMENTATION OF CLUSTER BASED ISWM PROJECT ON REGIONAL LANDFILL APPROACH.

A. ISWM Katni Project: The state has planned Katni Cluster on the above lines. The image below shows the operational plan for Katni cluster. The proposed project will cater to ~95 MT waste/day, collectively from Katni, Sihora, Kymore, Vijayraghavgarh and Barhi. The ISWM Facility has been planned in Katni while waste



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Action plan of MSWM in Madhya Pradesh

storage units may be planned in Kymore, Vijaygarhgarh and Barhi for temporary storage of waste (2-3 days) before transporting to ISWM Facility in Katni to minimize the transportation expenses.

The table below highlights key features of this project:

Coverage			
State	Madhya Pradesh, India	District	Katni; Jabalpur
Towns:	Katni, Sihora, Kymore, Sihora and Vijayraghavgarh	Population	320,000 (2014)
Average Inter Town Distance	40 Km	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; 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	Operational modality	A. A monitoring committee comprising of all chief Executive

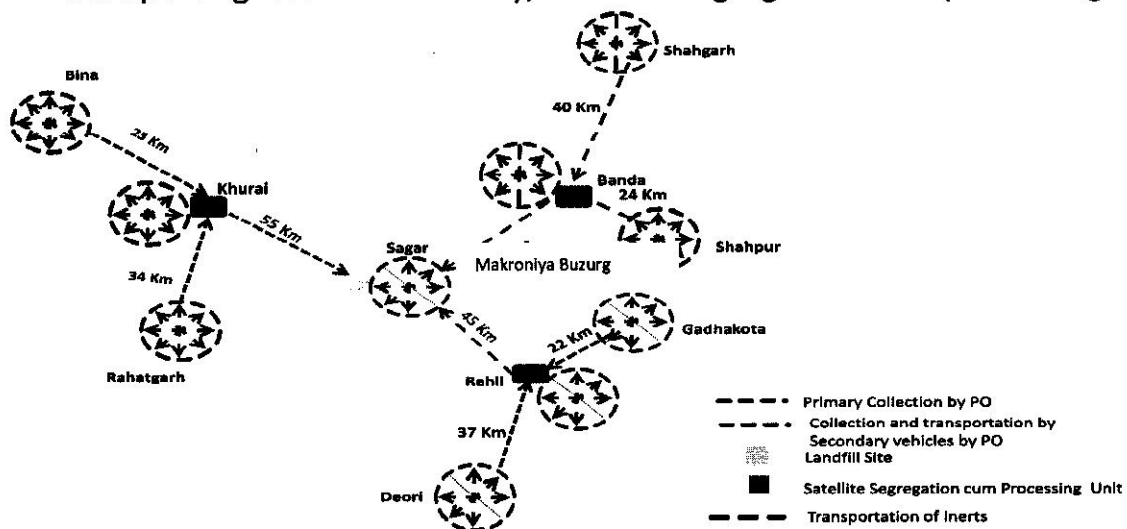
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Action plan of MSWM in Madhya Pradesh

	<p>bigger ULB to act as lead member of the cluster.</p>		<p>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 concessionaire, an agency to be appointed to act as Independent Engineer for the full Concessionaire period.</p>
<p>Sources of Funds for CAPEX</p>	<p>70% of the estimated cost of the project comprises of 50% Grant to ULBs by State plus 20% loan to ULBs (through DFID supported MPUIF).</p> <p>a. 30% of the estimated cost of the project plus any cost</p>	<p>Project OPEX</p> <p>Support to ULBs for paying Tipping fee</p> <p>Payment Guarantee on Behalf of ULBs</p>	<p>Private Operator</p> <p>Grant from GoMP for the initial 4-5 years</p> <p>Payment Guarantee from GoMP for payment of tipping fee to Concessionarie.</p>

	overrun by the Concessionaire.		
Waste Processing location	Katni or any other ULB where land is available and the selected Concessionaire desires to use.	Land Fill Site (free of all encumbrances)	6.3 Hectare land in Katni(land already acquired), EC in process
Potential Revenue Streams for Private Operator	Tipping Fee from implementing agency, Sale of processed by-products	Employee Rehabilitation	Not required

B. ISWM Sagar Project: Further, for a cluster with ISWM Facility, 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 waste segregation-cum-processing units have been proposed at Khurai, Rehli and Banda where waste from the neighbouring ULBs will be collected, segregated, processed and inert will be transported to Sagar for scientific disposal. Waste storage units may be planned at each of ULBs for temporary storage of waste before transporting it to ISWM facility/ Satellite segregation-cum-processing unit.



6.3. Current Status of the ISWM Projects, Cluster Based on Regional Landfill approach

a) ISWM Projects Katni (05 ULBs) & Sagar (11 ULBs)

The Feasibility Study Report (FSR) 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 an open workshop 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 (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.

M/S Ramky Enviro., Hyderabad was the preferred bidder for both the projects. The concession agreement for both the projects has been signed and the process of implementing the project is underway.

The concessionaire has started door to door collection, secondary collection and transportation for both the project in Dec-2015. However, as there was delay in securing environmental clearance, and other multiple factors beyond the control of concessionaire the ISWM facility operations was also delayed. At present, the construction and establishing the plant has begun and the full operations of plant and associated facilities including waste processing and final disposal is expected to start by May 2017.

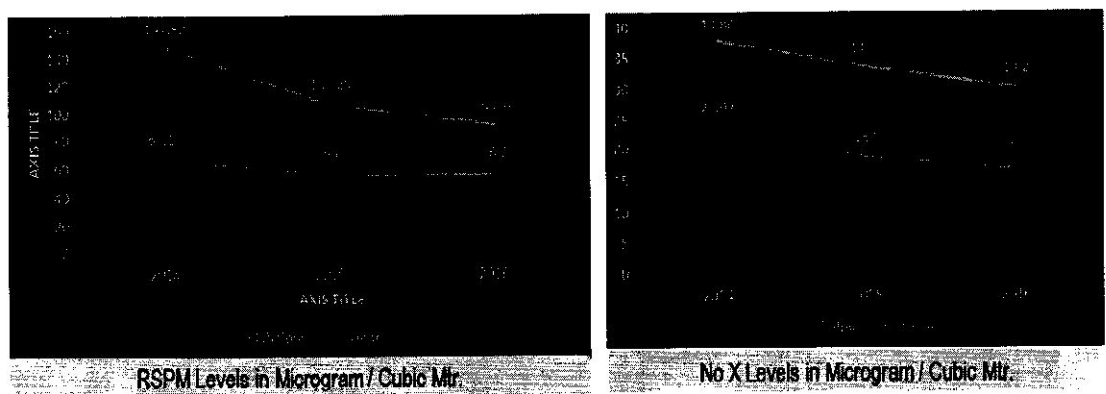
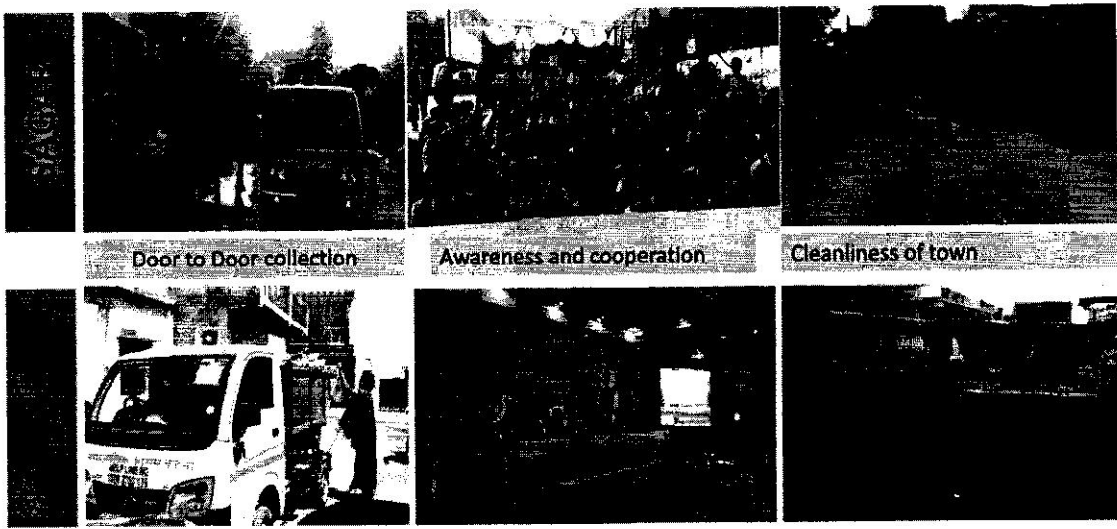
Also, due to high efficiency of waste collection, transportation from all the towns of both the project area, all the cities are clean, littering of waste is minimal and there has been considerable improvement in environmental conditions, which is also shown in the chart below. The citizens of these cities

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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 the projects.

□ Current scenario



RSPM and NOx Levels in Jabalpur and Sagar

b) ISWM Project Jabalpur

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

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c) ISWM Project Bhopal, Rewa, Indore & Gwalior

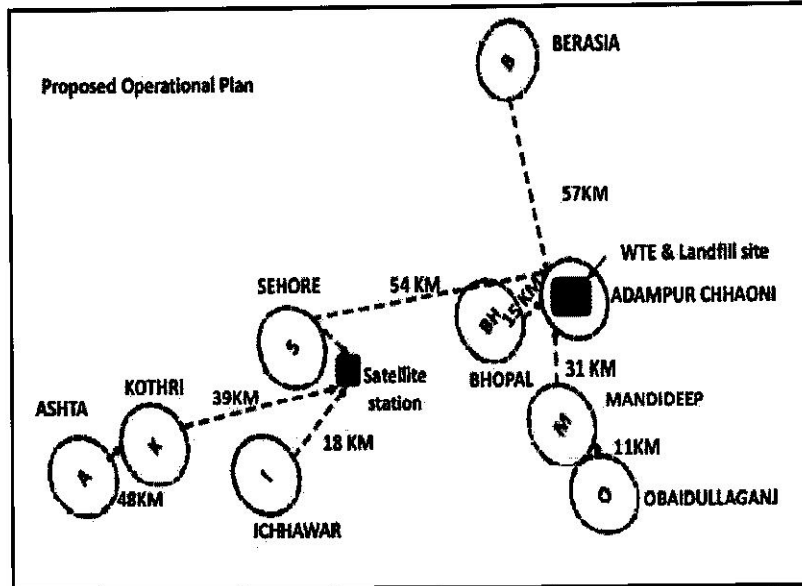
The concessionaire for Bhopal (8 ULBs) and Rewa (28 ULBs) Cluster, have been selected and are at various stages of preparation of implementing projects. Both these projects are Waste to Energy project. Five Clusters Jabalpur, Bhopal, Rewa, Indore and Gwalior shall be Waste to Energy Projects.

The bids for Indore (08 ULBs) and Gwalior (16 ULBs) cluster are under evaluation and concessionaire agreement for both the clusters is expected to be signed by mid of March 2017.

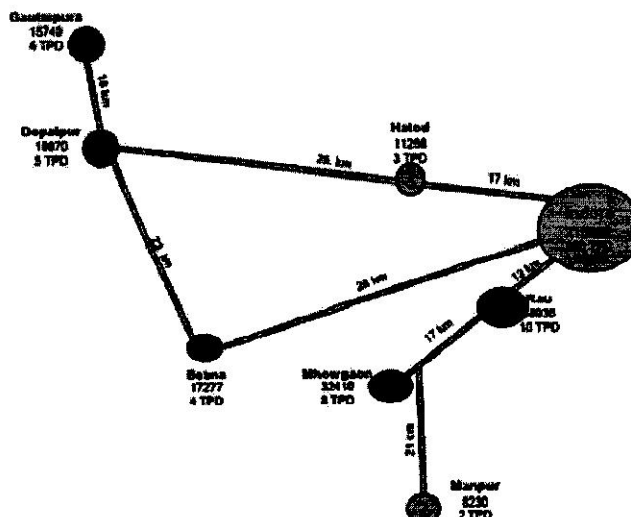
- **Name of Cluster:** Bhopal Cluster
- **Towns:** Ashta, Berasia, Bhopal, Ichhawar, Kothri, Mandideep, Obedullaganj, Sehore
- **Est. Project Cost. (Rs. Cr):**465.76
- **Total MSW Generated (TPD):** 1065
- **Concession Period:**21 years including implementation
- **Implementation Modality:** Public Private 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

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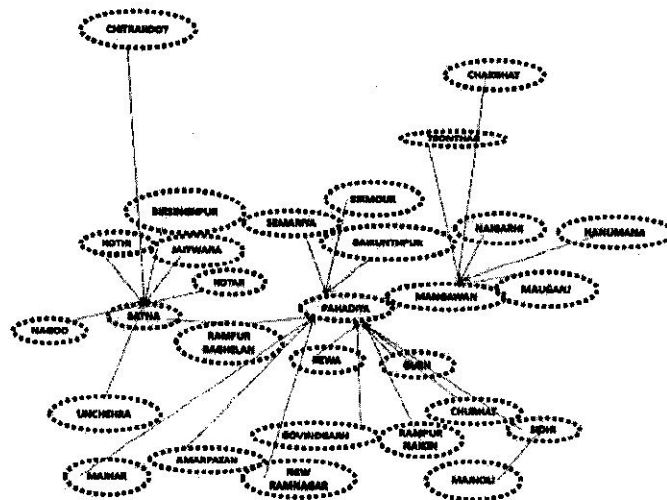
Action plan of MSWM in Madhya Pradesh



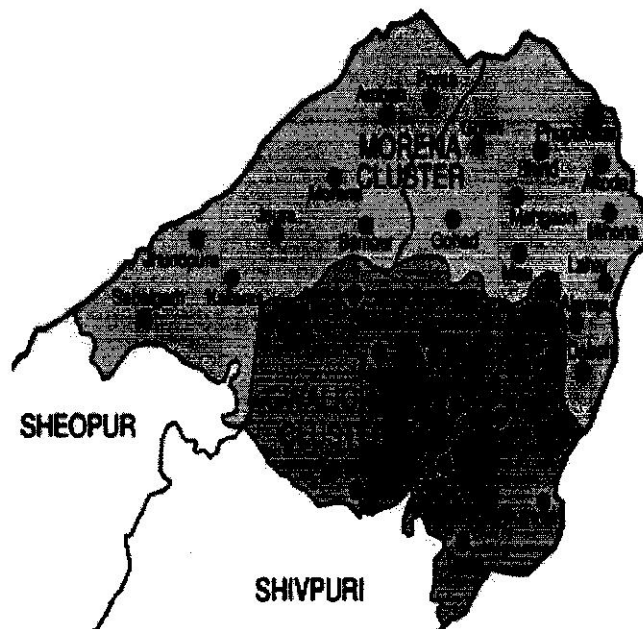
- Name of Cluster: Indore Cluster
- Towns: Betma, Depalpur, Hatod, Indore, Manpur, Mhowgaon, Rau, Runji-Gautampura
- Est. Project Cost. (Rs. Cr): 470.0
- Total MSW Generated (TPD): 1004
- Concession Period: 21 years including implementation
- Implementation Modality: Public Private Partnership
- Institutional 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



- **Name of Cluster: Rewa Cluster**
- **Towns:** Amarpatan, Baikunthpur, Birsinghpur, Chakghat, Chitrakoot, Churhat, Govindgarh, Gurh, Hanumana, Jaitwara, Kotar, Kothi, Maihar, Majhauri, 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



- **Name of Cluster: Gwalior Cluster**
- **Towns:** Antari, Badoni, Bhandar, Bhitwar, Bilaua, Dabra, Datia, Gwalior, Indergarh, Pichhore, Morena, Jhundpura, Sabalgarh, Bamor, Jaura, Kailaras
- **Est. Project Cost. (Rs. Cr):** 259.0 Cr
- **Total MSW Generated (TPD):** 605
- **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



Gwalior Cluster

d) ISWM Projects – Bids Floated

The bids of Khandwa (10 ULBs), Hoshangabad (14 ULBs), Dewas (24 ULBs) have been floated. The concessionaire for these clusters shall be finalized by end of March 2017, and concessionaire agreement is expected to be signed by end of April 2017.

The concessionaire has been given freedom for the selection of waste processing technology for these clusters.

e) Action plan for remaining ISWM Projects

The feasibility study reports for remaining 16 clusters has also been got prepared by the department. The bid documents for each cluster are being prepared and State government intends to finalize the selection of concessionaire for all clusters by the end of June 2017. The concessionaire shall be given freedom for the selection of waste processing technology for these clusters. Detailed Cluster wise status and action plan with proposed timeline is discussed in Section 8.