



MADHYA PRADESH POLLUTION CONTROL BOARD

Paryawaran Parisar, E-5, Arera Colony, Bhopal-462016

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No. **156** /HO/MSW/MPPCB/2020

Bhopal, Date: **30/7/2020**

To,

The Member Secretary,
Central Pollution Control Board,
Parivesh Bhawan, CBD cum office Complex,
East Arjun Nagar Delhi - 110032

Sub: Annual Report for year 2019-2020 under Solid Waste Management Rules, 2016.

As per the provision of the Rule – 24 (3) of Solid Waste Management Rules, 2016, Please find enclosed herewith the Annual Report for year 2019-2020 under Solid Waste Management Rules, 2016 in from (V) for your information & necessary action please.

Encl - As Above


(A.A.Mishra)
Member Secretary

Copy to :-

1. Principal Secretary, Urban Development & Housing Deptt. Govt. of M.P. Mantralaya, Bhopal for information please.
2. IT M.P. Pollution Control Board Bhopal for upload the same on Web Site of MPPCB.

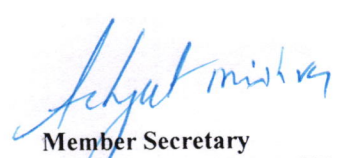
Form – V
[See rule 24(3)]

**Format of Annual Report to be submitted by the State Pollution Control Board or
Pollution Control Committee to the Central Pollution Control Board 2019-20**

PART A

To,

**The Chairman
Central Pollution Control Board
Parivesh Bhawan, East Arjun Nagar
DELHI- 1100032**

1.	Name of the State/Union territory	:	Madhya Pradesh
2.	Name & address of the State Pollution Control	:	M.P. Pollution Control Board, Paryawaran Parisar E-5 Arera Colony Bhopal – 462016
3.	Number of local bodies responsible for management of solid waste in the State/Union territory under these rules	:	Urban Local Bodies – 378 Cantonment Board - 5 (List enclosed as Annex-I)
4.	No. of authorization application Received	:	01
5.	A Summary Statement on progress made by local body in respect of solid waste management	:	Attached as Annexure-II.
6.	A Summary Statement on progress made by local bodies in respect of waste collection, segregation, transportation and disposal	:	Attached as Annexure-III.
7.	A summary statement on progress made by local bodies in respect of implementation of Schedule II	:	As per Annex-II
Date: Place:		 Member Secretary Madhya Pradesh Pollution Control Board	

PART B

Towns/Cities

Total number of Towns/Cities	383
Total number of ULBs	Urban Local Bodies -378 Cantonment Board -5
Number of class I & class II Cities/Towns	Class I Cities -34 Class II Cities – 29 Towns – 317 Cantonment Board-05

Authorization Status (Names/Number)

Number of application received	01[Nepra resource management, Indore]
Number of authorizations granted	01
Authorizations under scrutiny	Nil

SOLID WASTE Generation Status

Solid waste generation in the state (TPD)	7980 Approximately
Collected	7193
Treated	6431
Landfilled	762

Compliance to Schedule I of SW Rules (Number/Names of Towns/Capacity)

Activities	No of Cities/Towns	Remark
Good practices in cities/towns	277	Indore has been declared the cleanest city of the country for the last 3 years; Bhopal has been declared cleanest capital in Swachh Survekshan 2019 and second cleanest city in India in 2017 and 2018.
House-to-house collection	372	
Segregation	276	
Storage	276	
Covered transportation	364	Among the Top 100 cleanest cities in India, Madhya Pradesh has 20 Cities in Swachh Survekshan 2019. Madhya Pradesh is declared as 100% Open Defecation Free (ODF) in urban areas with third party inspection by Quality Council of India. 234 cities of the State have been declared as ODF+ and 108 cities are declared as ODF++ by Government of India.

Processing of SW (Number/Names of Towns/Capacity)

Solid Waste Processing facilities setup:

Sl. No.	Composting (No of Towns)	Vermi-composting (No of Towns)	Biogas (No of Towns)	RDF/Pelletization
	(100)	(02)	(07)	(83)
1	<ol style="list-style-type: none"> 1. Agar (M) 2. Alirajpur (M) 3. Anuppur (M) 4. Ashoknagar (M) 5. Ashta (M) 6. Badnagar (M) 7. Balaghat (M) 8. Barwaha (M) 9. Begamganj (M) 10. Betul (M) 11. Bhind (M) 12. Bhopal (M Corp.) 13. Bijawar (NP) 14. Bina Etawa (M) 15. Burhanpur (M Corp.) 16. Chanderi (M) 17. Chhatarpur (M) 18. Chhindwara (M) 19. Dabra (M) 20. Damoh (M) 21. Damua (M) 22. Dewas (M Corp.) 23. Dhamnod (NP) 24. Dhanpuri (Nargada Hari Dafai) (M) 25. Dhar (M) 26. Gadarwara (M) 27. Garhi - Malhera (NP) 28. Gohad (M) 29. Guna (M) 30. Gwalior (M Corp.) 31. Harda (M) 32. Hatta (M) 33. Hoshangabad (M) 34. Indore (M Corp.) 35. Itarsi (M) 36. Jabalpur (M Corp.) 37. Jaora (M) 38. Jhabua (M) 39. Joura (NP) 40. Kannod (NP) 41. Kareli (M) 42. Kasrawad (NP) 43. Khacharod (M) 44. Khandwa (M Corp.) 45. Khargone (M) 46. Khatagaon (NP) 47. Khurai (M) 48. Kumbhraj (NP) 49. Maheshwar (NP) 50. Mahidpur (M) 	<ol style="list-style-type: none"> 1. Seoni-Malwa 2. Barwani 	<ol style="list-style-type: none"> Bhopal- 05 Unit Ujjain Indore 	<ol style="list-style-type: none"> 1. Alirajpur (M) 2. Ashoknagar (M) 3. Ashta (M) 4. Badnagar (M) 5. Badnagar (NP) 6. Balaghat (M) 7. Barigarh (NP) 8. Barwaha (M) 9. Barwani (M) 10. Basoda (M) 11. Begamganj (M) 12. Berasia (M) 13. Betul (M) 14. Bhind (M) 15. Bhopal (M Corp.) 16. Biaora (M) 17. Bina Etawa (M) 18. Burhanpur (M Corp.) 19. Chandameta- Butaria (NP) 20. Chhatarpur (M) 21. Chhindwara (M) 22. Dabra (M) 23. Damoh (M) 24. Datia (M) 25. Dewas (M Corp.) 26. Dhamnod (NP) 27. Dhar (M) 28. DongarParasia (M) 29. Gadarwara (M) 30. Gohad (M) 31. Guna (M) 32. Harda (M) 33. Hoshangabad (M) 34. Indore (M Corp.) 35. Itarsi (M) 36. Jabalpur (M Corp.) 37. Jaora (M) 38. Jirapur (NP) 39. Joura (NP) 40. Khacharod (M) 41. Khandwa (M Corp.) 42. Khargone (M) 43. Khurai (M) 44. Maheshwar (NP) 45. Mahidpur (M) 46. Maihar (M) 47. MakroniyaBujurg 48. Malajkhanda (M) 49. Manawar (M)

51. Maihar (M) 52. MakroniyaBujurg 53. Malajkhand (M) 54. Manasa (NP) 55. Manawar (M) 56. Mandav (NP) 57. Mandideep (M) 58. Mandsaur (M) 59. Mhowgaon (NP) 60. Murwara (Katni) (M Corp.) 61. Nagda (M) 62. Nagod (NP) 63. Narsimhapur (M) 64. Narsinghgarh (M) 65. Neemuch (M) 66. Nowgong (M) 67. Palera (NP) 68. Panagar (M) 69. Pandhurna (M) 70. Panna (M) 71. Patan (NP) 72. Pithampur (M) 73. Prithvipur (NP) 74. Raghogarh -Vijaypur (M) 75. Raisen (M) 76. Ratlam (M Corp.) 77. Rau (NP) 78. Rewa (M Corp.) 79. Sagar (M Corp.) 80. Sanawad (M) 81. Sarni (M) 82. Satna (M Corp.) 83. Sehore (M) 84. Sendhwa (M) 85. Seoni (M) 86. Shahdol (M) 87. Shahpur (NP) 88. Shajapur (M) 89. Sheopur (M) 90. Shivpuri (M) 91. Shujalpur (M) 92. Sidhi (M) 93. Singrauli (M Corp.) 94. Sohagpur (NP) 95. Soyatkalan (NP) 96. Tarana (NP) 97. Tikamgarh (M) 98. Timarni (NP) 99. Ujjain (M Corp.) 100.Vidisha (M)			50. Mandideep (M) 51. Mandla (M) 52. Mandsaur (M) 53. Manpur (NP) 54. Multai (M) 55. Nagda (M) 56. Nagod (NP) 57. Narsimhapur (M) 58. Neemuch (M) 59. Nowgong (M) 60. Pithampur (M) 61. Raghogarh - Vijaypur (M) 62. Raisen (M) 63. Ratlam (M Corp.) 64. Rau (NP) 65. Rewa (M Corp.) 66. Sagar (M Corp.) 67. Sanawad (M) 68. Sarangpur (M) 69. Sarni (M) 70. Satna (M Corp.) 71. Sehore (M) 72. Sendhwa (M) 73. Seoni (M) 74. Shahdol (M) 75. Shajapur (M) 76. Sheopur (M) 77. Shivpuri (M) 78. Shujalpur (M) 79. Singrauli (M Corp.) 80. Thandla (NP) 81. Tikamgarh (M) 82. Ujjain (M Corp.) 83. Vidisha (M)
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Processing facility Operational:

Sl. No.	Composting (No of Towns)	Vermi-composting (No of Towns)	Biogas (No of Towns)	RDF/Pelletization
1	100	02	07	83

Processing facility under Installation/Planned:

Sl. No.	Composting	Vermi-composting	Biogas	RDF/Pelletisation
1	1. Rewa cluster 2. Sagar 3. Chhatarpur	-	-	Sagar cluster -01 Chhatarpur -01

Waste-to-Energy Plants: (Number/Names of Towns/Capacity)

Sl. No.	Plant Location	Status of operation	Power generation (MW)	Remarks
1	1. Gwalior 2. Jabalpur 3. Rewa	Under Construction Operational Under Construction	11 MW 11.5 MW 2x6 MW	600 TPD

Disposal Of Solid Waste (Number/Names of Towns/Capacity):

Activities	No of Cities/Towns	Names of ULBs
Landfill sites identified	51	
Landfill constructed	07	1. Gwalior 2. Indore 3. Jabalpur 4. Katni 5. Rewa 6. Sagar 7. Ujjain
Landfill under construction	01	1. Bhopal
Landfill in operation	05	1. Gwalior 2. Indore 3. Jabalpur 4. Katni 5. Ujjain
Landfill exhausted	0	
Land filled capped	0	

Solid Waste Dumpsites (Number/Names of Towns/Capacity):

Activities	No. of Towns	Remark
Total number of existing dumpsites	328	Reclaimed – 50
Dump sites reclaimed/capped	Reclaimed – 50	
Dumpsites converted to sanitary landfill	Nil	

Monitoring at Waste processing/Landfills sites:

Sl. No.	Name of facilities	Ambient air	Ground water	Leachate quality	Compost quality	VOCs
1.	List Enclosed at Annexure -IV	428	424	-	-	-

Status of Action Plan prepared by Municipalities:

Total number of municipalities : 378+05 (CB)

Number of Action Plan submitted : Please refer annexure -V

Annexure –I**List of ULBs of Madhya Pradesh**

S.No	Name of ULBs
1.	Indore
2.	Bhopal
3.	Jabalpur
4.	Gwalior
5.	Ujjain
6.	Dewas
7.	Sagar
8.	Ratlam
9.	Satna
10.	Rewa
11.	Singrauli
12.	Katni(Murwara)
13.	Morena
14.	Chhindwara
15.	Bhind
16.	NN Burhanpur
17.	NN KHANDWA
18.	Guna
19.	Shivpuri
20.	Vidisha
21.	Chhatarpur
22.	Mandsaur
23.	Damoh
24.	Pithampur
25.	KHARGONE
26.	Neemuch
27.	Hoshangabad
28.	Sehore
29.	Seoni
30.	Datia
31.	Itarsi
32.	Betul
33.	Dhar
34.	Nagda
35.	Shahdol
36.	Sarni

37.	Balaghat
38.	Ashoknagar
39.	Tikamgarh
40.	GanjBasoda
41.	Javra
42.	Harda
43.	Sheopur kalan
44.	Shajapur
45.	Bina-Etawa
46.	Raghogarh - Vijaypur
47.	Dabra
48.	Mandideep
49.	Gohad
50.	Maihar
51.	Narsinghpur
52.	Mandla
53.	Sidhi
54.	Panna
55.	Ashtha
56.	Sironj
57.	Sendhwa
58.	Barwani
59.	Shujalpur
60.	Khurai
61.	Biaora
62.	Pipariya
63.	Gadarwara
64.	Ambah
65.	Dhanpuri
66.	Raisen
67.	Joura
68.	Pandhurna
69.	Sihora
70.	Nowgong
71.	Sabalgarh
72.	Porsa
73.	Agar
74.	Sarangpur
75.	Donger Parasia
76.	Sanawad
77.	Jhabua
78.	Lahar
79.	Baraily
80.	Malajkhand

81.	Begamganj
82.	Badnagar
83.	Rau
84.	Umaria
85.	Chanderi
86.	Bamor
87.	Garhakota
88.	Bijuri
89.	Hatta
90.	Manawar
91.	Narsinghgarh
92.	Khachrodpop
93.	Rahatgarh
94.	Berasia
95.	Banda
96.	Rehli
97.	Seoni-Malwa
98.	Kareli
99.	Rajgarh
100.	Kotma
101.	Mahidpur
102.	Karera
103.	Alirajpur
104.	Pasan
105.	Kukshi
106.	Gotegaon
107.	Aron
108.	Amla
109.	Mhowgaon
110.	Multai
111.	Waraseoni
112.	Nepanagar
113.	Pachore
114.	Prithvipur
115.	Mauganj
116.	Mungaoli
117.	Kailaras
118.	Panagar
119.	Deori
120.	Sausar
121.	Khategaon
122.	Bhander
123.	Sohagpur
124.	Nainpur

125.	Badwaha
126.	Manasa
127.	Beohari
128.	Khajuraho
129.	Anjad
130.	A lot
131.	Nashrullaganj
132.	Niwari
133.	Maharajpur
134.	Tarana
135.	Indergarh
136.	Obedullaganj
137.	Damua
138.	Shamgarh
139.	Khirkiya
140.	Maheshwar
141.	Kurawar
142.	Timarni
143.	Pali
144.	Mackronia
145.	Laundi(Lavkush Nagar)
146.	Nowrozabad
147.	Chachaura - Binaganj
148.	Jirapur
149.	Chitrakoot
150.	Sewda
151.	Mehgaon
152.	Dindori
153.	Rajgarh
154.	Kasrawad
155.	Patharia
156.	Badnawar
157.	Nagod
158.	Gormi
159.	New Ramnagar
160.	Junnardev Jamai
161.	Unchahara
162.	Bijawar
163.	Harsood
164.	Mau
165.	Maksi
166.	Anuppur
167.	Kolaras
168.	Kumbhraj

169.	Kymore
170.	Badi
171.	Bhanpura
172.	Rajpur
173.	Narwar
174.	Burhar
175.	Bhitarwar
176.	Khilchipur
177.	Lateri
178.	Silwani
179.	Harpalpur
180.	Baroda
181.	Neuton Chikhli Kalan
182.	Bada Malhera
183.	Shahpur
184.	Udaipura
185.	Gairatganj
186.	Pichhore
187.	Daboh
188.	Amarpatan
189.	Bhikangaon
190.	Kannod
191.	Katangi
192.	Katangi
193.	Jatara
194.	Palera
195.	Hatpiplya
196.	Lakhnadon
197.	Teonthar
198.	Rampura
199.	Vijaypur
200.	Mihona
201.	Budhni
202.	Hanumana
203.	Babai
204.	Nalkheda
205.	Baihar
206.	Sonkatch
207.	Susner
208.	Dharampuri
209.	Shahgarh
210.	Depalpur
211.	Hindoria
212.	Chandia

213.	Khaniyadhana
214.	Jawad
215.	Thandla
216.	Kurwai
217.	AjayGarh
218.	Chandameta-Butaria
219.	Ichawar
220.	Petlawad
221.	Churhat
222.	Sanwer
223.	Tal
224.	Betma
225.	Khargapur
226.	Soyatkalan
227.	Gurh
228.	Khetia
229.	Tendukheda
230.	Rajnagar
231.	Satwas
232.	Sitamau
233.	Garoth
234.	Piplya Mandi
235.	Badod
236.	Mangawan
237.	Shahpur
238.	Unhel
239.	Garhi-Malhera
240.	Badarwas
241.	Lanji
242.	Patan
243.	Gautampura
244.	Semaria
245.	Pawai
246.	Dhuwara
247.	Birshinghpur
248.	Salichauka
249.	Amarwara
250.	Tendukheda
251.	Lidhora Khas
252.	Meghnagar
253.	Barhi
254.	Bilaua
255.	Amaganj
256.	Chandla

257.	Pandhana
258.	Bankhedi
259.	Phuph
260.	Rampur Baghelan
261.	Shahpura
262.	Isagarh
263.	Akoda
264.	Pichhore
265.	Ranapur
266.	Suwasara
267.	Polaykalan
268.	Majholi
269.	Bhaurasa
270.	Barghat
271.	Bhawra
272.	Chaurai Khas
273.	Sailana
274.	Jobat
275.	Rampur Naikin
276.	Mundi
277.	Majhauri
278.	Sirmour
279.	Devendra nagar
280.	Barela
281.	Akodia
282.	Rehti
283.	Orchha
284.	Mandleshwar
285.	Shamshabad
286.	Karnawad
287.	Pansemal
288.	Bhainsdehi
289.	Kukdeshwar
290.	Shahpura
291.	Athner
292.	Dhamnood (Dhar)
293.	Makdon
294.	Saikheda
295.	Khujner
296.	Alampur
297.	Chakghat
298.	Jiran
299.	Khand
300.	Shadora

301.	Suthaliya
302.	Satai
303.	Talen
304.	Govindgarh
305.	Kothari
306.	Kanad
307.	Bichhiya
308.	Kari
309.	Kantaphod
310.	Naigarhi
311.	Bagli
312.	Badoni
313.	Baikunthpur
314.	Sultanpur
315.	Bamhani
316.	Harrai
317.	Antari
318.	Patera
319.	Boda
320.	Mandav
321.	Betul-Bazar
322.	Jhundpura
323.	Namli
324.	Dahi
325.	Pipalrawan
326.	Hatod
327.	Machalpur
328.	Chand
329.	Buxwaha
330.	Chichali
331.	Narayangarh
332.	Jeron Khalsa
333.	Palsood
334.	Omkareshwar
335.	Karhi Padiya
336.	Badagaon
337.	Badkuhi
338.	Lodhikheda
339.	Loharda
340.	Mohgaon
341.	Baldeogarh
342.	Jaitwara
343.	Barigarh
344.	Singoli

345.	Badawada
346.	Chicholi
347.	Shahganj
348.	Chhapiheda
349.	Amarkantak
350.	Sanchi
351.	Jaithari
352.	Dhamnod (Ratlam)
353.	Piploda
354.	Niwas
355.	Jaisinghnagar
356.	Jawar
357.	Kothi
358.	Tonk Khurd
359.	Pipla narayannwar
360.	Kakarhati
361.	Vijayraghavgarh
362.	Malhargarh
363.	Tarichar Kalan
364.	Kotar
365.	Sadarpur
366.	Ratargarh
367.	Diken
368.	Badagaon
369.	Manpur
370.	Nagri
371.	Sarwania Maharaj
372.	Nayagaon
373.	Nemawar
374.	Athana
375.	Bichua
376.	Bhedaghat
377.	Bairad
378.	Pankhedi (Kalapipal)

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**Summary Statement on progress made by local body in respect of
Solid Waste Management in Madhya Pradesh**

Annexure – II

SNo.	Indicator	Status As on 31/03/2019	Status As on 31/03/2020
1.	% Collection & Transportation	364 ULBs	372 ULBs
2.	100% Segregation at source	249 ULBs	276 ULBs
3.	Waste processing facilities (population >1 lakh)	18 / 34	34/34
4.	Geo-tagged waste processing facilities (population <1 lakh)	344 ULBs / 1779 facilities	309 ULBs
5.	Geo-tagged composting facilities	145 ULBs	
6.	Material Recovery Facilities	112 operational facilities	256 ULBs have 275 functional MRF facilities that are operational. However, 339 ULBs (in total) are processing dry waste through functional facilities or linkages with junk dealers.
7.	Legacy Waste – Remediation	32 / 378	<u>50/ 378</u>
8.	Wire Mesh Installation	490 / 1490	1310 Storm water drains / 2089 wire mesh installed*
9.	Home Composting	1,48,716	2,60,252
10.	By Laws framed under Rule - 15 of SWM Rule 2016 Penalty collected in the By Laws framed	310 ULBs 1.66 Crs	Over 26,400 challans issued and over Rs. 1.09 crore collected in fine for open dumping and from citizens and BWGs
11.	CCTV Camera Installation at Dumping Sites	NIL	Indore, Katni, Jabalpur, Ujjain
12.	Separate storage, collection and transportation of construction and demolition wastes	Mechanism Established in 284 ULBs Under process in 94 ULBs	318 ULBs have dedicated areas to keep C&D waste
13.	Current status of ISWM Project	UADD working in 9 Clusters covering 96 ULBs (this includes Ujjain City – which is standalone not under ISWM)	<u>09 ISWM</u> Projects in various stages of implementation (6 WTC, 3 WTE). PPA issue resolved for Rewa and Gwalior. To commence implementation work.
14.	Current status of Decentralized Solid Waste Facilities	Not Applicable	Remaining 17 clusters comprising of 239 ULBs to adopt <u>Decentralized Solid Waste Management</u> Model
15.	Status of SWM in 4 WTE	The 04 Waste to Energy	PPA issue resolved for Rewa

	clusters	(WTE) clusters comprise of 60 ULBs are on hold due power tariff issue by MPPMCL.	and Gwalior cluster. State has closed Indore ISWM project and Bhopal ISWM closed will be closed too.
16.	Status of State Policy formulation for C&D Waste	Not Applicable	Drafted. Currently under final review with Cabinet.
17.	GPS Installation in vehicles collecting Municipal Solid Waste in ULBs having population more than 1 Lakh	All 1,714 tippers sanctioned are fitted with GPS	All 3,399 vehicles are fitted with GPS.

Summary Statement on Progress made by Local Bodies in respect of Waste Collection, Segregation, Transportation and Disposal:-

In order to comply with the Solid Waste Management Rules, 2016 following steps have been taken by the state:-

Waste Collection:- 100% door to door collection of the waste has been achieved in 372 ULBs and 14 ULBs are facilitating partial door to door collection of the waste. 4,217 waste pickers for solid waste management system have been engaged and provided source of livelihood through this integration.

Waste Segregation:- 100% Segregation at source of waste has been achieved in 276 ULBs. However, for the remaining 102 ULBs, 100% segregation of waste from each house is yet to be achieved. The ULBs are segregating dry waste into different components such as plastic, wood, paper, glass, cardboards, etc. 328.41 Metric Ton of plastic waste was utilized in road construction. Many ULBs supply Refuse Derived Fuel to cement factories as Alternate Fuel & Raw Material (AFR). Other ULBs are also selling segregated dry waste to junk dealers for recycling.

Waste Transportation:- ULBs transporting the segregated waste in covered vehicles from transfer stations to the processing facilities. As per the mandate, all towns / cities with more than 1 lakh of population are required to have GPS fitted garbage collection and transportation vehicles. In Madhya Pradesh, there are 34 towns with more than 1 lakh population. There are 3,399 vehicles with ICT based monitoring system for collection and transportation of municipal waste. Total 5,200 vehicles have been deployed for collection and transportation of municipal waste and are being monitored through various ICT based monitoring mechanisms.

Waste Processing/Treatment:- The cluster based Integrated Solid Waste Management model adopted by the state is working in 09 clusters that are in various stages of implementation. This covers a total of 139 ULBs. Out of 09 cluster, 06 cluster are waste to compost (Sagar, Katni, Neemuch, Khandwa, Chhatarpur and Singrauli) and 03 Cluster are waste to energy (Jabalpur, Rewa, and Gwalior).

The Power Purchase agreement (PPA) issue has been resolved for Rewa WTE cluster (28 ULBs) and Gwalior WTE cluster (16 ULBs) and they will be setting up waste to energy plant now.

Earlier Conceived ISWM based regional landfill based Indore Cluster has been terminated because of delay in signing of the PPA. Similarly Bhopal ISWM cluster is in the process of termination. The State is planning to implement solid waste management through 'Decentralized Solid Waste Management Model' (Standalone Model) in 8 ULBs of Bhopal Cluster and 8 ULBs of Indore Cluster.

The State is also finding it difficult to select suitable private players in remaining cluster comprising of 239 ULBs mainly due to unavailability of "right" PPP partners with technical know-how and financial capacity. Hence, the state has devised an alternate 'Decentralized Solid Waste Management Model' with processing facilities at ULB level to ensure effective implementation of SWM Rules, 2016. This approach is

already working in Ujjain city which has waste to compost facility for processing 190 TPD of waste.

The Change in approach towards implementation of solid waste management through decentralized mode is also approved by state cabinet on 25/09/2019 and permitted to use Rs. 224.75 crores for projects to be implemented under this model (through ULBs).

256 ULBs are processing dry waste through functional facilities. 354 ULBs are processing wet waste & 256 ULBs process their plastic waste. This is based on the assumption that ULBs are processing plastic waste as well through their MRF facility. 256 ULBs have 275 Material Recovery Facilities (MRF) facilities that are operational. The State has also disbursed total funds of Rs. 9.22 Cr to 93 ULBs to set-up Material Recovery Facilities.

316 ULBs have started collecting domestic hazardous waste. The processing and disposal of domestic hazardous waste is being done through installation of incinerators by ULBs and / or by having tie ups with agencies that process domestic hazardous waste. 263 ULBs have started processing domestic hazardous waste (Sanitary Napkins, Pads).

Initiatives

3R – Reduce, Reuse and Recycle

The State aims to move toward 3R (Reduce-Reuse-Recycle) and following actions have already been taken in this direction:-

- 332 ULBs have taken different measures to reduce generation of Dry/Wet Waste;
- Over 200 ULBs have claimed that they have reduced their municipal waste by an average of 10% ;
- 277 ULBs have taken a 1,700+ initiatives in total (and around 6 initiatives per ULB as average) to reduce municipal waste;
- Some of the initiatives taken by the ULBs on 3R principles are: ban on single-use plastic, home composting, bartan banks, cloth banks, extensive IEC activities (such as rallies, meetings, workshops, campaigns) and involvement of SHGs and RWAs, converting leaves into disposables, distribution of cloth-bags, “neki ki diwar” etc.

Home Composting

The State has been actively promoting home composting in order to move towards Waste Reduction at source. As per December 2019 MIS updated by ULBs, the number of households practicing home composing have increased from 2,14,518 households to 2,60,252 (increase by 20%). This excludes households falling under RWA and are qualified as Bulk Waste Generators.

Model Tender:- The State has taken an initiative to frame “**Model Tender**” to ensure quality at ULB level in procurement of plants and equipment for Solid Waste Management or Sewage Treatment. Model documents and model estimates have been prepared at State level to provide handholding support to ULBs. The documents have also been prepared for procuring machinery and setting up infrastructure like MRF Facilities, Bio- methanation plants.

Waste Disposal:- Presently the solid waste generated in the State is being processed through multiple approaches-

i.Waste to Energy (3 clusters)

The waste to energy plant operating in Jabalpur is first of its kind, fully operational Municipal Solid Waste Plant in India with a capacity of 11 MW. This plant is currently processing waste of 16 ULBs. Two more Integrated 'Waste to Energy' clusters are under implementation in Rewa Cluster and in Gwalior Cluster to process waste from 44 ULBs.

ii.Waste to Compost through integrated approach (6 clusters)

Six (6) Clusters comprising 79 ULBs are proposed on 'Waste to Compost' model. The 'Waste to Compost' plants in Sagar and Katni are fully operational and processing the waste of 16 ULBs. Four additional 'Waste to Compost' plants are to be established in Neemuch, Singrauli, Chhatarpur and Khandwa which will benefit 63 ULBs.

iii.Decentralized (Standalone) composting

Bigger ULBs such as Bhopal, Indore and Ujjain have standalone waste to compost facilities to treat the waste of entire city. Total 239 ULBs including Indore and Bhopal Cluster have also created decentralized composting methods for wet waste processing (Examples- Windrow Composting, NADEP Composting, Vermi Composting, etc.)

iv.Biomethanization/Bio-gas

Bhopal, Indore, Ujjain and Dewas have set up Biomethanization plants for converting wet waste to gas. Indore has 3 plants with a total capacity of 37 TPD, Bhopal has five plants with a total capacity of 17.5 TPD, Ujjain has one plant with capacity of 5 TPD and Dewas has one plant with capacity of 0.2 TPD.

Legacy Waste:- The legacy waste remediation work has been undergoing in the various ULBs of the State. 50 ULBs have remediated 100% of their legacy waste and the land has also been reclaimed. As per the directions of the Hon'ble Tribunal, other ULBs of the State are also in the process of remediating their dump sites and in all probabilities State will initiate the work of legacy waste dumpsite remediation by 31.03.2020 as per the directions of the Hon'ble Tribunal.

Policy & Bye-Laws :- The Urban Development & Housing Department of the State Government has notified "Solid Waste Management Policy-2018" on 05.09.2018 under Rule 11 (1)(a) of SWM Rules 2016. 310 ULBs have framed bye-laws under Rule 15 of Solid Waste Management Rules, 2016 and collected penalty of 1.09 Cr during 2019-20.

Public Awareness :- The State has adopted an inclusive strategic model for IEC-BCC initiatives to bring the desired changes in the community behavior and ensuring ownership among citizens and communities towards cleanliness. Our IEC-BCC initiatives target broader spectrum of cleanliness factors covering DTDC, source segregation, open defecation, prevention of manual scavenging, hygiene practices, etc., and creating awareness on health and environmental benefits among masses.

The State's IEC-BCC Campaigns have targeted all the key stakeholders including Resident Welfare Associations (RWA), Educational Institutions, Businesses, Community Leaders, Sanitation Staff, Bulk Waste Generators, etc.

The state is also taking sincere efforts to sensitize the students by conducting seminars, workshops and campaigns in every district covering approximately 25,000 school of the State. The State intends to create a healthy competition among the schools by declaring 6 Schools in every district as **"Green Schools"** on the basis of cleanliness maintained in the schools, waste management, water conservation techniques, plantation done, making and using eco-friendly items, reusing the old text books etc. A state level award has also been instituted for 3 best environment friendly schools under primary, middle and higher secondary categories respectively.

"Eco-club" has been constituted in 250 schools of every district i.e. 13,000 schools in the State. Environment related activities are conducted throughout the year in these schools with the help of the eco-clubs. The eco-clubs also act as the resource school for other schools in their vicinity.

Achievements :- The Ministry of Housing and Urban Affairs, Government of India conducts nation-wide Swachh Survekshan survey under Swachh Bharat Mission. The efforts being taken by the State for effective disposal of waste and cleanliness, have been reflected in the rankings of Swachh Survekshan 2019, wherein Madhya Pradesh has been declared the Best Solid Waste Management State of India.

In addition, Indore has been declared the cleanest city of the country for the last 3 years; Bhopal has been declared cleanest capital in Swachh Survekshan 2019 and second cleanest city in India in 2017 and 2018.

Among the Top 100 cleanest cities in India, Madhya Pradesh has 20 Cities in Swachh Survekshan 2019. Madhya Pradesh is declared as 100% Open Defecation Free (ODF) in urban areas with third party inspection by Quality Council of India. 234 cities of the State have been declared as ODF+ and 108 cities are declared as ODF++ by Government of India.

Annexure - IV

Monitoring at Waste processing/Landfills sites

S.No.	Regional Office	Name of Sites/Facilities	Ambient Air (No. of Samples)	Ground water (No. of Samples)
1.	Bhopal	Vidisha	01	-
2.		Bhopal	-	01
3.		Sehore	-	01
4.		Sanchi	-	01
5.		Bhanpur	01	-
6.		Ichhawar	01	-
7.	Chhindwara	Amarwara	1	3
8.		Badkuhi	3	3
9.		Chand	2	-
10.		Chandameta-Butaria	2	2
11.		Chaurai Khas	-	2
12.		Chhindwara	2	-
13.		Damua	2	2
14.		Donger Parasia	3	1
15.		Harrai	2	1
16.		Junnardev Jamai	3	2
17.		Lodhikheda	1	3
18.		Mohgaon	2	1
19.		Neuton Chikhli Kalan	2	2
20.		Pandhurna	2	1
21.		Piplanarayannwar	2	2
22.		Sausar	2	2
23.	Dhar	Dhar	2	2

24.	Guna	Biaora	-	2
25.		Chhapiheda	-	2
26.		Machalpur	-	2
27.		Rajgarh	-	2
28.		Jirapur	-	2
29.		Khilchipur	-	2
30.		Shivpuri	-	1
31.		Aron	-	1
32.		Ashoknagar	-	1
33.		Chachaura-Binaganj	-	1
34.		Chanderi	-	1
35.		Guna	02	01
36.		Isagarh	-	1
37.		Kumbhraj	-	1
38.		Mungaoli	-	1
39.		Raghogarh-Vijaypur	-	1
40.		Sarangpur	0	2
41.		Boda	0	2
42.		Talen	0	2
43.		Pachor	0	2
44.		Suthaliya	0	2
45.		Narshiggarh	0	2
46.		Khujhner	0	2
47.		Kurawar	0	2
48.		Shadora	-	1
49.		Antari	2	2
50.		Badoni	-	1

51.	Gwalior	Bhander	2	1
52.		Bhitarwar	2	3
53.		Bilaua	2	1
54.		Dabra	2	3
55.		Datia	2	2
56.		Gwalior	-	1
57.		Indergarh	2	1
58.		Pichhore	-	2
59.		Banmor	1	3
60.		Jhundpura	-	1
61.		Joura	-	2
62.		Kailras	2	2
63.		Morena	3	5
64.		Akoda	1	2
65.		Alampur	2	1
66.		Ambah	3	2
67.		Bhind	5	4
68.		Gohad	3	2
69.		Gormi	3	2
70.		Lahar	-	1
71.		Mau	-	1
72.		Mehgaon	5	2
73.		Mihona	2	1
74.		Phuphkalan	2	1
75.		Sewda	2	-
76.		Porsa	1	2
77.		Badoda	1	1

78.		Sheopur kalan	1	3
79.		Morar	-	1
80.		Davoh	2	2
81.		Sabalgarh	2	2
82.		Vijaypur	1	2
83.	Indore	Indore	4	39
84.		Khandwa	-	2
85.		Bhurhanpur	-	2
86.		Khargon	1	4
87.		Badwani	-	1
88.	Jabalpur	Sihora	2	2
89.		Jabalpur CB	2	2
90.		Barela	2	2
91.		Bhedaghat	2	2
92.		Chichali	2	2
93.		Gadarwara	2	2
94.		Gotegaon	2	2
95.		Kareli	2	2
96.		Katangi Jabalpur	2	2
97.		Manjholi	2	2
98.		Narsinghpur	4	2
99.		Panagar	2	2
100.		Patan	2	2
101.		Saikheda	2	2
102.		Salichauka	2	2
103.		Shahpura Bhitoni	2	2
104.		Tendukheda	2	2

105.		Baihar	2	2
106.		Balaghat	4	2
107.		Bamhani Banjar	2	2
108.		Bichhiya	2	2
109.		Katangi	2	2
110.		Lanji	2	2
111.		Malajkhand	2	2
112.		Mandla	4	2
113.		Nainpur	2	2
114.		Niwas	2	2
115.		Waraseoni	2	2
116.		Barghat	2	2
117.		Lakhnadon	2	2
118.		Seoni	4	2
119.		Jabalpur	4	7
120.	Katni	Barhi	4	4
121.		Katni(Murwara)	4	4
122.		Kymore	4	4
123.		Vijayraghavgarh	4	4
124.	Satna	satna	1	1
125.		Chitrakut	1	1
126.		Maihar	01	01
127.		Kothar	01	01
128.		Birsinghpur	01	01
129.		Amarpatan	01	01
130.		Jaitwara	01	01
131.		Kothi	01	01

132.	Satna	Unchehra	01	01
133.		Rampur Baghelan	01	01
134.		Nagod	01	01
135.		Ramnagar	01	01
136.	Ujjain	Ujjain	12	05
137.		Namli	-	01
138.		Pipliyamandi	-	01
139.		Ratangarh	-	01
140.		Ratlam	12	01
141.		Mandsaur	21	02
142.		Badnagar	0	01
143.		Neemuch	21	-
144.		Agar	06	-
145.	Rewa	Chakghat	1	1
146.		Baikunthpur	1	1
147.		Churhat	1	1
148.		Govindgarh	1	1
149.		Gurh	1	1
150.		Hanumana	1	1
151.		Majhauri	1	1
152.		Mangawan	1	1
153.		Mauganj	1	1
154.		Naigarhi	1	1
155.		Rampur Naikin	1	1
156.		Rewa	1	1
157.		Semaria	1	1
158.		Sidhi	1	1

159.		Sirmour	1	1
160.		Teonthar	1	1
161.	Pithampur	Pithampur	18	2
162.	Sagar	Panna	6	5
163.		Chhatarpur	4	3
164.		Damoh	4	4
165.		Tikamgarh	2	4
166.		Sagar	2	4
167.	Shahdol	Umariya	4	4
168.		Shahdol	4	3
169.		Anuppur	5	2
170.		Dindori	3	4
171.	Singrauli	Singrauli	16	4
172.	Dewas	Dewas	14	12
173.		Shajapur	08	06
174.	Mandideep	Raisen	02	02
175.		Sanchi	02	03
176.		Udaypura	01	02
177.		Silwani	01	01
178.		Obedullaganj	01	02
179.		Sultanpur	02	03
180.		Bareli	01	02
181.		Mandideep	03	03
182.		Begum ganj	02	01
183.		Gairat ganj	01	01
184.		Badi	01	02
185.		Hoshangabad	03	04

186.		Seoni Malwa	02	03
187.		Itarsi	03	04
188.		Pipariya	02	03
189.		Babai	04	04
190.		Sohagpur	04	04
191.		Bankhedhi	03	03
192.		Pachmarhi	03	03
193.		Harda	03	04
194.		Timarni	02	03
195.		Khirkiya	03	04
Total			428	424



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 Simhashth 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.

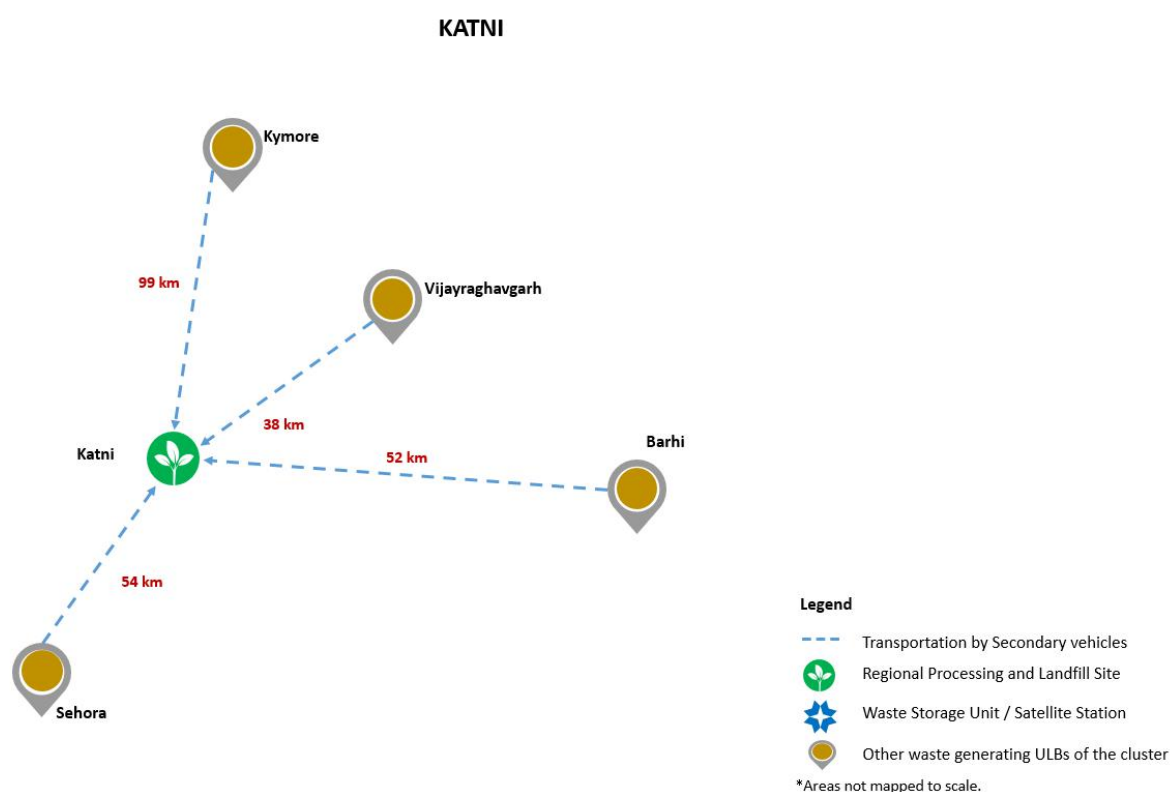
BENEFITS FROM THE INITIATIVE

- 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.

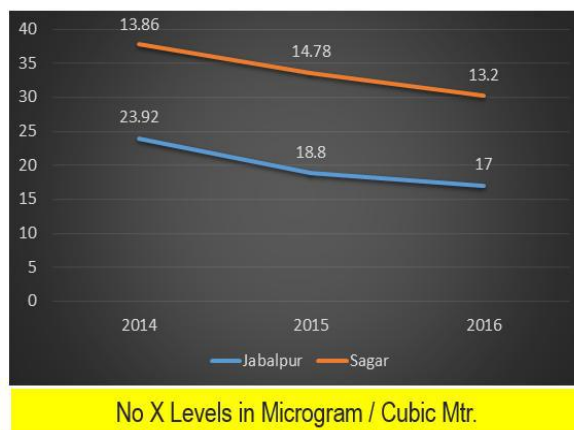
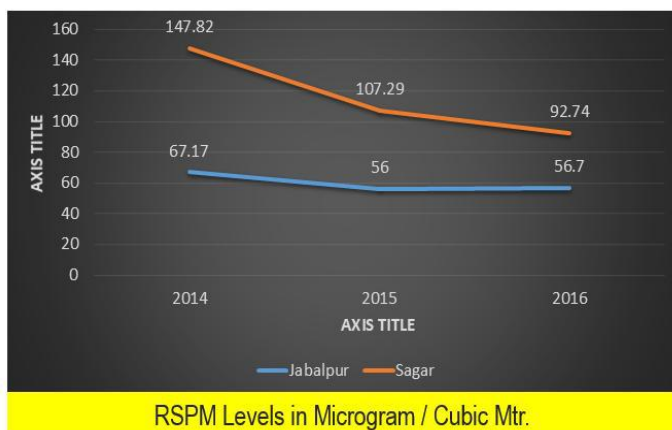
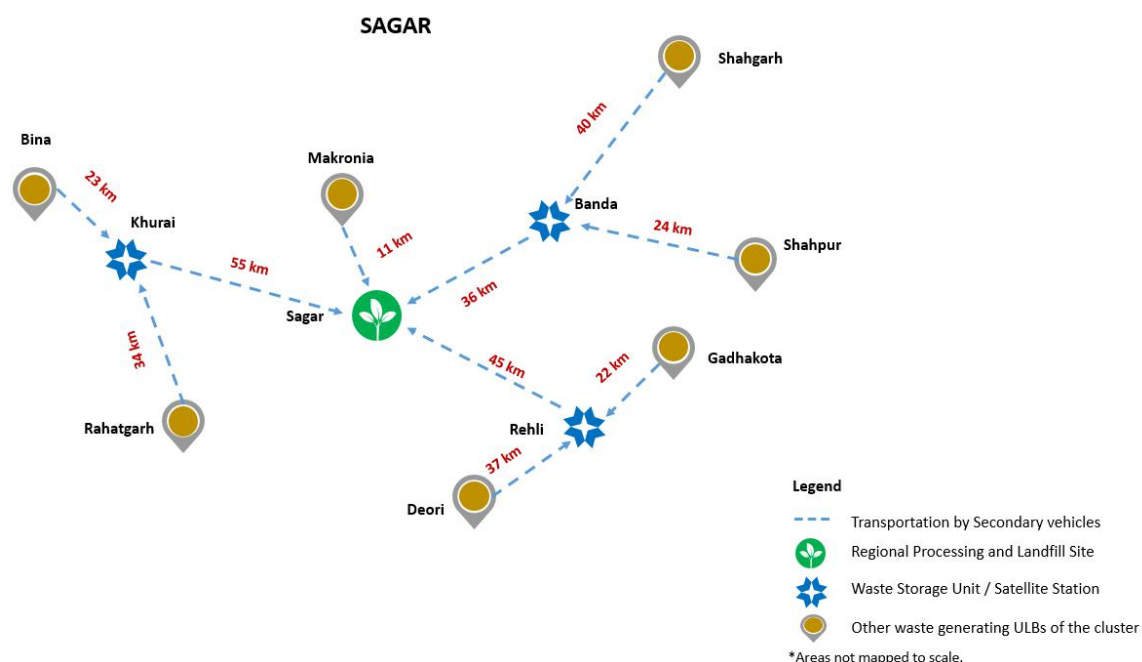


Image: RSPM and NOx Levels in Jabalpur and Sagar

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.

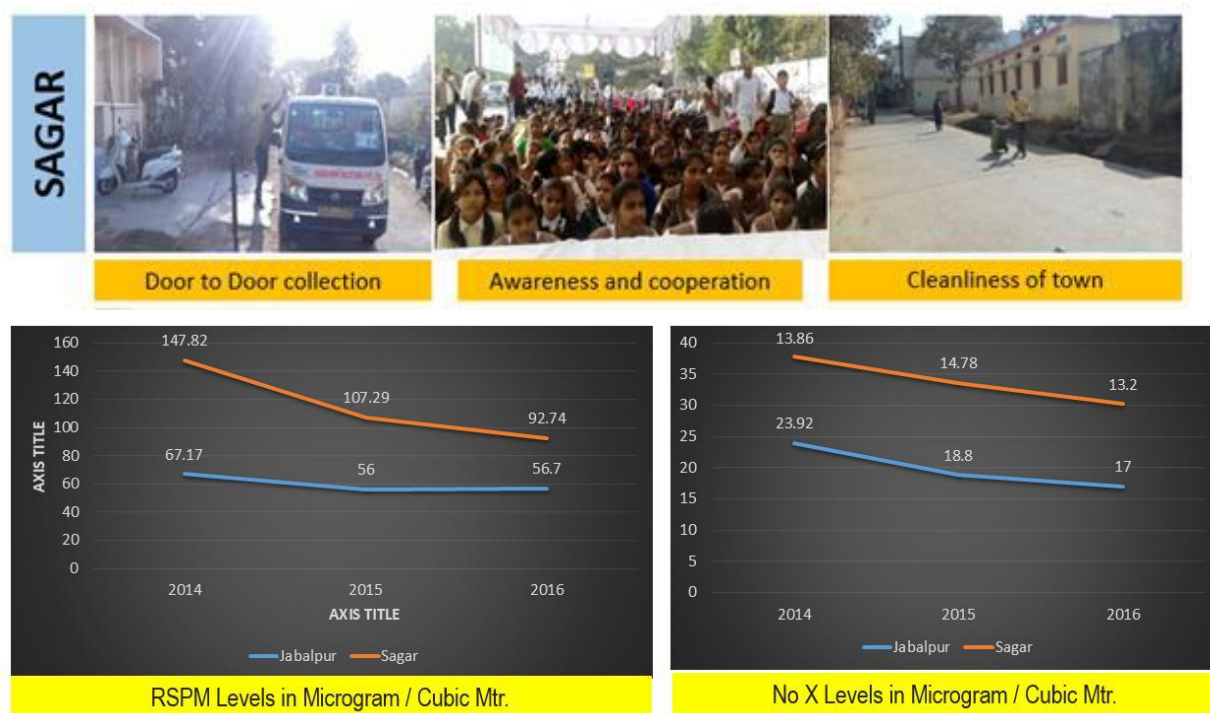
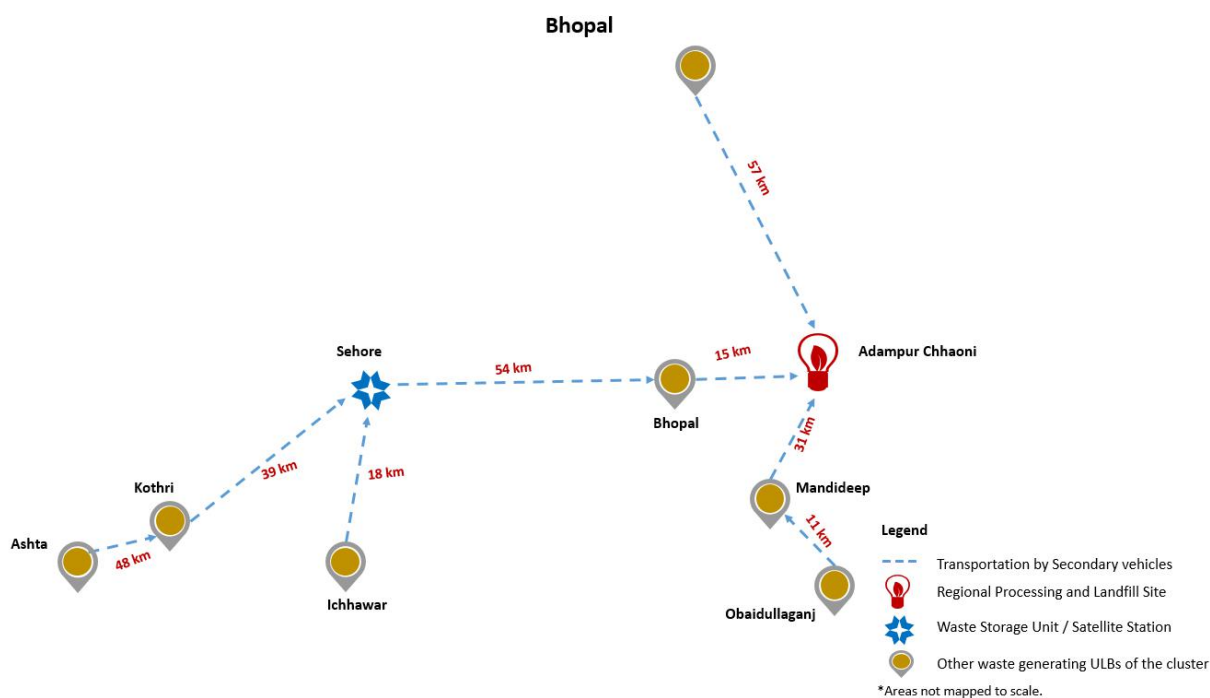


Image: RSPM and NOx Levels in Jabalpur and Sagar

CLUSTER: BHOPAL (WTE)

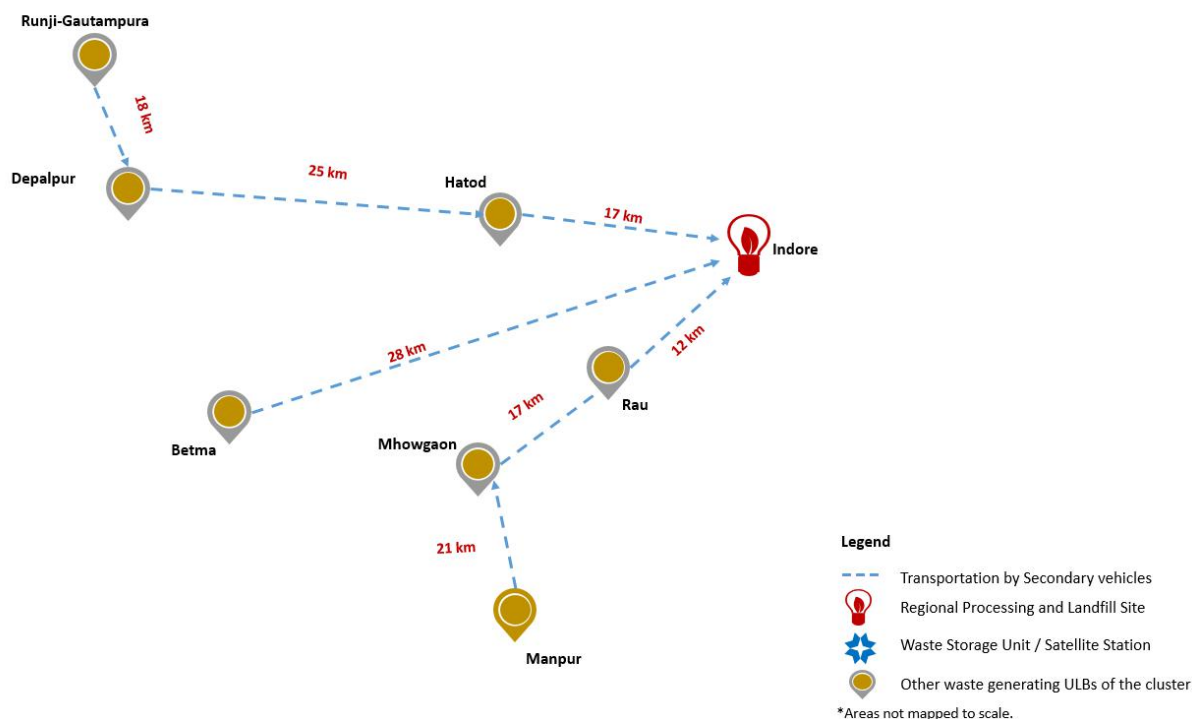
- Towns: Ashta, Berasia, Bhopal, Ichhawar, Kothri, Mandideep, Obedullaganj, Sehore
- Est. Project Cost. (Rs. Cr): 465.76
- Total MSW Generated (TPD): 1,060
- Concession Period: 21 years including implementation
- Implementation Modality: Public Private Partnership
- Institutional arrangement: An inter 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)

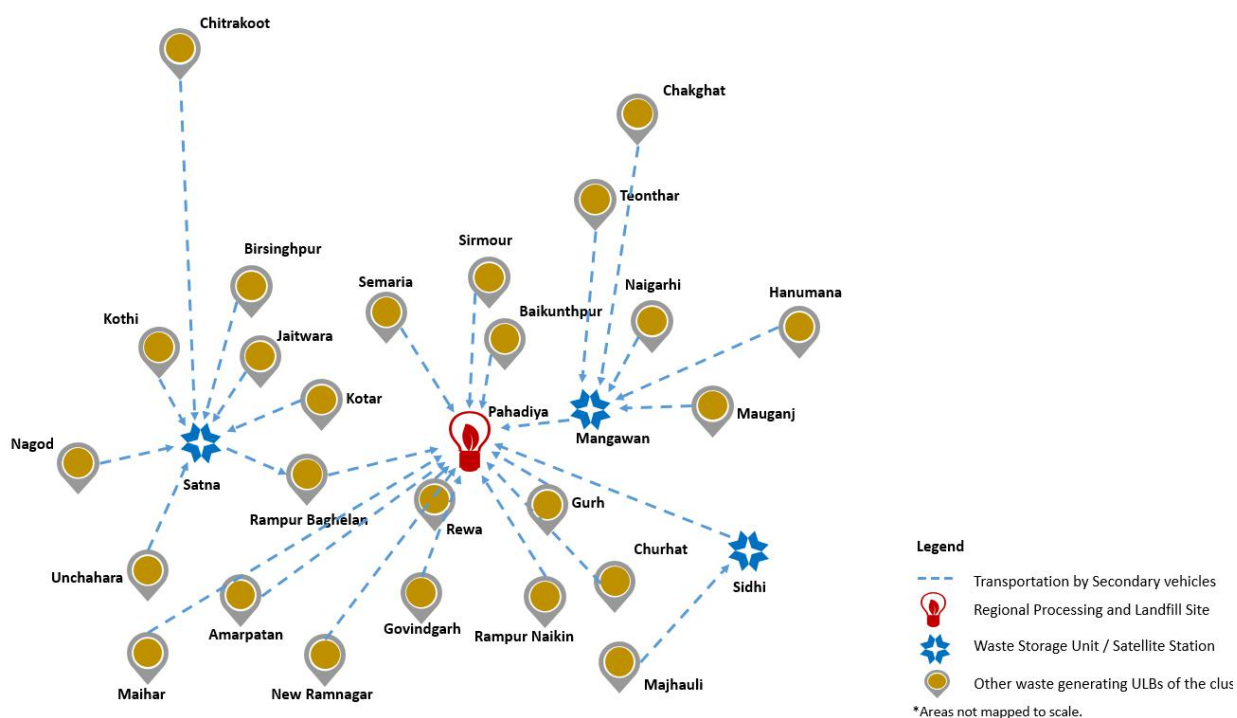
- Towns: Betma, Depalpur, Hatod, Indore, Manpur, Mhowgaon, Rau, Runji-Gautampura
- Est. Project Cost. (Rs. Cr): 470.0
- Total MSW Generated (TPD): 1,010
- Concession Period: 21 years including implementation
- Implementation Modality: Public Private Partnership
- Institutional arrangement: An inter ULB 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)

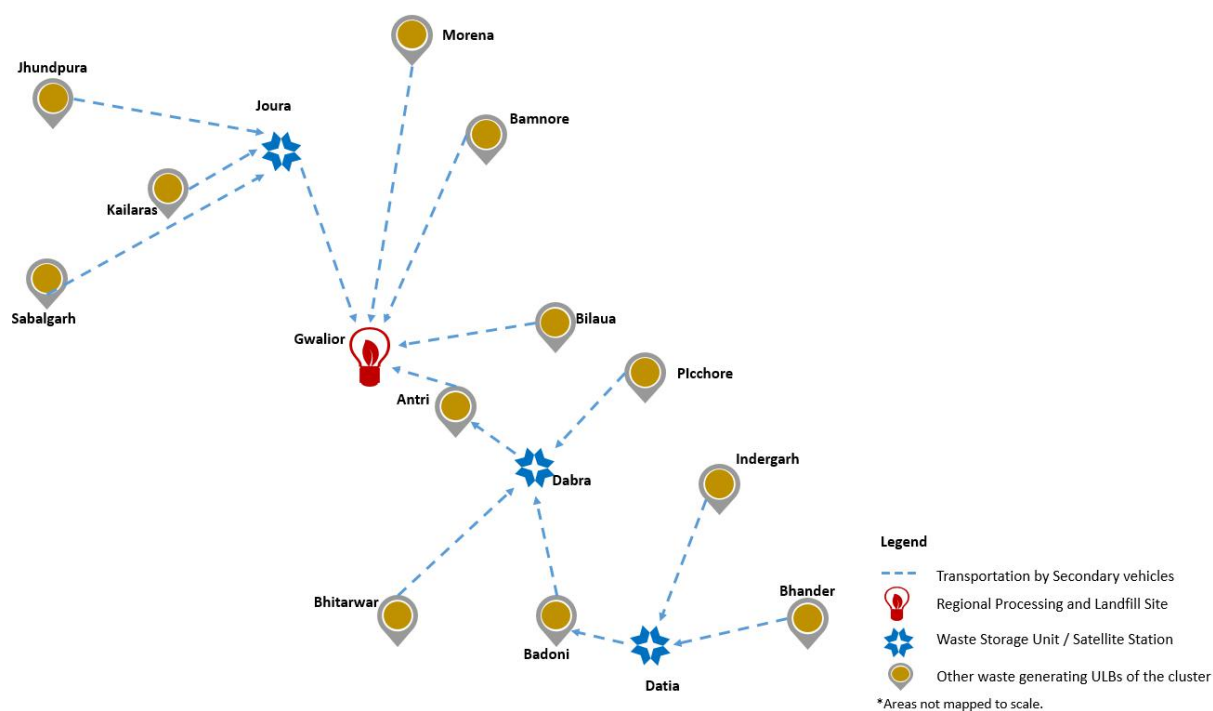
- Towns: Amarpatan, Baikunthpur, Birsinghpur, Chakghat, Chitrakoot, Churhat, Govindgarh, Gurh, Hanumana, Jaitwara, Kotar, Kothi, Maihar, Majhauli, Mangawan, Mauganj, Nagod, Naigarhi, New Ramnagar, Rampur Baghelan, Rampur Naikin, Rewa, Satna, Semaria, Sidhi, Sirmour, Teonthar, Unchahara
- Est. Project 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
	Khirkia	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
	Phuphkalan	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
	Dhamnod (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
	Sitamaui	15,179	5
	Pithampur	136,282	41
	Dhar	101,420	30
	Rajgarh (457001)	25,708	8
	Sadarpur	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
Jabalpur City Project is Standalone project only for Jabalpur City. Cities of Jabalpur Cluster are formed into Jabalpur Cluster and Bid is invited			

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