Annual Report 2019-20 on Implementation of Solid Waste Management Rules, 2016



CENTRAL POLLUTION CONTROL BOARD DELHI

	CONTENT	
Serial No.	Topic	Page No
1.0	Background	1
2.0	Status of Solid Waste Management	1
2.1	Overall Solid Waste Management Status	1
2.2	Trends in Solid Waste Management	3
2.2.1	SWM Trend (Year wise)	3
2.2.2	SWM Trend (State wise)	6
2.2.3	Country wise waste generation	7
2.3	Towns/Cities & Urban Local Bodies in States / UT	11
2.4	Authorization Granted To Waste Processing /Disposal Facilities	13
2.5	Collection , Segregation & Transportation of Solid Waste	14
2.6	Solid Waste Processing Facilities	15
2.7	Landfill for Waste Disposal	15
2.8	Waste Disposal in dumpsites	15
2.9	Monitoring at Waste Processing & Disposal Sites	15
3.0	State wise Observations/ Findings	72
3.1	Andhra Pradesh:	72
3.2	Arunachal Pradesh	74
3.3	Assam	74
3.4	Bihar	75
3.5	Chhattisgarh	75
3.6	Goa	76
3.7	Gujarat	76
3.8	Haryana	77
3.9	Himachal Pradesh	79
3.10	Jammu & Kashmir	79
3.11	Jharkhand	82
3.12	Karnataka	82
3.13	Kerala	83
3.14	Madhya Pradesh	84
3.15	Maharashtra	85
3.16	Manipur	86
3.17	Meghalaya	87
3.18	Mizoram	87

	CONTENT				
Serial	Topic	Page No			
No.					
3.19	Nagaland	88			
3.20	Odisha	89			
3.21	Punjab	90			
3.22	Rajasthan	90			
3.23	Sikkim	92			
3.24	Tamil Nadu	93			
3.25	Telangana	94			
3.26	Tripura	96			
3.27	Uttarakhand	97			
3.28	Uttar Pradesh	97			
3.29	West Bengal	98			
3.30	Andaman & Nicobar Islands	98			
3.31	Chandigarh	99			
3.32	Daman & Diu	99			
3.33	Delhi	100			
3.34	Lakshadweep	103			
3.35	Puducherry	105			
4.0	Best Practices in Solid Waste Management	105			
5.0	Environmental Performance (SWM) based rating of States/ UTs	109			
6.0	Observations & Recommendations	114			
	List of Annexures				
1	The template of the performance assessment of Solid Waste Management	117			
11	Environment Performance based rating of States/UTs	120			

1.0 Background:

In accordance with the Provision 24 (4) of the Solid Wastes Management Rules, 2016, the Central Pollution Control Board (CPCB) is required to prepare a Consolidated Annual Report (CAR) and forward to the Central Government (Ministry of Environment, Forests and Climate Change) along with suggestions/recommendations. During 2019-20, 35 SPCBs/PCCs have submitted Annual Report in compliance of Solid Waste Management Rules, 2016.

2.0 Status of Solid Waste Management

2.1 Overall Solid Waste Management Status

The total quantity of Solid waste generated in the country is 150761 TPD of which 145957 TPD of waste is collected as per which overall collection efficiency of waste collection works out to 96.8%. 70881 TPD (47.01 %) of waste is treated and 40952 27.16%) TPD is landfilled. 38928 TPD which is 25.8% of the total waste generated remains unaccounted. State wise details of solid waste management is given in **Table 1.0**.

Table 1.0: OVERALL SOLID WASTE MANAGEMENT STATUS

SI.	State	Solid waste	Collected	Treated	Landfilled
No.		generated (TPD)	(TPD)	(TPD)	(TPD)
1.	Andhra Pradesh	6766	6140	1059	203
2.	Arunachal Pradesh	285.65	223.56	Nil	127.72
3.	Assam	1271.305	922.4115	41.6625	880.749
4.	Bihar	4334	Yes	Not	No
5.	Chhattisgarh	1650	1650	1385	265
6.	Goa	188.88	180.38	148.91	15.59
7.	Gujarat	-	10755	6924	3831
8.	Haryana	5231.9	4808.8	1620.6	3188.2
9.	Himachal Pradesh	393	354	230	124
10.	Jammu & Kashmir	1518.91	1464.65	540.19	No
11.	Jharkhand	2188.97	1847.38	731.76	1179.68
12.	Karnataka	12258.2	10011	4489	Not
13.	Kerala	3521	880	1837	Not

SI.	State	Solid waste	Collected	Treated	Landfilled
No.		generated (TPD)	(TPD)	(TPD)	(TPD)
14.	Madhya Pradesh	7980	7193	6431	762
15.	Maharashtra	22945.256	22779.31	16037.26	6907.98
16.	Manipur	265	192.4	103.57	88.63
17.	Meghalaya	153.18	119.19	9.64	Nil
18.	Mizoram	348.19	313	278.4	Nil
19.	Nagaland	306.1	255.9	24	6
20.	Odisha	2208.6	2123.3	202.4	1920.9
21.	Punjab	4477.542	4413.952	2112.457	2301.495
22.	Rajasthan	6659.38	6475.9	1190.93	5112.66
23.	Sikkim	74.7	74.6	12.56	62.032
24.	Tamil Nadu	14228	13955	6620	6765
25.	Telangana	9285	9270	6070	593
26.	Tripura	411.32	380.8	253.6	127.2
27.	Uttarakhand	1610.942	1481.057	716.637	-
28.	Uttar Pradesh	14468	13955	5395	0
29.	West Bengal	13980	12062	916	334
30.	Andaman and	121	115	50	65
31.	Chandigarh	450	450	179.61	270.39
32.	DDDNH	184	191	97	DNH – Not Provided Daman – Not Provided Diu - 30
33.	Delhi	10470.57	10466.57	5193.57	5276
34.	Lakshadweep	32.55	32.55	11.44	Nil
35.	Puducherry	580	517	61	456
	TOTAL	150847.1	146053.8	70973.2	40863.2

2.2. Trends in Solid Waste management

2.2.1. SWM Trend (Year wise)

SWM data for the last five years (2015-20) have been examined and following are the observations:

(a) Per capita Solid waste generation: Per capita solid waste generation has been calculated for the last five years and is given in Table 2.0. The trend in per capita waste generation is illustrated in Figure 1. Marginal decreasing trend is observed in per capita solid waste generation over the last five years.

 Year
 (gm/day)

 2015-16
 118.68

 2016-17
 132.78

 2017-18
 98.79

 2018-19
 121.54

 2019-20
 119.26

Table 2.0: SOLID WASTE GENERATION PER CAPITA

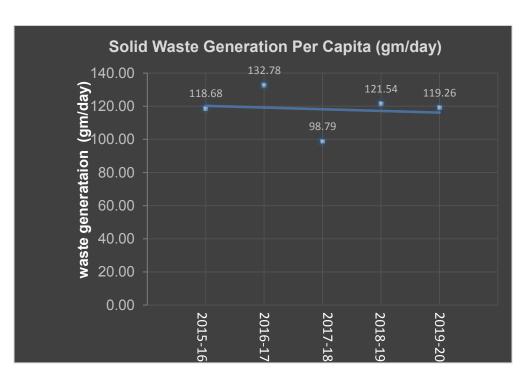


Fig. 1: Solid Waste Generation Per Capita (gm/day)

(b) **Solid waste processing**: Trend of percentage solid waste processed during the last 2015-20 is illustrated in **Figure 2**. Increasing trend in percentage of solid waste

processed has been observed during the last five years wherein percentage of solid waste processed has increased from 19% in 2015-16 to 47% in 2019-20.



Fig 2: Year wise solid waste treated (%)

c. Trend in solid waste landfilled: Trend of percentage solid waste landfilled during 2015-20 is illustrated in Figure 3.Decreasing trend in solid waste landfilled has been observed during the last five years wherein solid waste landfilled has decreased from 54% in 2015-16 to 27% in 2019-20.

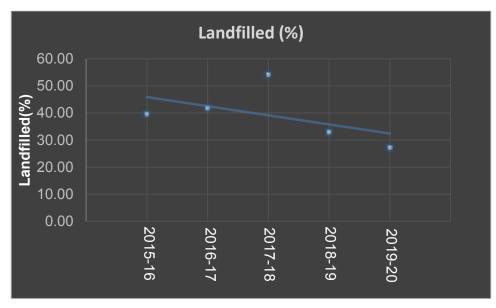


Fig 3: Year wise solid waste landfilled (%)

(d) Trend in gap in Solid waste management: Percentage gap in solid waste management has been calculated for the period 2015-20, the details of which are given in Table 3.0 and the trend in the gap is illustrated in Figure 4. Decreasing trend in solid waste management has been observed during the last five years wherein percentage gap in Solid Waste Management has decreased from 40.99% in 2015-16 to 25.82% in 2019-20.

 Year
 Gap in Solid Waste Management (%)

 2015-16
 40.99

 2016-17
 79.78

 2017-18
 9.38

 2018-19
 30.35

 2019-20
 25.82

Table 3.0: GAP IN SOLID WASTE MANAGEMENT

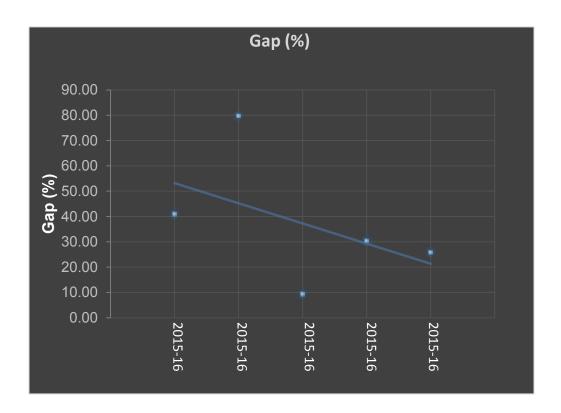


Fig.4: Gap in solid waste management in percentage

2.2.2 SWM Trend (State wise)

(a) Trend in solid waste generation: Per capita generation of solid waste in different States/UTs is illustrated in Figure 5. It is observed that maximum quantity of per capita solid waste is generated in Delhi followed by Lakshadweep & Mizoram in that order.

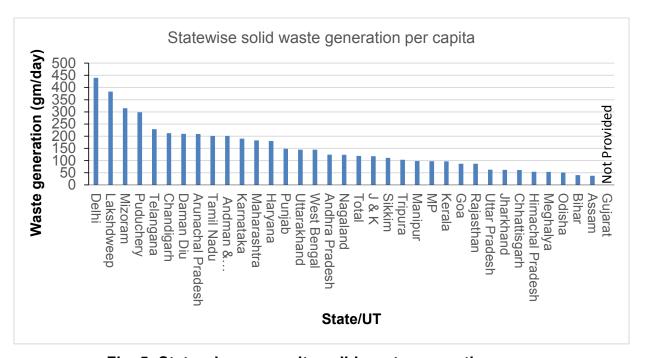


Fig. 5: State wise per capita solid waste generation

(b) Trend in solid waste processing: Percentage of solid waste treated in different States/UTs is illustrated in **Figure 6**. It is observed that maximum percentage of solid waste treated is in Chhattisgarh (84%) followed by Madhya Pradesh (80.5%), Mizoram (80%) &Goa (79%) in that order.

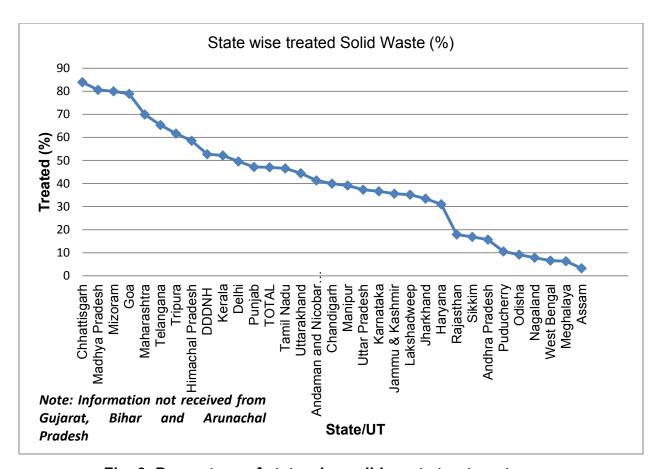


Fig. 6: Percentage of state wise solid waste treatment

2.2.3 Country wise waste generation

As per the World Bank report "What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050" published in 2018, Country wise information on Solid waste is tabulated in **Table 4.0**. The data has been examined it is observed that India is the third largest generator of Solid waste in the World. However, India is ranked at 187 w.r.t per capita solid waste generation. It is to be noted India's GDP is ranked at 66 as per information provided in the Table 4.0.

TABLE 4.0: GLOBAL SNAPSHOT OF SOLID WASTE GENERATION

SI. No.	Country Name	GDP	MSW (Million TPA)	TPA/Pe r Capita	SI. No.	Country Name	GDP	MSW (Million TPA)	TPA/ Per Capita
1.	China	16092.30	395.081	0.28	109.	Nepal	2902.25	1.769	0.06
2.	United States	61498.37	265.225	0.81	110.	Kuwait	58810.3	1.75	0.58
3.	India	6496.81	189.75	0.14	111.	Oman	30535.83	1.735	0.44
4.	Brazil	14596.25	79.07	0.38	112.	El Salvador	7328.71	1.649	0.27
5.	Indonesia	10531.20	65.2	0.25	113.	Nicaragua	4611.84	1.529	0.27
6.	Russian Federation	26012.85	60	0.42	114.	Panama	28436.36	1.472	0.37
7.	Mexico	19332.07	53.1	0.42	115.	Costa Rica	18168.71	1.46	0.31
8.	Germany	53784.78	50.628	0.61	116.	Zimbabwe	3190.51	1.45	0.12
9.	Japan	41309.96	42.72	0.34	117.	West Bank and Gaza	5985.68	1.387	0.34
10.	France	46110.18	36.749	0.55	118.	Chad	1732.69	1.359	0.11
11.	Turkey	28289.09	35.374	0.42	119.	Lithuania	37278.3	1.315	0.47
12.	United Kingdom	46290.12	30.771	0.46	120.	Malawi	999.44	1.298	0.08
13.	Pakistan	4571.41	30.76	0.16	121.	Uruguay	20588.39	1.26	0.37
14.	Italy	42419.72	30.088	0.5	122.	Bosnia and Herzegovina	12671.01	1.249	0.35
15.	Nigeria	4690.38	27.615	0.18	123.	Kyrgyz Republic	4805.14	1.113	0.19
16.	Thailand	16301.54	26.853	0.39	124.	Togo	1404.13	1.109	0.15
17.	Canada	47672.08	25.103	0.71	125.	Central African Republic	822.61	1.106	0.24
18.	Spain	40985.56	22.409	0.48	126.	Cambodia	3364.28	1.089	0.07
19.	Egypt, Arab Rep.	10301.11	21	0.24	127.	Albania	13724.06	1.087	0.38
20.	Korea, Rep.	42105.28	20.453	0.4	128.	Slovenia	39037.93	1.052	0.5
21.	South Africa	12666.61	18.457	0.36	129.	Jamaica	9550.81	1.052	0.37
22.	Argentina	23550.1	17.911	0.42	130.	Qatar	96261.66	1.001	0.47
23.	Iran, Islamic Rep.	14535.86	17.885	0.22	131.	Papua New Guinea	3912.38	1	0.13
24.	Saudi Arabia	48921.23	16.126	0.51	132.	Bahrain	47937.78	0.952	0.67
25.	Ukraine	11534.64	15.242	0.34	133.	Latvia	30982.17	0.84	0.44
26.	Bangladesh	3195.74	14.778	0.09	134.	Georgia	12605.14	0.8	0.22
27.	Philippines	7705.05	14.632	0.14	135.	Cyprus	39544.68	0.769	0.64
28.	Congo, Dem. Rep.	1055.57	14.385	0.18	136.	Trinidad and Tobago	28910.91	0.728	0.55
29.	Australia	47784.18	13.345	0.56	137.	Eritrea	1714.55	0.727	0.16
30.	Iraq	10310.68	13.14	0.36	138.	Benin	2227.35	0.686	0.12
31.	Malaysia	23906.27	12.983	0.43	139.	Macedonia, FYR	16147.73	0.627	0.3
32.	Poland	33221.54	12.758	0.34	140.	Sierra Leone	1237.63	0.61	0.11
33.	Algeria	11826.17	12.379	0.3	141.	Guinea	1622.78	0.597	0.07
34.	Colombia	12523.01	12.15	0.26	142.	Liberia	1333.42	0.564	0.16

SI. No.	Country Name	GDP	MSW (Million TPA)	TPA/Pe r Capita	SI. No.	Country Name	GDP	MSW (Million TPA)	TPA/ Per Capita
35.	Venezuela, RB	14269.67	9.779	0.33	143.	Turkmenistan	11471.19	0.5	0.09
36.	Vietnam	5089.41	9.57	0.11	144.	Armenia	11019.84	0.493	0.17
37.	Tanzania	2128.55	9.277	0.19	145.	Luxembourg	114323.4	0.49	0.79
38.	Netherlands	56849.38	8.805	0.51	146.	Estonia	36956.29	0.49	0.37
39.	Peru	11877.08	8.357	0.27	147.	Mauritania	4783.64	0.454	0.13
40.	NA	57362.93	7.336	0.31	148.	Congo, Rep.	4899.58	0.451	0.17
41.	Uganda	1972.3	7.045	0.2	149.	Mauritius	20646.93	0.438	0.35
42.	Morocco	6915.1	6.852	0.2	150.	Macao SAR, China	117335.6	0.378	0.62
43.	Ethiopia	1779.08	6.533	0.07	151.	Lao PDR	6543.67	0.352	0.05
44.	Chile	20361.71	6.517	0.39	152.	Malta	43707.54	0.349	0.69
45.	Switzerland	68394.29	6.08	0.71	153.	Montenegro	20752.62	0.33	0.53
46.	Hong Kong SAR, China	57215.97	5.68	0.78	154.	Kosovo	9723.56	0.319	0.18
47.	Afghanistan	2057.06	5.629	0.16	155.	Guinea-Bissau	1800.07	0.29	0.16
48.	United Arab Emirates	67119.13	5.618	0.57	156.	Bahamas, The	35400.08	0.264	0.68
49.	Greece	30465.45	5.615	0.52	157.	Namibia	6152.99	0.257	0.16
50.	Kenya	3329.85	5.595	0.14	158.	Gabon	18514.65	0.238	0.22
51.	Romania	29983.56	5.42	0.28	159.	Iceland	55274.19	0.225	0.66
52.	Israel	37687.75	5.4	0.64	160.	Eswatini	8321.11	0.218	0.16
53.	Czech Republic	40836.33	5.335	0.5	161.	Brunei Darussalam	60865.99	0.216	0.51
54.	Ecuador	11896.38	5.297	0.33	162.	Maldives	17284.61	0.212	0.52
55.	Portugal	34961.95	5.268	0.51	163.	Botswana	14126.39	0.211	0.1
56.	Austria	56029.61	5.22	0.59	164.	Equatorial Guinea	24827.07	0.198	0.16
57.	Denmark	57821.2	4.911	0.84	165.	Gambia, The	2180.86	0.193	0.15
58.	Yemen, Rep.	8269.67	4.837	0.18	166.	Fiji	10787.69	0.189	0.22
59.	Belgium	51914.91	4.766	0.42	167.	Solomon Islands	2596.45	0.18	0.32
60.	Myanmar	1093.79	4.677	0.1	168.	Guyana	9812.09	0.179	0.24
61.	Kazakhstan	22702.58	4.66	0.28	169.	Channel Islands	46672.59	0.179	1.09
62.	Sweden	52608.71	4.618	0.45	170.	Barbados	15444.75	0.175	0.62
63.	Syrian Arab Republic	8587.05	4.5	0.22	171.	French Polynesia	60955.73	0.147	0.54
64.	CÃ′te d'lvoire	3660.9	4.441	0.22	172.	Virgin Islands (U.S.)	30436.56	0.147	1.38
65.	Rwanda	1950.53	4.385	0.37	173.	Guam	59074.94	0.142	0.88
66.	Belarus	18307.52	4.28	0.45	174.	Cabo Verde	6353.78	0.133	0.26
67.	Angola	8036.69	4.214	0.17	175.	Djibouti	6596.78	0.115	0.15
68.	Puerto Rico	34311.03	4.171	1.2	176.	Bhutan	6743.02	0.111	0.16
69.	Norway	64962.26	4.15	0.78	177.	New Caledonia	57330.2	0.108	0.39

SI. No.	Country Name	GDP	MSW (Million TPA)	TPA/Pe r Capita	SI. No.	Country Name	GDP	MSW (Million TPA)	TPA/ Per Capita
70.	Dominican Republic	15328.35	4.064	0.39	178.	Belize	7259.02	0.101	0.28
71.	Uzbekistan	5164.27	4	0.13	179.	Comoros	2959.54	0.091	0.12
72.	Moldova	10360.83	3.981	1.12	180.	Aruba	35563.31	0.088	0.85
73.	Hungary	32643.49	3.781	0.39	181.	Bermuda	80982.37	0.082	1.27
74.	Madagascar	1565.87	3.769	0.15	182.	Suriname	16953.8	0.079	0.15
75.	Ghana	3092.6	3.538	0.16	183.	St. Lucia	14029.98	0.078	0.44
76.	New Zealand	41857.48	3.405	0.73	184.	Lesotho	1978.61	0.073	0.04
77.	Cameroon	3262.76	3.271	0.15	185.	Vanuatu	3061.79	0.07	0.26
78.	Finland	48814.31	3.124	0.57	186.	Timor-Leste	3344.57	0.064	0.05
79.	Azerbaijan	14853.91	2.93	0.3	187.	Faeroe Islands	44402.88	0.061	1.25
80.	Ireland	83388.72	2.911	0.6	188.	Cayman Islands	66207.45	0.06	1.01
81.	Mongolia	10940.42	2.9	0.96	189.	Isle of Man	44203.62	0.051	0.63
82.	Bulgaria	22279.36	2.859	0.41	190.	Greenland	43948.56	0.05	0.88
83.	Sudan	4191.82	2.831	0.07	191.	Seychelles	23302.95	0.048	0.54
84.	Guatemala	8125.36	2.757	0.17	192.	Monaco	43711.8	0.046	1.22
85.	Tunisia	10505.26	2.7	0.24	193.	Andorra	43711.8	0.043	0.52
86.	Cuba	12984.71	2.693	0.24	194.	Kiribati	2249.77	0.036	0.31
87.	South Sudan	1795.99	2.681	0.24	195.	St. Kitts and Nevis	25569.36	0.033	0.61
88.	Sri Lanka	12287.47	2.632	0.12	196.	Northern Mariana Islands	60955.73	0.033	0.61
89.	Zambia	3201.29	2.608	0.18	197.	Liechtenstein	45726.99	0.032	0.89
90.	Burkina Faso	1925.33	2.575	0.14	198.	St. Vincent and the Grenadines	11971.99	0.032	0.29
91.	Jordan	10413.18	2.53	0.3	199.	Antigua and Barbuda	17965.5	0.031	0.32
92.	Mozambique	1217.09	2.5	0.09	200.	Grenada	13207.71	0.03	0.28
93.	Senegal	3067.66	2.454	0.16	201.	Samoa	6210.98	0.027	0.15
94.	Serbia	18351.27	2.347	0.34	202.	Micronesia, Fed. Sts.	3440.06	0.026	0.25
95.	Somalia	1862.61	2.326	0.16	203.	São Tomé and PrÃncipe	3720.79	0.026	0.13
96.	Haiti	2952.62	2.31	0.21	204.	Curacao	27503.79	0.025	0.16
97.	Slovak Republic	31965.76	2.296	0.42	205.	British Virgin Islands	24215.88	0.021	1.02
98.	Bolivia	7984.41	2.219	0.21	206.	American Samoa	11113.44	0.019	0.34
99.	Honduras	5395.61	2.162	0.24	207.	Tonga	5636.42	0.017	0.16
100.	Libya	8479.95	2.148	0.35	208.	San Marino	58806.2	0.017	0.52
101.	Lebanon	16966.74	2.04	0.36	209.	Gibraltar	43711.8	0.017	0.5
102.	Mali	2007.81	1.937	0.12	210.	St. Martin (French part)	30385.89	0.015	0.5
103.	Burundi	839.78	1.872	0.28	211.	Dominica	11708.64	0.013	0.18
104.	Singapore	97341.47	1.87	0.33	212.	Palau	18275.03	0.009	0.44

SI. No.	Country Name	GDP	MSW (Million TPA)	TPA/Pe r Capita	SI. No.	Country Name	GDP	MSW (Million TPA)	TPA/ Per Capita
105.	Niger	1038.22	1.866	0.21	213.	Marshall Islands	3628.9	0.009	0.16
106.	Paraguay	11810.43	1.819	0.27	214.	Nauru	11167.32	0.006	0.47
107.	Croatia	28829.36	1.81	0.45	215.	Tuvalu	3793.13	0.004	0.36
108.	Tajikistan	2616.48	1.787	0.22					

2.3 Towns/Cities & Urban Local Bodies in States / UT

The details of Towns/Cities & Urban Local Bodies in States / UTs are given in **Table 5.0**. As per the information provided by SPCBs/PCCs, there are 4369 ULBs, 3126 Towns & cities and 822 Class I & II Towns & Cities in the country. Some of the states/UTs, as indicated in the table, have not provided complete information on the matter.

Table 5.0: Details of Towns/Cities & Urban Local Bodies in States / UT

S.	States	No. of	No. of ULBs	No. of Class I
No.		Towns/Cities		&II Towns/Cities
1.	Andhra Pradesh	110	110	72
2.	Arunachal Pradesh	34	2	0
3.	Assam	101	96	14
4.	Bihar	Not Provided	142	1
5.	Chhattisgarh	168	168	0
6.	Goa	14	14	1
7.	Gujarat	170	170	6
8.	Haryana	86	86	29
9.	Himachal Pradesh	61	54	1
10.	Jammu & Kashmir	241	80	7
11.	Jharkhand	228	42	23
12.	Karnataka	Not Provided	279	6
13.	Kerala	93	93	39
14.	Madhya Pradesh	383	383	63
15.	Maharashtra	394	394	88
16.	Manipur	27	27	1

S.	States	No. of	No. of ULBs	No. of Class I
No.		Towns/Cities		&II Towns/Cities
17.	Meghalaya	22	7	3
18.	Mizoram	23	3	1
		Villages - 692		
19.	Nagaland	32	32	2
20.	Odisha	114	114	24
21.	Punjab	167	167	65
22.	Rajasthan	193	193	59
23.	Sikkim	7	7	0
24.	Tamil Nadu	Not Provided	664	0
25.	Telangana	140	140	95
26.	Tripura	20	20	1
27.	Uttarakhand	91	91	8
28.	Uttar Pradesh	75	652	119
29.	West Bengal	125	125	87
30.	Andaman and Nicobar	1	1	1
	Islands			
31.	Chandigarh	1	1	1
32.	DDDNH	3	3	0
33.	Delhi	1	5	1
34.	Lakshadweep	10 islands	No ULBs (10	0
			village Dweep	
			Panchayat)	
35.	Puducherry	2	5	4
	TOTAL	3127	4370	822

2.4 AUTHORIZATION GRANTED TO WASTE PROCESSING /DISPOSAL FACILITIES

As per Rule 15 y of SWM Rules, local bodies are required to obtain authorization for setting up waste processing, treatment or disposal facility, if the volume of waste is exceeding five metric tons per day including sanitary landfills from the concerned SPCB/PCC. A total number of 531 such applications have been received and 334 Authorizations granted as per the information provided by the SPCBs/PCCs. The details of the same are given in **Table 6.0**.

TABLE 6.0: DETAILS OF AUTHORIZATION GRANTED TO WASTE PROCESSING & DISPOSAL FACILITIES

S. No	State	No. of applications	No. of authorization
		received	granted
1.	Andhra Pradesh	1	1
2.	Arunachal Pradesh	0	0
3.	Assam	0	0
4.	Bihar	0	0
5.	Chhattisgarh	2	1
6.	Goa	5	1
7.	Gujarat	33	10
8.	Haryana	0	0
9.	Himachal Pradesh	0	0
10.	Jammu & Kashmir	0	0
11.	Jharkhand	0	0
12.	Karnataka	42	0
13.	Kerala	35	8
14.	Madhya Pradesh	1	1
15.	Maharashtra	117	56
16.	Manipur	1	1
17.	Meghalaya	6	6
18.	Mizoram	1	0

S. No	State	No. of applications	No. of authorization
		received	granted
19.	Nagaland	1	1
20.	Odisha	12	0
21.	Punjab	0	0
22.	Rajasthan	1	0
23.	Sikkim	1	1
24.	Tamil Nadu	224	224
25.	Telangana	0	0
26.	Tripura	1	1
27.	Uttarakhand	21	0
28.	Uttar Pradesh	3	3
29.	West Bengal	0	0
30.	Andaman and Nicobar	0	0
31.	Chandigarh	1	1
32.	DDDNH	0	0
33.	Delhi	3	0
34.	Lakshadweep	0	0
35.	Puducherry	18	17
	TOTAL	531	334

2.5 Collection, Segregation & Transportation of Solid Waste

Details of Collection, Segregation & Transportation of Solid Waste are given in **Table 7**. Only three states- Nagaland, Arunachal Pradesh & Himachal Pradesh have provided ULB wise information. Remaining States/UTs have provided consolidated information. As per the information provided 13 States /UTs (Delhi, DDDNH, Chandigarh, A& N, Chhattisgarh, Gujarat, Goa, HP, J&K, Jharkhand, Lakshadweep, Karnataka, Odisha) practice 100% collection of Solid Waste. Only 4 States/UTs (Chhattisgarh, Goa, Lakshadweep& A&N practice 100% segregation of waste. Three states /UTs viz Goa, Chhattisgarh & Jharkhand transport segregated waste in covered vehicles in all ULBs.

2.6 Solid Waste Processing Facilities

State wise details of solid waste processing facilities are given in **Table 8**. Details of waste to energy plants is given in **Table 8A**. As per the details provided by SPCBs/PCCs, currently there are nine waste to energy plants operational in India – Delhi-3, Uttarpradesh-2, Tamil Nadu-2, Maharashtra -1, and Madhya Pradesh- 1.

2.7 Landfill for Waste Disposal

State wise details of landfill are given in **Table 9**. As per the details provided 1359 sites for landfill have been identified, 312 landfills have been constructed, 376 are under construction, 379 are in operation, 10 are exhausted and 13 landfill have been capped. Maximum number of sites have been identified in Maharashtra (320) Karnataka (199) and Punjab (150). Maximum number of landfill sites in operation are in Karnataka (191), Rajasthan (36) and Uttar Pradesh (83). City wise details have not been provided by 13 States/UTs – Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Karnataka, Maharashtra, Manipur, Meghalaya, Odisha, Punjab, Tamil Nadu, Chandigarh and Puducherry.

2.8 Waste Disposal in dumpsites

In absence of adequate scientifically designed landfills for waste disposal, waste is disposed in dumpsites. There are 3084 dumpsites in the country as per information provided by SPCBs/PCCs, of which 91 have been reclaimed and remaining 14 have been converted to landfill. Details of same are given in **Table 10**. Maximum number of dumpsites are in Uttar Pradesh (611) followed by Madhya Pradesh (328) and Maharashtra (327) in that order. Maximum number of dumpsites have been reclaimed in Madhya Pradesh (50) followed by Karnataka (15) and Kerala (6) in that order. 6 dumpsites have been converted to landfill in Karnataka, 3 in Andhra Pradesh and 1 each in Meghalaya, Rajasthan, Sikkim, Telangana and Chandigarh. Details regarding quantity of waste disposed at these dumpsites have not been provided by the SPCBs/PCCs.

2.9 Monitoring at Waste Processing & Disposal Sites

8 States & UTs (Andhra Pradesh, Assam, Himachal Pradesh, Manipur & Meghalaya, Telangana, Gujarat and Uttarakhand) have carried out monitoring at 35 Waste Processing & Disposal Sites. Ambient Air quality monitoring has been carried out at all 33 sites, leachate analysis has been carried at 12 sites and Compost analysis has been

carried out at one site each in Andhra Pradesh & Uttarakhand. Monitoring report has been provided for ambient air quality for sites monitored in Himachal Pradesh. Details are given in **Table 11**.

TABLE 7: STATEWISE DETAILS OF COLLECTION, SEGREGATION & TRANSPORTATION OF SOLID WASTE

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
1.	Andhra Pradesh		99	81	Refuse Compactors - 473 in 106 ULBs, Tractor Trailers in 4 ULBs. In addition to the above Skid Steer loaders - 225 & Mini compactors - 330. Waste Collection Trolleys - 10649 Nos. Mini Collection Trucks - 1566 Nos.
2.	Arunachal Pradesh	Aalo	4161 (out of 4161) households covered in D2D collection.	Segregation of waste at source not practiced by premises.	Information not furnished
	Arunachal Pradesh	Anini	500 (out of 621) households covered in D2D collection. 80 non-residential premises including commercial est., hotels,restaurents, educational institutions/offices etc covered.	Segregation of waste at source not practiced by premises.	Information not furnished.
	Arunachal Pradesh	Basar	851 (out of 1064) households covered in D2D collection. 3 (out of 3) non-residential premises covered.	80% premises practice segregation of waste at source.	Information not furnished.
	Arunachal Pradesh	Boleng	700 (out of 914) households covered in D2D collection.	Segregation of waste at source not practiced by premises.	Information not furnished.
	Arunachal Pradesh	Bomdila	1750 (out of 2189) households covered in D2D collection. 50 non-residential premises covered.	Segregation of waste at source not practiced by premises	Information not furnished.

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
	Arunachal Pradesh	Changlang	400 (out of 1498) households covered in D2D collection. 100 non-residential premises covered.	30% premises segregate waste at source.	Information not furnished.
	Arunachal Pradesh	Daporijo	3412 (out of 4141) households covered in D2D collection. 1100 non-residential premises covered.	Segregation of waste at source not practiced by premises.	Information not furnished.
	Arunachal Pradesh	Deomali	D2D collection of waste not yet done in the Town.	Segregation of waste at source not practiced by premises.	Information not furnished.
	Arunachal Pradesh	Dirang	770 (out of 966) households covered in D2D collection. 125 non-residential premises covered.	Segregation of waste at source not practiced by premises.	Information not furnished.
	Arunachal Pradesh	Doimukh	1300 (out of 1675) households covered in D2D collection. 90% (numbers under survey) =non-residential premises covered.	400/0 of premises segregate waste at source.	Information not furnished.
	Arunachal Pradesh	Dumporijo	85 (out of 571) households covered in D2D collection. 120 non-residential premises covered.	Segregation of waste at source not practiced by premises.	Information not furnished.
	Arunachal Pradesh	Hawai	1081 (out of households covered collection.	20% premises practice segregation of waste at source.	Information not furnished.

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
	Arunachal Pradesh	Itanagar Municipal Corporation	2965 (out of households covered collection.	Segregation of waste at source not practiced by premises.	Information not furnished.
	Arunachal Pradesh	Jairampur	950 (out of 2866) households covered in D2D collection. 100 non-residential premises	30% premises practice segregation of	Information not furnished.
	Arunachal Pradesh	Khonsa	4000 households covered in D2D collection.	40% premises practice segregation waste source.	Information not furnished.
	Arunachal Pradesh	Kimin	500 (out of 897) households covered in D2D collection. 160 (out of 160) -nonresidential premises covered.	premises practice segregation waste source.	Information not furnished.
	Arunachal Pradesh	Koloriang	1800 (out of 1800) households covered in D2D collection. 532 (out of 532) =nonresidential premises covered.	100% premises segregate waste source.	Information not furnished.
	Arunachal Pradesh	Longding	926 (out of 926) households covered in D2D collection.	76% premises segregate waste at source.	Information not furnished.
	Arunachal Pradesh	Mariyang	162 households (out of 323 households) covered in D2D collection. 3 (out of 57) non-residential premises covered.	Segregation of waste at source not practiced by premises.	Information not furnished.

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
	Arunachal Pradesh	Miao	870 (out of 2329) households covered in D2D collection. 90 non-residential premises covered.	30% premises practice segregation of waste	Information not furnished.
	Arunachal Pradesh	Namsai	1198 (out of households covered collection. 3899) in D2D	Segregation of waste at source not practiced by premises.	Information not furnished.
	Arunachal Pradesh	Palin	1350 (out of households covered collection. 250 (out of 250 residential premises 1707) in D2D noncovered.	Segregation of waste at source not practiced by premises.	Information not furnished.
	Arunachal Pradesh	Pangin	250 (out of 281) households covered in D2D collection.	Information not furnished.	Information not furnished.
	Arunachal Pradesh	Pasighat Municipal Council	3197 (out of 7584) households covered in D2D collection. 1300 (out of 1466 nonresidential premises covered.		Information not furnished.
	Arunachal Pradesh	Roing	2000 (out of 2617) households covered in D2D collection	Segregation of waste at source not practiced by premises,	Information not furnished.
	Arunachal Pradesh	Sagalee	200 (out of 684) households covered in D2D collection. 500 (out of 500) non-residential premises covered under D2D.	40% premises segregate waste at source.	Information not furnished.
	Arunachal Pradesh	Seppa	2900 (out of 3610) households covered in D2D collection. 25 (out of 25 non-residential premises covered.	Segregation of waste at source not practiced by premises.	Information not furnished.

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
	Arunachal Pradesh	Tawang	1685 (out of 1685) households covered in D2D collection. 800 non-residential premises covered.	100% premises practice segregation of waste at source.	Information not furnished.
	Arunachal Pradesh	Tezu	5765 (out of 5765) households covered in D2D collection. 70 (out of 70) non-residential premises covered	40% premises segregate waste at source.	Information not furnished.
	Arunachal Pradesh	Yingkiong	1595 (out of 1595) households covered in D2D collection. 5 non-residential premises covered.	20% premises practice segregation of waste at source.	Information not furnished.
	Arunachal Pradesh	Yupia	200 (out of 295) households covered in D2D collection. 40 (out of 40 non-residential premises covered	40% of premises segregate waste at source.	Information not furnished.
	Arunachal Pradesh	Ziro	2400 (out of 2400) households covered in D2D collection.	Information not furnished.	Information not furnished.
3.	Assam	Not Provided	604 out of 942 wards from 97 ULBs practice D 2 D collection	Not practiced	Not available
4.	Bihar	Not Provided	3341 wards out of 3398 wards = 98.3%	1734 wards out of 3398 wards = 51.03%	Partially
5.	Chhattisgarh	Not Provided	168 ULBs = 100%	168 ULBs = 100%	168 ULBs = 100%
6.	Goa	Not Provided	14 ULBs = 100%	14 ULBs = 100%	14 ULBs = 100%

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
7.	Gujarat	Not Provided	100%	82%	Not Provided
8.	Haryana	Not Provided	1439 wards out of 1540 wards = 93%	988 wards out of 1540 wards = 64%	Local Bodies are using covered containerized handcarts/tricycles/Tractor Trolly/Refuse Compactor or other similar means for the primary collection of waste stored at various sources of waste generation. Existing waste collection vehicles are being modified into two covered compartments for collection of waste in segregated manner. Freshly, ordered vehicles will have two covered compartments for collection of wet and dry waste in a segregated manner. For secondary transportation of solid waste form the Primary Collection Center to the designed processing plant site or sanitary landfill site, "Dumper Pacers with two bin containers" is provided.
9.	Himachal Pradesh	MC Shimla	Door-to-Door collection occurs in all 34 wards and No. of household covered 40224 nos.	 100 storage of waste at source in dustbins in households and commercial establishments. Solid waste is stored in a segregated form. 80 of premises segregating the waste at source. 	Not Provided
	Himachal Pradesh	MC Rohroo	Not Provided	Solid waste is stored at source in segregated form.	Not Provided

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
	Himachal Pradesh	MC Rampur Bushahr	 9 Nos of wards are covered in D2D. 2560 household covered and 1320 non-residential premises quantity of solid waste generated 3.75 tones. D2D collection of solid waste is being done in the city. 	 Percentage of households practice storage of waste at source in domestic bins is 100. 90 of non-residential premises practice storage of waste at source in commercial/institutional bins. 10 % of households dispose or throw solid waste on the streets and 10 % dispose or throw solid waste on the streets and 10 % of non-residential premises dispose or throw solid waste on the streets. 	Not Provided
	Himachal Pradesh	MC Theog	Percentage of residential and non-residential premises covered in door to door collection through other device 80% collection adopted 20% through dustbins.	Not Provided	Not Provided
	Himachal Pradesh	NP Narkhanda	Door-to-door collection of solid waste in 7 wards.	• 65% of households practice storage of waste at source in domestic bins. 80 % non-residential premises practice storage of waste at source in commercial bin. • 28 % of households. Dispose of throw solid waste on the streets. • 20 % of non-residential premises dispose throw solid Waste on the streets. • 100% of premises segregating waste at source.	Not Provided

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
	Himachal Pradesh	NPSunni	Door to door collectio of solid waste in 7 wards. No. of households covered 1115.	85% of premises regarding the waste at source. 28 no. of non-residential premises including commercial establishments, hotels, restaurants, educational institutions/offices etc. covered. 85% of premises segregating waste at source.	Not Provided
	Himachal Pradesh	NP Chopal	Not Provided	 95% of households practice storage of waste at source in domestic bins. 5% household and 10% non-residential premises solid waste disposed or throw on the street. 95 % of premises segregated the waste at source. 	Not Provided
	Himachal Pradesh	NP Kotkhai	Door to door collection of solid waste in 7 wards.	 100% of households practice storage of waste at source in domestic bins. 100% of non- residential premises practice storage of waste at source commercial/institutional bins. 90 % of premises segregated the waste at source. 	Not Provided

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
	Himachal Pradesh	NP Jubbal	Door to door collection of solid waste in 7 wards. 442 No. of households covered 255. No. of non-residential premises including hotels, restaurants educational institutions etc.	 100% of households practice storage of waste at source in domestic bins. 100% of non- residential premises practice storage of waste at source commercial/institutional bins. 70 % of premises segregated the waste at source. 	Not Provided
	Himachal Pradesh	MC Solan		• 40-50 % of households practice storage of waste at source in domestic bins. • 40% of non- residential premises practice storage of waste at source commercial/institutional bins. 1 % of households dispose of throw solid waste on the streets. 1% of non-residential premises dispose of throw solid waste on the streets 40% of premises segregating the waste at source.	Not Provided
	Himachal Pradesh	Nalagarh	Door to door collection of solid waste in 9 wards. No. of households covered 2535. Nos. of non-residential premises including commercial.	Lifting of solid waste from storage depots is mechanical through tractor, dumper placer &Hyva tipper.	Not Provided
	Himachal Pradesh	MC Parwano	Door to door collection of solid waste in 9 wards. No. of households covered 3500. Nos. of non-residential premises including commercial.	Door to door collection of solid waste and started in segregated manner on 01.04.2019.	Not Provided

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
	Himachal Pradesh	MC Baddi	Door to door collection of solid waste 100% in 9 wards. No. of households covered 8352. No. of residential and non- residential premises covered in door to door collection residential 65% and commercial 35% No. of noncommerical establishments, hotels, restaurants educational institutions/offices etc covered 4236 nos.	25 % of households practice storage of waste at source in domestic bins. 10 % of non-residential premise practice storage of waste at source in commercial/ institutional bins. 5% of households dispose of throw solid waste on the streets. 10% of non-residential premises dispose of throw solid waste on the streets.	Not Provided
	Himachal Pradesh	NP Arki	Door to door collection of solid waste 7 wards. No. of households covered 605.	•Not being segregated.	Not Provided
	Himachal Pradesh	MC Nahan	Door to door collection of solid waste 13 wards.	• 60% of households practice storage of waste at source in domestic bins. • 70% of non-residential premises practice storage of waste at source in commercial/institutional bins. • 0.1% of households dispose of or throw solid waste on the streets. • 1% of solid waste stored at segregated formand 25% of waste segregating at source.	Not Provided

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
	Himachal Pradesh	Paonta Sahib	Door to door collection of solid waste is being done in the city and 2544 wards covered.	Solid waste is stored at source in domestic/commercial/institutional bins. Long handle broom used by sanitation workers. Sanitation worker is given handcart/ tricycle for collection of waste. Handcart/ tricycle is containerized.	Not Provided
	Himachal Pradesh	Rajgarh	Door to door collection of solid waste in 7 wards.	 90% percentage of household practice storage of waste at source in domestic bins. 50% non-residential premises practice stored of waste at source in commercial 0.1 % of housrhold dispose or throw solid waste on the street. 0.1 % of nonresidential premise dispose of throw solid waste on the street. 95 % premises segregating the waste at source. 	Not Provided
	Himachal Pradesh	Bilaspur	Door to door collection of solid waste 11 wards	90% percentage of household practice storage of waste at source in domestic bins. 100% of non-residential premises practice stored of waste at source in commercial/institutional bins. percentage of households dispose or throw solid waste on the street. 10%	Not Provided

Not Provided

Not Provided

Himachal

Pradesh

Himachal

Pradesh

Sunder Nagar

MC Nerchowk

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
	Himachal Pradesh	Shri Nai	• Door to door collection in seven (7) wards.	100% of premises segregating the waste at source.	Not Provided
	Himachal Pradesh	Ghumarwin	• 7 number of wasrds covered in D2D collection of waste.	Frequency of street sweeping and % of population coverred daily 70% alter nate day 20% twice a week 10%.	Not Provided
	Himachal Pradesh	NP Talai	Door to door to collection of solid waste is being done in the city/town.	100% of premises segregating the waste at source.	Not Provided
	Himachal Pradesh	MC Mandi	• Residential and non-residential premises covered in D2D collectiuon through Motorized vehicle is 45%, containerized tricycle/hand cart is 25% and other device is 30%.	Segregation of solid waste at source. Solid waste is stored at source in domestic/ commercial / institutional bins. 85% of household practice storage of waste at source in domestic bins. 87% of non-residential premises practice storage of waste at commercial/ institutional bins. 5% of household disposed or throw solid waste on the streets. 42% of premises segregating the waste at source.	Not Provided

Segregation at source is not

Solid waste segregation of

awareness is been conducted.

waste at source has been

started in all wards and

done.

Door to door collection (D2D)

the city/town.

of solid waste is being done in

Door to door Collection of solid

waste in 11 wards and No. of

households covered. 4500

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
	Himachal Pradesh	MC Sarkhaghat	Door to door collection through containerized tricycle/ handcraft 50% and other devices 50%	 95% household and non-residential premises practice stored of waste at source in commercial. 20% of non-residential premises storage of waste at source in commercial/institutional bins. Non solid waste is segregated at source. 	Not Provided
	Himachal Pradesh	NP Jogindenagar	100% door to door collection	 2 Nos waste storage depots in the city/ town. Daily collected waste material in MC Jogindernagar 7 No. wards. 	Not Provided
	Himachal Pradesh	NP Rewalsar	Door to door collection in 7 Nos. of wards. 500 mno of household and 436 non- residential premises including commercial establishment, educational institutions/office etc. covered.	Segretation of waste at source has been started in all wards and awareness is being conducted.	Not Provided
	Himachal Pradesh	NP Karsog	Door to door collection of waste in 6 wards.	30% of premises segregating the waste at source.	Not Provided

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
	Himachal Pradesh	MC Kullu	Door to door collectio of solid waste in 11 wards.	The waste is collected in segregated from at source. MC Kulludivided into 2 Zone-1 ward 1-6 zone -2 ward 7 -11. Dry waste is being sent to waste to energy plant Rangri at Manali and wet waste treated at composter installed at Lanka Bekar. MRF site located at Sarwari Park. 100% of premises segregating the waste at source.	Not Provided
	Himachal Pradesh	MC Manali	Door to door collection in seven wards.	Waste lifted from door to door and transported to treatment plant directly in a segregated form.	Not Provided
	Himachal Pradesh	NP Bhunter	Door to door collection of solid waste is being done in the city all 7 wards are covered under D2D	•N.P Bhunter collected solid waste directly form households in segregated manner through door to door and transported in to waste to energy project Rangri, Manali.	Not Provided
	Himachal Pradesh	NP Banjar	Door to door collection of solid waste is being done in the city in all 7 wards.	The waste is collected in segregated from at source. 100% premises segregating the waste at source. waste lifted from door to door and transported to treatment plant directly in a segregated from.	Not Provided
	Himachal Pradesh	MC Una	Door to door - D2D collection of solid waste is being done in the city in all wards.	70% premises segregating the waste at source.	Not Provided

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
	Himachal Pradesh	MC Santokhgarh	Door to door - D2D collection of solid waste is being done in the city in 9 wards. 1976 nos. of households are covered and 450 nos. of non-residential premises in including commercial establishments, hotels restaurants educational institutions/ offices covered.	• 70-80% of premises segregating the waste at source.	Not Provided
	Himachal Pradesh	NP Daulatpur	Door to door: - D2D collection fo solid waste is being done in the city in 7 wards. 853 nos. of households are covered and 705 nos. of non-residential covered. 12.20 km length of roads, street, lanes in the city.	not being segregated	Not Provided
	Himachal Pradesh	Gagret	Quantity of solid waste collected 1.65 tpd. Door to door: - D2D collection of solid waste is being done in the city in 2 wards. 840 nos. of households are covered and 524 nos. of non-residential covered. Sweeping of streets.	95% premises segregating the waste at source.	Not Provided
	Himachal Pradesh	MC Mehatpur	Not Provided	60% premises segregating the waste at source.	Not Provided
	Himachal Pradesh	NP Tahliwal	Door to door collection of solid waste is being done in the city in 7 wards. 660 nos. of households are covered and 410 nos. of non-residential covered.	40% premises segregating the waste at source.	Not Provided
	Himachal Pradesh	Hamirpur	Door to door collection of solid waste is being done in the city in 11 wards. 6339 nos. of households are covered.	90% premises segregating the waste at source.	Not Provided

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
	Himachal Pradesh	MC Sujanpur	Not Provided	• 70% premises segregating the waste at source.	Not Provided
	Himachal Pradesh	NP Nadaun	Door to door collection of solid waste is being done in the city in 7 wards of households are covered 1054.	• 55% premises segregating the waste at source.	Not Provided
	Himachal Pradesh	NP Bhota	Door to door collection in 7 wards.	20% of household practice storage of waste at source in domestic bins. 15% of non-residential premises practice storage of waste at source in commercial/institutions bins and 2% of household dispose throw solid waste on the streets. 35% of premises segregating the waste at source.	Not Provided
	Himachal Pradesh	MC Dharamshala	Door to door collection of solid waste is being done in the city in 17 wards. 8500 approx. Household covered 1750 approx. Non-residential premise covered in D2D collection.	40 % premises segregating the waste at source.	Not Provided
	Himachal Pradesh	MC Kangra	Door to door collection of solid waste is being done in the city in 1-9 wards. No of households are covered 2450.	Not Provided	Not Provided
	Himachal Pradesh	MC Palampur	Not Provided	 • 100 % premises segregating the waste at source. • Solid waste is collected in segregated form and dispose at GP Aima. 	Not Provided

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
	Himachal Pradesh	MC Nurpur	Door to door collection of solid waste is being done in the city in 9 wards, 1800 house hold and 730 non-residential area.		Not Provided
	Himachal Pradesh	MC Nagrota	Door to door collection of solid waste is being done in the city in 7 wards, 1779 house hold and 929 non-residential area.	95 % of households practice storage of waste at source in domestic bins.	Not Provided
	Himachal Pradesh	MC Dehra	Door to door collection of solid waste is being done in the city in 7 wards, 950 house hold and 380 non-residential area.	Not Provided	Not Provided
	Himachal Pradesh	MC Jawalamukhi	Door to door 80 % D2D collection of solid waste in being done in the city in 7 wards, 795 house hold and 526 non-residential area.	Segregation and storage 60% of households. Storage depots have facility for storage of segregated waste in green 4 Blue 2.	Not Provided
	Himachal Pradesh	NP BaijnathPaprola	Door to door collection is being done in the city.	not being segregated	Not Provided
	Himachal Pradesh	NP Jawali	No Door to door collection of solid waste is being done in the city.	Only 10% of household practices of waste at source in domestic bins. And 5 % of non-residential premises practices storage of waste at source in commercial/institutional 7 % of household dispose or throw solid waste in the streets. 5% of premises segregating the waste at source.	Not Provided
	Himachal Pradesh	MC Chamba	Door to door collection of solid waste is being done in the city in 11 wards, D2D collection is being done through 100% by Motorized vehicle.	not being segregated	Not Provided

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S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
	Himachal Pradesh	MC Dalhousie	Door to door collection of solid waste is being done in the city in 9 wards 70% household and 70% non-residential. Premises covered in D2D collection through 70 % Motorized vehicle, 70 % containerized tricycle/ handcart.	not being segregated	Not Provided
	Himachal NP Chowari 60 % Door to door collection of •		• 0.5 % of premises segregating the waste of source.	Not Provided	
	Himachal Pradesh	Cantonment Board Jutogh	Door to door collection of solid waste in being done in the city in 2 wards, 677 house hold and 28 small shop non-residential area.	100 % storage depots have facility for the storage of segregated waste in green bins 17 nos. blue bins 17 nos.	Not Provided
	Himachal Pradesh	Cantonment Board Kasauli	Door to door collection of solid waste is being done in the city in 6 wards.	• 70 % premises segregating the waste at source.	Not Provided
		Cantonment Board Yol	Not Provided	not being segregated	Not Provided
	Himachal Cantor Pradesh Board Dalhou		Door to door collection of solid waste is being done in the city in 6 wards, 146 house hold. Residential and 1 hotels/ restaurant, 1 educational institute, 1 office complex, 6 shops. Percentage of residential and non-residential premises covered in door to door collection through. motorized vehicle 100%.	Segregation and storage of waste at source Yes. • 100% solid waste is stored at source in a segregated form.	Not Provided

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
	Himachal Pradesh	Cantonment Board Bakloh	Door to door collection of solid waste is being done in the city in 2 wards,	Storage depots have facility for storage of segregated waste in green 400 blue 400.	Not Provided
	Himachal Pradesh	Cantonment Board Subathu	100 % door to door collection of solid waste is being done in the city 6 wards.	70% premises segregating the waste at source.	Not Provided
	Himachal Pradesh	Cantonment Board Dagsai	Door to door collection of solid waste is being done in the city in 6 wards,	50% premises segregating the waste at source.	Not Provided
10.	Jammu & Kashmir	Not Provided	100% House to House collection is being done by 13 local bodies. Partial House to House collection is being done by 16 local bodies including JMC and other 9 local bodies no collection is being done. Kashmir Division: 80% collection is being done by SMC in Srinagar City.	No segregation is done in state except Partial segregation is being done. In 02 local bodies i.e Katra & Jammu MC. Partial segregation is being done at only secondary level at 3 nos. of Vermicomposting facilities Baderwath, Doda & Sunderbani. Kashmir Division: Segregation and storage of waste at source has been initiated by Srinagar MC, however no point source segregation of waste is being carried out by Municipal council/committees	Jammu Division: Jammu Division 95% covered transportation in all local bodies. Kashmir: 90% covered transportation in all local bodies
11.	Jharkhand	Not Provided	42 ULBs (100%)	38 ULBs (90.04 %)	42 ULBs (100%)

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
12.	Karnataka	Not Provided	279 ULB (100%)	Many ULB collected mixed waste and transport it to the land fill sites or processing facilities. Where ever processing facilities are established, segregation is done at the processing facilities. Otherwise mixed solid waste is dumped in the landfill sites without processing	Collection of solid waste is done in most of the local bodies. Cover transportation is done in Mysore and BBMP limits.
13.	Kerala	Not Provided	Composter, bobin, pipe compost, ring compost, compost pits, material collection facilities.	Resource. Material collection and recovery facilities are provided.	Not Provided
14.	Madhya Pradesh	Not Provided	372 Cities/Towns	276 Cities/Towns	364 Cities/Towns
15.	Maharashtra	Not Provided	387 ULBs	344 ULBs	389 ULBs
16.	Manipur	Not Provided	27 Local Bodies	22 ULBs	The waste are transported in open vehicles. The Transporters take care to cover the wastes with plastic sheets during transportation to avoid scattering
17.	Meghalaya	Not Provided	3 ULBs	2 ULBs	5 ULBs
18.	Mizoram	Not Provided	100% in Aizawl City 70% in Urban Towns 57% (396 out of 692 villages) in Rural areas	Aizawl: Practiced in 57 Local Councils out of 83 Local Councils (68.67%) Urban Towns: 70% Rural Areas: Ongoing activity	Proper Waste transportation trucks are used in Aizawl while in Urban and rural area, the transportation vehicles are covered with Silpaulin.
19.	Nagaland	Kohima	50% in Kohima MC	Yes	Yes

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
	Nagaland	Dimapur	100%	Yes	No
	Nagaland	Mokokchung	55%	No	No
	Nagaland	Phek	85%	No	No
	Nagaland	Wokha	4%	No	No
	Nagaland	Mon	50%	Yes	No
	Nagaland	Zunheboto	90%	50%	No
	Nagaland	Tuensang	100%	No	No
	Nagaland	Kipire	100%	No	No
	Nagaland	Peren	25%	No	No
	Nagaland	Longleng	No	20%	No
	Nagaland	Noklak	15%	No	No
	Nagaland	Medziphema	No, however, point to point collection is being done	No	No
	Nagaland	Chumukedima	80%	60%	No

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
	Nagaland	East Dimapur	DNA	DNA	DNA
	Nagaland	Tuli	28%	85%	No
	Nagaland	Changtongya	Yes	30%	No
	Nagaland	Longkhim	No	Yes	No
	Nagaland	Mangkolemba	No	No	No
	Nagaland	Bhandari	No	No	No
	Nagaland	Tening	No	No	No
	Nagaland	Jalukie	No	No	No
	Nagaland	Pfutsero	85%	No	No
	Nagaland	Tseminyu	Under the process for implementation.	Yes	No
	Nagaland	Naqginimora	No	No	No
	Nagaland	Tizit	No	Nil	No
	Nagaland	Shamator	No	No	No

100% in 123 ULBs

80 to 100% in 13 ULBs

24.

Tamil Nadu

Not Provided

S. No.	State/UT	ULBs House to House Collection (% covered)		Segregation (% covered)	Covered Transportation	
	Nagaland	Pungro	No	No	No	
	Nagaland	Tobu	No	No	No	
	Nagaland	Aboi	No	No	No	
	Nagaland	Meluri	No	No	No	
	Nagaland	Chozuba	No	Yes	No	
20.	Odisha	Not Provided	114 ULBs (100%)	107 ULBs	Not provided	
21.	Punjab	Not Provided	150 ULBs	67 ULBs	135 ULBs	
22.	Rajasthan	Not Provided	34,61,760 households	105 ULBs	6351.9 TPD	
23.	Sikkim	Not Provided	Yes	Segregation of dry and wet waste is in practice. Separate bins are being provided to residents for source segregation by ULBs.	Yes	

100% in 77 ULBs

80 to 100% in 30 ULBs

Less than 50% in 5 ULBs

100% in 114 ULBs

80 - 100% in 16 ULBs

Less than 80% - 5 ULBs

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
25.	Telangana	Not Provided	House to House collection of MSW has been practicing in all the ULBs in the State. As per the information furnished by the Commissioner & Director of Municipal Administration, 100% of households covered under door to door collection.	About 53% of households in the State were covered under source segregation.	In GHMC and some other municipalities, the MSW is transported in covered vehicles. In other municipalities the waste is transported in trucks covered with nets to avoid scattering.
26.	Tripura	Not Provided	295 Wards	20 Wards	20
27.	Uttarakhand	Not Provided	1139 Wards	735 Wards	Partly
28.	Uttar Pradesh	Not Provided	Approx. 98%	Partially Complied	Partially Complied
29.	West Bengal	Not Provided	86.40%	18.40%	Not Provided
30.	Andaman and Nicobar Islands	Not Provided	100%	100%	Transportation of waste is carried out through tarpaulin covered vehicles
31.	Chandigarh	Not Provided	100%	80%	Yes
32.	DDDNH	Not Provided	Not Provided	100% of households practice storage of waste at source in domestic bins 100% of non-residential premises practice storage of waste at source in commercial/institutional bins.	DNH: 14 Tractor, 6 dumpers, 1 compactor lifter, 3 Hydraulic lift, 6 pick-up tempo, 20 compactor bins and 45 hydraulic bins Daman MC: 2 tractor, 7 tipping truck, 1 compactor Daman District Panchayat: 27 Tractor, 15 Tipping truck, 3 compactors

S. No.	State/UT	ULBs	House to House Collection (% covered)	Segregation (% covered)	Covered Transportation
					Diu MC: 8 tractor, 10 other hopper vehicles Diu District Panchayat: 8 tractor and 16 other vehicles
33.	Delhi	Not Provided	ULBs - 100% DCB - 94%	North DMC - 80% in Model Wards South DMC - 10% East DMC - 10% New DMC - 90% DCB - 90% in Civil Area and 60% in Army area	Collected Solid Waste is transported by Tractors, Tipping trucks, Dumper placers, Refuse collectors, Compactors, JCB/Loaders, Litter pickers, Auto tippers, TATA 407, HYVA trucks and Cycle-rickshaw/E-rickshaw
34.	Lakshadweep	Not Provided	12 wards	100%	Yes
35.	Puducherry	Not Provided	In ten wards segregation of waste is being practiced into degradable and non-biodegradable.	Segregation in selected wards	Yes

TABLE 8: STATEWISE DETAILS OF SOLID WASTE PROCESSING FACILITIES

State/UT	Name of City/Town	Type of Waste Processing Facility	Number	Capacity (TPD)	Status (Operational/Setup/Planned)
Andhra	Narsipatnam, Bobbili,	Composting			Setup
Pradesh	Jammalamadugu, Markapur,				
	Rayadurg, Punganur,				
	Ralamaneru, Nuzivid,				
	Palasa-Kasibugga, Kanigiri,				
	Ichapuram, Pulivendula,				
	Allagadda, Yelamanchili, Giddalur, Piduguralla, Adoni,				
	Tiruvuru, Madanapalle,				
	Salur, Rajam, Chirala,				
	Amadalavalasa, Sullurpet,				
	Puttaparthy, Tadipatri,				
	Tirupathi, Palakonda,				
	Parvathipuram,				
	Amalapuram, Tuni,				
	Mummidivaram,				
	Machilipatnam, Gudivada,				
	Jaggayyapet, Pedana,				
	Vuyyuru, Bapatla, Repalle,				
	Macherla, Vinukonda,				
	Ongole, Kandukur, Addanki,				
	Chimakurthy, Hindupur,				
	Kadiri, Kalyandurgam,				
	Madakasira& Atmakur-50				
	Nos Waste to compost				
	Plants in 54 ULBs.				

State/UT	Name of City/Town	Type of Waste Processing Facility	Number	Capacity (TPD)	Status (Operational/Setup/Planned)
Andhra Pradesh	Bobbili, Salur, Visakhapatnam, Mandapeta, Mumidivaram, Eluru, Tadepalligudem, TanukumJangareddygudem, Vijayawada, Guntur, Tenali, Vinukonda, Tadepalli, Chirala, Kavali, Venkatagiri, Atmakur (NLR), Tadipatri, Madanapalli, Nandyal, Kadapa, Proddatur, Samalkot, Narasaraopet, Piduguralla, Ongole, Chittoor, Tirupati - 29 ULBs	Vermi-Composting			Setup
Andhra Pradesh	Bobbili, Salur, Guntur, Tenali, Venkatagiri, Madanapalli, Piduguralla.	Biogas			Setup
Andhra Pradesh	Narsipatnam, Bobbili, Jammalamadugu, Markapur, Rayadurg, Punganur, Palamaneru, Nuzivid, Palasa- Kasibugga, Kanigiri, Ichapuram, Pulivendula, Allagadda, Yelamanchili, Giddalur, Piduguralla, Adoni, Tiruvuru, Madanapalle, Salur, Rajam, Chirala, Amadalavalasa, Sullurpet, Puttaparthy, Tadipatri& Tirupathi 27 Nos.(commissioned)	Composting			Operational

State/UT	Name of City/Town	Type of Waste Processing Facility	Number	Capacity (TPD)	Status (Operational/Setup/Planned)
Andhra Pradesh	Bobbili, Salur, Visakhapatnam, Mandapeta, Mumidivaram, Eluru, Tadepalligudem, Tanuku, Jangareddygudem, Vijayawada, Guntur, Tenali, Vinukonda, Tadepalli, Chirala, Kavali, Venkatagiri, Affnakur (NLR), Tadipatri, Madanapalli, Nandyal, Kadapa, Proddatur, Samalkot, Narasaraopet, Piduguralla, Ongole, Chittoor, Tirupati.	Vermi-Composting			Operational
Andhra Pradesh	Bobbili, Salur, Guntur, Tenali, Venkatagiri, Madanapalli, Piduguralla.	Biogas			Operational

State/UT	Name of City/Town	Type of Waste Processing Facility	Number	Capacity (TPD)	Status (Operational/Setup/Planned)
Andhra Pradesh	Palakonda, Parvathipuram, Amalapuram, Tuni, Mummidivaram, Machilipatnam, Gudivada, Jaggayyapet, Pedana, Vuyyuru, Bapatla, Repalle, Macherla, Vinukonda, Ongole, Kandukur, Addanki, Chimakurthy, Hindupur, Kadiri, Kalyandurgam, Madakasira&Atmakur — 23 Nos.	Composting			Under installation / Planned
Andhra Pradesh	Bobbili, Salur, Visakhapatnam, Mandapeta, Mumidivaram, Eluru, Tadepalligudem, Tanuku, Jangareddygudem, Vijayawada, Guntur, Tenali, Vinukonda, Tadepalli, Chirala, Kavali, Venkatagiri, Atmakur (NLR), Tadipatri, Madanapalli, Nandyal, Kadapa, Proddatur, Samalkot, Narasaraopet, Piduguralla, Ongole, Chittoor, Tirupati.	Vermi-Composting			Under installation / Planned
Andhra Pradesh	Bobbili, Salur, Guntur, Tenali, Venkatagiri, Madanapalli, Piduguralla.	Biogas			Under installation / Planned

Annual Report on Solia	a waste Management (2019-20), Cl CD, Dethi	

State/UT	Name of City/Town	Type of Waste Processing Facility	Number	Capacity (TPD)	Status (Operational/Setup/Planned)
Arunachal Pradesh		Vermi-Composting	3	Not Provided	Setup
Assam	Guwahati MC	Composting		50 MTD	Setup
		Vermi-Composting		Nil	Setup
		Biogas		Nil	Setup
	Tezpur MC	Composting		50 TPD	Setup
	Bongaigaon MC	Composting		26 TPD	Setup
	Kokrajhar MC	Composting		18.14 TPD	Setup
	Silchar MC	Composting		60 TPD	Setup
	Tezpur MC	Composting		50 TPD	Operational
	Bongaigaon MC	Composting		26 TPD	Operational
		RDF/ Pelletization		18.41 TPD	Operational
	Kokrajhar MC	RDF/ Pelletization		60 TPD	
	Dibrugarh Municipal Board	Composting		50 MTD	Under installation / Planned
Bihar		Composting	Solid waste processing facility (Composting) are operational in 79 ULBs.		Operational
	Supaul	Vermi-Composting			Operational
	BairiaRamachak	Composting			Under installation / Planned
	Bihar Sharif	Vermi-Composting			Under installation / Planned
	BairiaRamachak	RDF/ Pelletization			Planned
Chhattisgarh		Composting	521		Operational
		RDF/ Pelletization	2		Operational

State/UT	Name of City/Town	Type of Waste Processing Facility	Number	Capacity (TPD)	Status (Operational/Setup/Planned)
Goa	Pernem, Bicholim, Sankhali, Mapusa, CCP Panaji, Valpoi, Ponda, Nargao, Curchorem-Cacora, Sanguem, Wuepem, Canacona	Composting			setup
	Mormugaon	Composting			Setup
		Biogas	Installed	10 TPD	Installed
	Bicholim, Sankhali, Mapusa, Panaji, Valpoi, Ponda, Quepem, Cuncolim, Sanguem, Margao, Pernem,	Composting	Not Provided	Not Provided	Operational
	Mormugaon	Composting			Operational
Gujarat		Composting	38		Setup
		Vermi-Composting	95		Setup
		Biogas	3		Setup
		RDF/ Pelletization	2		Setup
		Composting	38		Operational
		Vermi-Composting	33		Operational
		Biogas	3		Operational
		RDF/ Pelletization	2		Operational
Haryana		Composting	25		Setup
		Vermi-Composting	10		Setup
		Biogas	1		Setup
		RDF/ Pelletization	3		Setup
		Composting	25		Operational
		Vermi-Composting	10		Operational
		Biogas	1		Operational
		RDF/ Pelletization	3		Operational
		Composting	7		Under installation / Planned
		Vermi-Composting	1		Under installation / Planned

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State/UT	Name of City/Town	Type of Waste Processing Facility	Number	Capacity (TPD)	Status (Operational/Setup/Planned)
Himachal Pradesh	Bilaspur	Composting	Compost pits available but site under dispute (45 pits). Presently waste sent to piggery farm Ghumarwin.		Operational
	Ghumarwin	Composting	Piggery		Operational
	Naina Devi	Composting	Pit composting facility operational (30 pits)		Operational
	Talai	Composting	Pit composting facility operational (75 pits)		Operational
	Chamba	Composting	Pit composting facility operational (30 pits)		Operational
	Chowari	Composting	Pit composting facility operational (7 pits)		Operational
	Dalhousie	Composting	Pit composting facility operational (10 pits)		Operational
	Bhota	Composting	Temporary pit composting operational (3 temp pit)		Operational
	Hamirpur	Composting	Pit composting facility operational (74 pits)		Operational
	Nadaun	Composting	Pit composting facility operational (8 pits)		Operational
	TiraSujanpur	Composting	Pit composting facility operational (10 pits)		Operational

Annual Report on Solia	waste management	(2017-20), CI CI	D, Deini	

State/UT	Name of City/Town	Type of Waste Processing Facility	Number	Capacity (TPD)	Status (Operational/Setup/Planned)
	Dehra	Composting	Temporary pit composting facility operational		Operational
	Jawalamukhi	Composting	Pit composting facility operational (30 pits)		Operational
	Baijnath	Composting	Temporary pit composting facility operational (3 temp pits)		Operational
	Dharmshala	Composting	Pit composting facility operational (23 pits)		Operational
	Jawali	Composting	Temporary pit composting facility operational		Operational
	Kangra	Composting	Pit composting facility operational (28 pits)		Operational
	NagrotaBagwan	Composting	at Kangra site		Operational
	Nurpur	Composting	Pit composting facility operational		Operational
	Palampur	Composting	wet waste processing is done jointly with AIMA gram panchayat through composting machine. 50 Kg compost is generated per day. Compost is distributed free of cost to nearby farmer.		Operational

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State/UT	Name of City/Town	Type of Waste Processing Facility	Number	Capacity (TPD)	Status (Operational/Setup/Planned)
	Banjar	Composting	Pit composting facility operational (20 pits)		Operational
	Bhuntar	Composting	Temporary pit composting facility operational		Operational
	Kullu	Composting	Wet waste is treated by composting machine. It has been installed in ward no. 9 at Lanka Bekar Kullu. The composter generates approx 2.5 tons compost per month which is used by local farmers in agriculture and horticulture.		Operational
	Manali	Composting	Pit composting facility operational		Operational
	Jogindernagar	Composting	Temporary pit composting facility operational (10 pits)		Operational
	Karsog	Composting	Pit composting facility operational (6 pits)		Operational
	Mandi	Composting	Pit composting facility operational (104 pits)		Operational
	Nerchowk	Composting	Wet waste sent to piggery & gaushala		Operational

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State/UT	Name of City/Town	Type of Waste Processing Facility	Number	Capacity (TPD)	Status (Operational/Setup/Planned)
	Rewalsar	Composting	Pit composting done at Mandi site.		Operational
	Sarkaghat	Composting	Temporary pit composting (3 temp pits)		Operational
	Sundernagar	Composting	Pit composting (25 pits)		Operational
	Chaupal	Composting	Temporary pit composting facility operational (2 temp pits)		Operational
	Jubbal	Composting	Pit composting facility operational (8 pits)		Operational
	Kotkhai	Composting	Pit composting facility operational (9 pits)		Operational
	Narkanda	Composting	Pit composting facility operational (2 pits)		Operational
	Rampur	Composting	Pit composting facility operational (39 pits)		Operational
	Rohru	Composting	Pit composting facility operational (6 pits)		Operational
	Sunni	Composting	Pit composting facility operational (20 pits)		Operational
	Nahan	Composting	Pit composting facility operational (60 pits)		Operational
	Paonta Sahib	Composting	Pit composting facility operational (20 pits)		Operational

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State/UT	Name of City/Town	Type of Waste Processing Facility	Number	Capacity (TPD)	Status (Operational/Setup/Planned)
	Rajgarh	Composting	pit composting (5 pits)		Operational
	Solan	Composting	Pit composting facility operational (20 pits)		Operational
	Arki	Composting	Pit composting facility operational (14 pits)		Operational
	Parwanoo	Composting	Pit composting facility operational		Operational
	Nalagarh	Composting	Pit composting facility operational		Operational
	Baddi	Composting	waste accumulated at kenduwal site		Operational
	Daulatpur	Composting	Pit composting facility operational		Operational
	Gagret	Composting	Wet waste is sent to private gaushala t Amboa village. The wet waste is collected by Gaushala operator separately. Gagret has compost pits also constructed at krishnanagar at NP gaushala site but they are not in use as all wet waste is consumed by Gaushala &pggery nearby.		Operational
	Mehatpur	Composting	pit composting at Mehatpur site (joint with Santokhgarh)		Operational

Annual Report on Solia Wasie Management (2019-20), Cl CB, Deini	

State/UT	Name of City/Town	Type of Waste Processing Facility	Number	Capacity (TPD)	Status (Operational/Setup/Planned)
	Santokhgarh	Composting	Pit composting facility operational (107 pits)		Operational
	Una	Composting	Pit composting facility operational (150 pits)		Operational
Jammu &		Composting	4		Setup
Kashmir		Vermi-Composting	3		Setup
		Biogas	2		Setup
		RDF/ Pelletization	Nil		Setup
		Composting	2		Operational
		Vermi-Composting	2		Operational
		Biogas	2		Operational
		RDF/ Pelletization	Nil		Operational
		Composting	2		Under installation / Planned
		Vermi-Composting	3		Under installation / Planned
		Biogas	Nil		Under installation / Planned
		RDF/ Pelletization	1		Under installation / Planned
Jharkhand		Composting	42 ULBs as per UDD		Setup
		Vermi-Composting	5		Setup
		Biogas	3		Setup
		RDF/ Pelletization	1		Setup
		Composting	22		Operational
		Vermi-Composting	3		Operational
		Biogas	1		Operational
		RDF/ Pelletization	1		Operational
		Biogas	4		Under installation / Planned
		RDF/ Pelletization	3		Under installation / Planned
Karnataka		Composting	183		Setup
		Vermi-Composting	68		Setup
		Biogas	7		Setup
		RDF/ Pelletization	2		Setup

State/UT	Name of City/Town	Type of Waste Processing Facility	Number	Capacity (TPD)	Status (Operational/Setup/Planned)
		Composting	176		Operational
		Vermi-Composting	48		Operational
		Biogas	9		Operational
		Composting	32		Under installation / Planned
		Vermi-Composting	22		Under installation / Planned
		Biogas	3		Under installation / Planned
		RDF/ Pelletization	1		Under installation / Planned
Kerala		Composting	14		Operational
		Vermi-Composting	7		Operational
		Biogas	Community Level- 287 Household level- 25255		Operational
Madhya		Composting	100		Operational
Pradesh		Vermi-Composting	2		Operational
		Biogas	7		Operational
		RDF/ Pelletization	83		Operational
		Composting	3		Under installation / Planned
		RDF/ Pelletization	2		Under installation / Planned
Maharashtra	No. of cities/ ULBs 330	Composting	337		Operational
	No. of cities/ ULBs 82	Vermi-Composting	82		Operational
	No. of cities/ ULBs 41	Biogas	62		Operational
	No. of cities/ ULBs 17	RDF/ Pelletization	26		Operational
	No of Cantonment Boards	Composting	3		
		Vermi-Composting	1		
Manipur		Composting	7	100 TPD	Setup
		Composting	5	100 TPD	Operational
		RDF/ Pelletization	Installed as a Waste to Energy Component at Lamdeng	Nil	Under installation / Planned
Meghalaya		Composting	1	9.64 MT/Day	Operational
Mizoram		Composting	1		Setup

State/UT	Name of City/Town	Type of Waste Processing Facility	Number	Capacity (TPD)	Status (Operational/Setup/Planned)
		Vermi-Composting	1		Setup
Nagaland	Kohima	Composting	1		Setup
Odisha		Composting	Yes		Setup
		Vermi-Composting	Yes		Setup
Punjab		Composting	1515		Operational
		Vermi-Composting	1		Operational
		RDF/ Pelletization	2		Operational
Rajasthan	Jaipur	Composting	1	250 TPD	setup
	Pratapgarh	Vermi-Composting	2	13 TPD	setup
	Grasim India Ltd Jaipur	RDF/ Pelletization	1	350 TPD	setup
	Udaipur	Composting	1	250 TPD	Operational
		Vermi-Composting	2	13 TPD	Operational
		Biogas	Not Provided	Not Provided	Nil
		RDF/ Pelletization	1	350 TPD	Operational
		Compost+RDF	1	258 TPD	Under installation / Planned
		Compost+RDF	1	100 TPD	Under installation / Planned
		Compost+RDF	1	60 TPD	Under installation / Planned
		Compost+RDF	1	100	Under installation / Planned
		Compost+RDF	1	144	Under installation / Planned
		Compost+RDF	1	40	Under installation / Planned
		Compost+RDF	1	44	Under installation / Planned
		Compost+RDF	1	100	Under installation / Planned
		Compost+RDF	1	123	Under installation / Planned
		Compost+RDF	1	60	Under installation / Planned
		Compost+RDF	1	42	Under installation / Planned
		Compost+RDF	1	82	Under installation / Planned
		Compost+RDF	1	65	Under installation / Planned
		Compost+RDF	1	95	Under installation / Planned
		Compost+RDF	1	129	Under installation / Planned
		Compost+RDF	1	60	Under installation / Planned
		Compost Plant	1	30	Under installation / Planned
		Compost+RDF	1	400	Under installation / Planned

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State/UT	Name of City/Town	Type of Waste Processing Facility	Number	Capacity (TPD)	Status (Operational/Setup/Planned)
		Compost+RDF	1	61	Under installation / Planned
		Compost+RDF	1	200	Under installation / Planned
Sikkim		Composting	1	80 kg/ day	Operational
		Composting	1	50 TPD	Operational
		Composting	1	1 TPD	Operational
Tamil Nadu		Composting	1	1016 MCC, 526 Windrows	Setup
		Vermi-Composting	1	263	Operational
		Biogas	1	106	Setup
		Composting	1	753 MCC, 526 Windrows	Operational
		Vermi-Composting	1	263	Operational
		Biogas	1	106	Operational
		Composting	1	263 MCC, 2 Windrows	Under installation / Planned
		Biogas	1	7	Under installation / Planned
Telangana	99 ULBs	Composting/Vermin-composting		Not Provided	Setup/Operational
	1 ULB	Biogas		Not Provided	Setup/Operational
	1	RDF		3600 TPD MSW Processing	
Tripura		Composting	1	256 MTPD	Setup
·		Vermi-Composting	1	0.4 MTPD	Setup
		Composting	1	156.1 MTPD	Operational
		Vermi-Composting	1	.4 MTPD	Operational
		Composting	14		Under installation / Planned
Uttarakhand		Composting	1	300 MTD	Setup
		Composting	1	30 T/day	Operational
		Composting	1	35 T/day	Operational
Uttar Pradesh		Composting	14	-	Operational
		RDF/ Pelletization	2	2.5 MW waste to Energy & 1.5 MW waste to energy	Operational

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State/UT	Name of City/Town	Type of Waste Processing Facility	Number	Capacity (TPD)	Status (Operational/Setup/Planned)
		Composting	4	15 Plants with 5395 TPD, 2 Plant with 115 TPD, 7 Plants with 860 TPD, 8 Plant with 930 TPD & 37 Plants with 3170 TPD	Under installation / planned
West Bengal		Composting	13	25,11,67,60,60,15,35,1 4,8,12,24 & 204.5 TPD	Setup
		Composting	10	500,150,100,10,28,15, 25,38,30 & 20 TPD	Operational
Andaman		Composting	5	Not Provided	Operational
and Nicobar Islands		Biogas	1	0.5 MTPD & 21 household in Bathubasti, Port Blair have installed captive bio-gas plants for waste processing.	Operational
Chandigarh		Composting	4	Raw Material processed- 23282 MT Final Product Produced: 924.57 MT, Sold: MT Quantity of residual waste landfilled: MT	Setup
		Vermi-Composting	Nil	Nil	Nil
		Biogas	4	Raw material processed: 576 MT Final product Produced: 17678 KVA Sold: Self used Quantity fo residual waste landfill: 1.5 MT	Setup

State/UT	Name of City/Town	Type of Waste Processing Facility	Number	Capacity (TPD)	Status (Operational/Setup/Planned)
		RDF/ Pelletization	4	Raw material processed: 77793 MT Final product produced: 12155.87 MT Sold: MT Quantity of residual waste landfill: MT	Setup
DDDNH	Silvasa Municipal Council	Composting	1	22 TPD	
	District Panchayat, DNH	Composting	1	15.75 TPD	
	Daman Municipal Council	Composting	1	55 TPD	
	Daman	Composting/Recycli ng/RDF	1	100TPD	Operational
	Diu	Co-processing	1	Not Provided	Operational
	Dadra Nagar Haveli	Composting	1	85 TPD	Operational
Delhi		Composting	5	0.175,9,11.46, 1 & 1 TPD	Setup
		Vermi-Composting	1	1 TPD	Setup
		Biogas	4	5,0.5,10 & 15 TPD	Setup
		RDF/ Pelletization	3	90000 (at Ghazipur Dumpsite), 2000 & 1950 PTD, WTE	Setup
		Composting	24	Not Provided	Operational

State/UT	Name of City/Town	Type of Waste Processing Facility	Number	Capacity (TPD)	Status (Operational/Setup/Planned)
		Vermi-Composting	1	Not Provided	Operational
		Biogas	7	Not Provided	Operational
		RDF/ Pelletization	3	Not Provided	Operational
		Composting	4	1 TPD each	Under installation / Planned
		Vermi-Composting	Nil	Nil	Nil
		Biogas	6	(4 of 5 TPD each, one of 200 TPD at Bhalaswa Dairy & One of 100 TPD at Ghazipur	Under installation / Planned
		RDF/ Pelletization	2	2 New and Expansion of 2 Existing WTEs proposed.	Under installation / Planned
Lakshadweep		Composting	1	9.89 kg/day	Setup
		Biogas	2	Not Provided	Setup
		Composting	1	Not Provided	Operational
		Biogas	47	Not Provided	Operational
		Composting	12	Not Provided	Under installation / Planned
		Biogas	11	Not Provided	Under installation / Planned
Puducherry		Composting	1	36 TPD	Operational
		Vermi-Composting	1	1 TPD	Operational
		Biogas	1	2 TPD	Operational

Table 8A: WASTE-TO-ENERGY PLANTS

S. No.	States		Waste-to-Energy	
		Plant Location	Power Generation (MW)	Remarks
1.	Andhra Pradesh	Visakhapatnam (4ULBs) Guntur (9 ULBs)	15 15	Waste to Energy Plants at Guntur & Visakhapatnam will commence its production Sep'2019 and Dec'2019 respectively. 133 and 1202 TPD of MSW will be utilized as fuel respectively
2.	Arunachal Pradesh	Nil	Nil	Nil
3.	Assam	Nil	Nil	Nil
4.	Bihar	Planned at Bairia Ramchack, Patna by PMC, Patna under integrated solid waste management facility	Nil	Not installed so far
5.	Chhattisgarh	Nil	Nil	Nil
6.	Goa	Hindustan waste Treatment Plant Pvt. Ltd. at Sailogo, Bardez, Goa	0.6	In operation
7.	Gujarat	-	-	-
8.	Haryana	Nil	Nil	Nil
9.	Himachal Pradesh	Not Provided	Not Provided	Not Provided
10.	Jammu & Kashmir	Nil	Nil	Nil
11.	Jharkhand	Nil	Nil	Nil
12.	Karnataka	As per the BBMP in Bengaluru following agencies are considered to establish waste to energy plants		M/s Sataram Enterprises (Cocombustion) executed agreement with BBMP 1. M/s. Essel Infra projects (incineration) – executed agreement with BBMP 2. M/s. Nexus Novis (Gasification)- executed agreement with BBMP 3. M/s. Indium projects pvt. Ltd. (Gasification)

S. No.	States	Waste-to-Energy						
		Plant Location	Power Generation (MW)	Remarks				
				 M/s. 3 Wayste S.A.S. (Cocombustion KPCL plant waste to energy. M/s. M.S.G.P. 				
13.	Kerala	 Kozhikode Sulthan Bathery Kannur Kollam Palakkad Kochi Thiruvananthapuram Munnar Thrissur Malappuram 	- DPR stage DPR Stage DPR State Retendering stage Tendering stage Tendering stage	-Work awarded-construction to be stared -Work Awarded- work started -Tendering for WtE plant completed and bidders were identified -Tendering for WtE plant completed and bidders were identified -Tendering for WtE plant at completed and bidders were identified -Tendering for WtE plant at completed and bidders were identified -Retendering -Tendering -Tendering -Land Identified -Land identified				
14.	Madhya Pradesh	 Gwalior Jabalpur Rewa 	11 MW 11.5 MW 2*6 MW	Under Construction Operational Under Construction				
15.	Maharashtra	Solapur Municipal Corporation	4 MW	In Operation				
16.	Manipur	Lamdeng, Imphal	Nil	Under Installation				
17.	Meghalaya	Nil	Nil	Nil				
18.	Mizoram	Nil	Nil	Nil				
19.	Nagaland	Nil	Nil	Nil				
20.	Odisha	-	-	-				
21.	Punjab	Earlier, Total 8 No. of WtE plants were proposed to be set up by the DLG alongwith each cluster. However, now decentralized approach has been adopted by the DLG.	-	Plant at nakodar for Ludhiana Cluster is already installed but yet not in operation.				

S. No.	States		Waste-to-Energy				
		Plant Location	Power Generation (MW)	Remarks			
22.	Rajasthan	M/s JITF Urban Infrastructure Ltd. Jaipur M/s JITF Urban Infrastructure Ltd. Jodhpur	600TPD 400TPD	Land allotted. Lease deed pending PPA &. Lease deed pending PPA & Lease Deed is pending			
23.	Sikkim	Nil	Nil	Nil			
24.	Tamil Nadu	 Manali. Zone-II, Greater Chennai Corporation M/s. MAK India Energy Ltd., Erode Waste to Energy Plant at 	10 TPD 50 TPD	Operational Operational			
		Kodungaiyur Greater Chennai Corporation 4. Waste to Energy plant at Perungudi Greater Chennai Corporation	32 26	Proposed Proposed			
25.	Telangana M/s. Integrated Municipal Solid Waste Management Project operated by Ramky EnviroEngg. Ltd., Jawaharnagar, Hyderaba		19.8	The TSPCB issued CFO vide letter dated 15.07.2020 with validity upto 31.03.2025 to M/s. Hyderabad Integrated Waste Management Project to operate Waste to Energy Plant of capacity 19.8 MW in the name of M/s. Hyderbad MSW Energy Solution Pvt. Ltd. (Unit-1)			
		11 MW Waste to Energy Capacity Chinna Ravulapalli, Bibi Nagar (M/s. RDF Power Projects)	11	Undergoing pre-commissioning activities. Presently, the industry has not commissioned due to financial issues.			
		12 MW Waste to Energy Capacity Yacharam, Ibrahimpatnam	12	Permission for granting extension of time to agency (M/s. SVGPPL) for entering into PPA with TSSPDCL is under examination of GHMC			
26.	Tripura	Nil	Nil	Nil			

S. No.	States		Waste-to-Energy	
		Plant Location	Power Generation (MW)	Remarks
27.	Uttarakhand	Haridwar	2	Waste to Energy plant I proposed, Roorke utilize the RDF (Refused Derived Fuel) of nearby town.
		Dehradun	-	Proposed Waste to Energy plant in Dehradun
28.	Uttar Pradesh	Barabanki Meerut	2.5 2.5	Operational Operational
29.	West Bengal	Nil	Nil	Nil
30.	Andaman and Nicobar Islands	-	-	-
31.	Chandigarh	M/s. Jaiprakash Associates Ltd. (Grentech Fuel Processing Plant), Opp. Dumping ground, Dadumajra, Sector-25 West, Chandigarh	RDF generated is utilized in their own Hot Air generator and the rest is supplied to nearby industries	Operational
32.	Daman & Diu and Dadra and Nagar Haveli	Nil	Nil	Nil
33.			23 12 24	Operational Operational Operational
34.	Lakshadweep	Nil	Nil	Nil
35.	Puducherry	Nil	Nil	Nil
TOTAL				

TABLE 9: STATEWISE DETAILS OF LANDFILL SITES FOR SOLID WASTE DISPOSAL

S. No.	State	Landfill site identified	Landfill Constructed	Landfill under construction	Landfill in operation	Landfill exhausted	Landfill capped	City/Town
1.	Andhra Pradesh	Nil	4	Nil	4	Nil	1	Landfill Constructed & Landfill in Operational: GVMC, Ongole, Chirala & Tirupati; Landfill Capped: Kadapa MC,
2.	Arunachal Pradesh	13	Nil	Nil	Nil	Nil	Nil	Landfill site identified: Basar, Changland, Deomali, Itanagar MC, Jairampur, Khonsa, Kimin, Koloriang, Longding, Miao, Tawang, Tezu and Yingkiong
3.	Assam	76	Nil	1	Nil	Nil	Nil	Details not provided
4.	Bihar	103 ULBs	Nil	Nil	Nil	Nil	Nil	Details not provided
5.	Chhattisgarh	2	2	0	2	0	0	Details not provided
6.	Goa	2	8	Nil	4	1	Nil	Landfill site Identified: Panji & Ponda; Landfill Constructed: Pernem, Bicholim, Sankhali, Quepem, Cuncolim, Canacona, Valpoi & Margao; Landfill in Operation; Pernem, Bicholim, Quepem & Cuncolim; Landfill Exhausted: Canacona
7.	Gujarat	28	12	24	4	0	1	Details not provided
8.	Haryana	4	0	0	0	0	0	Details not provided
9.	Himachal Pradesh	3	Nil	2	Nil	Nil	Nil	Landfill sites identified: Shimla, Una and Baddi;Landfil under construction; Shimla and Baddi

S. No.	State	Landfill site identified	Landfill Constructed	Landfill under construction	Landfill in operation	Landfill exhausted	Landfill capped	City/Town
10.	Jammu & Kashmir	15	1	Nil	1	Partial at Achan Site	Partial at Achan Site	Landfill sites identified: MC Thathri, MC Ghou-Manhasan, MC Kishtwar, MC Rajouri, MC Kalakote and MC Poonch (Landfill sites Identified in Jammu Division & Anantnag, Achabal, Bijbehara, Mattan, Aishmuquam, Seer Hamdan, Sumbal, Budgam & Shopian In Kashmeer Division Land fill site identified., Saidpura Achan, Srinagar; Landfill constructed Saidapora Srinagar; Landfill site exhausted, & Capped: Achan Site.
11.	Jharkhand	41	0	1	0	0	0	Landfill under construction : Giridih; Other details not provided
12.	Karnataka	199	178	10	191	2	6	Details not provided
13.	Kerala	2	Nil	1	NII	Nil	Not Provided	Landfill site identified:Ernakuram
14.	Madhya Pradesh	51	7	1	5	0	0	Landfill site identified: Details not provided; Landfill constructed: Gwalior, Indore, Jabalpur, Katni, Rewa, Sagar & Ujjain;Landfill under construction: Bhopal; Landfill in Operation ;Gwalior, Indore, Jabalpur, Katni and Ujjain.
15.	Maharashtra	320	18	302	18	0	1	Details not provided
16.	Manipur	Not Provided	4	Not Provided	4	Not Provided	Not Provided	Details not Provided
17.	Meghalaya	Nil	Nil	Nil	Nil	Nil	Nil	Details not Provided
18.	Mizoram	23 Towns	1	2	1	Nil	Nil	Landfill constructed:Aizwal Landfill under construction: Lunglei& Kolasib; Landfill in operation Aizwal
19.	Nagaland	1	1	Nil	1	Nil	Nil	Kohima Town
20.	Odisha	54	Nil	Nil	Nil	Nil	Nil	Details not provided
21.	Punjab	150	Nil	Nil	Nil	Nil	Nil	Details not provided

S. No.	State	Landfill site identified	Landfill Constructed	Landfill under construction	Landfill in operation	Landfill exhausted	Landfill capped	City/Town
22.	Rajasthan	61	17	29	36	1	1	Landfill exhausted & capped at Udaipur; Other details not provided
23.	Sikkim	3	3	1	3	Nil	Nil	Landfill site identified: Martam, East Sikkim; Sipsu, West Sikkim; Ringdang in Dzongu; Landfill constructed at Martam, East Sikkim; Sipsu, West Sikkim; Chandey at Mangan, Landfill under construction at Ringdang in Dzongu North Sikkim., Landfill in operation at Martam, East Sikkim; Sipsu, West Sikkim; Chandey at Mangan,
24.	Tamil Nadu	4	4	0	3	1		Details not provided
25.	Telangana	4	1	Nil	1	Nil	1	Landfill site identified: Greater Hyderabad MC at Jawaharnagar Village, Greater Warangal MC, Nizambad MC & Karimnagar MC;Landfill constructed at Greater Hyderabad MC at Jawaharnagar Village; Landfill in operation: Greater Hyderabad MC at Jawaharnagar Village;Landfilled capped:t Greater Hyderabad MC at Jawaharnagar Village.
26.	Tripura	20	6	Nil	2	1	1	Landfill constructed: Agartala, Mohanpur, Bishalgarh, Ranirbazar, Kamalpur and Jirania; Landfill in operation: Agartala MC & Kamalpur MC; Other details not provided
27.	Uttarakhand	91	2	Nil	2	NIL	NIL	Landfill constructed & Landfill in operation: Nagar Nigam Dehradun & Nagar Nigam Haridwar; Other details not provided

S. No.	State	Landfill site identified	Landfill Constructed	Landfill under construction	Landfill in operation	Landfill exhausted	Landfill capped	City/Town
28.	Uttar Pradesh	82	Not Provided	2	86	1	0	Landfill site identified :Ayoghya, Azamgarh, Ballia Bareilly, Basti, Bijnor, Bulandsahar, Ghaziabad, Hardoi, Hathras, Jaunpur, Kannauj, kanpur, Kasganj, Kaushambi, Kheeri, Mathura, Moradabad, Muzaffarnagar, Pilibhit Prayagraj, Sambhal , Sant Kabeer Nagar, Shamli, Sitapur, Sultanpur, Unnao, Landfill in Operation :Agra, Aligarh, Ambedkar Nagar, Barabanki, Bareilly, Bijnor, Bulandsahar, Deoria, Etah, Ghazipur, Gorakhpur, Hapur, hardoi, Hathras, Jaunpur, Kannauj, Kanpur, Kasganj, Maharajganj, Mainpuri, Mathura, Meerut, Moradabad, Muzaffarnagar, Pilibhit, Prayagraj, Sambhal, Sant Kabeer Nagar, Shamli, Unnao Varanasi, Landfill under Construction: Ghaziabad and Jaunpur;Landfill exhusted: Prayagraj.
29.	West Bengal	Nil	40	Nil	7	Nil	Nil	Landfill in operation: Midnapore (West) and Hooghly, Landfill constructed: 24 Paraganas, Hooghly, Burdwan, Howrah; Other details not provided
30.	Andaman and Nicobar Islands	1	0	0	0	0	0	Landfil sites identified :Brookshabad, Port Blair
31.	Chandigarh	1	1	Nil	1	Nil	1	Details not Provided
32.	DDDNH	Not Provided	Not Provided	1 (Kharadapada Site)	Not Provided	Not Provided	Not Provided	Landfill; Other details not provided

23582/2022/UPC-II-HOAnnual Report on Solid Waste Management (2019-20), CPCB, Delhi

S. No.	State	Landfill site identified	Landfill Constructed	Landfill under construction	Landfill in operation	Landfill exhausted	Landfill capped	City/Town
33.	Delhi	1	Nil	1	1	3	Nil	Landfill sites identified at Bawana, Landfill under construction at Engineered SLF at Tehkhand, Landfill in operation at Engineered SLF at Bawana, Landfill exhausted at 3 Dump sites at Okhla, Ghazipur and Bhalswa.
34.	Lakshadweep	Nil	Nil	Nil	Nil	Nil	Nil	Not Applicable
35.	Puducherry	3	0	0	0	0	0	Details not provided
	TOTAL	1359	312	376	379	10	13	

TABLE 10: STATEWISE DETAILS OF DUMPSITES

S. No.	State	Total Number of existing dumpsites	Dumpsites reclaimed/ capped	Dumpsites Converted to sanitary landfill
1.	Andhra Pradesh	110	1	3
2.	Arunachal Pradesh	27	Nil	Nil
3.	Assam	66	Nil	Nil
4	Bihar	140	Nil	Nil
5	Chhattisgarh	8	0	0
6	Goa	9	Nil	Nil
7	Gujarat	170	0	0
8	Haryana	69	0	0
9	Himachal Pradesh	57	Nil	Nil
10	Jammu & Kashmir	62	Nil	Nil
11	Jharkhand	41	0	0
12	Karnataka	157	15	6
13	Kerala	38	6	Not Provided
14	Madhya Pradesh	328	50	Nil
15	Maharashtra	327	1	0
16	Manipur	21	Nil	Nil
17	Meghalaya	6	Nil	1
18	Mizoram	1	Nil	Nil
19	Nagaland	23	Nil	Nil
20	Odisha	112	Nil	Nil
21	Punjab	150	Nil	Nil
22	Rajasthan	172	1	1
23	Sikkim	2	Nil	1
24	Tamil Nadu	143	7	0
25	Telangana	123	1	1
26	Tripura	14	1	Nil
27	Uttarakhand	53	Nil	Nil
28	Uttar Pradesh	611		
29	West Bengal	100	1	Nil
30	Andaman and Nicobar	1	1	Not Provided
31	Chandigarh	1	1	1
32	DDDNH (2018-19) information)	3	Nil	Not Provided
33	Delhi	3	In process	Nil
34	Lakshadweep	0	Nil	Nil
35	Puducherry	3	1	Nil
	Total	3151	87	14

TABLE 11: STATEWISE DETAILS OF MONITORING AT WASTE PROCESSING & DISPOSAL SITES

State/UT	City/Town	Ambient Air Quality		Leachate quality		Compost quality	
		Monitoring (Yes/No)	If yes, attach report	Monitoring (Yes/No)	If yes, attach report	Monitoring (Yes/No)	If yes, attach report
Andhra Pradesh	Ongole Municipal Corporation	Yes	NP	No	NA	No	NA
	Chirala Municipality	Yes	NP	No	NA	No	NA
	Greater Visakhapatnam MC	Yes	NP	No	NA	No	NA
	Tirupati MC	Yes	NP	No	NA	No	NA
	Kadapa MC	Yes	NP	Yes	NP	Yes	NP
Assam	Boragaon under Guwahati MC	Yes	NP	No	NA	No	NA
Himachal Pradesh	MC Shimla	Yes	Yes	No	NA	NP	NA
	MC Hamirpur (MSW Processing Facility HP)	Yes	Yes	NP	NA	NP	NA
	MC Dumpsite Kangra	Yes	Yes	NP	NA	NP	NA
	MC Dumpsite Dharamshala	Yes	Yes	NP	NA	NP	NA
	MC Chamba (MSW Processing site, Kurnah)	Yes	Yes	NP	NA	NP	NA
	MC Dalhousie (MSW Processing site, Kathlag	Yes	Yes	NP	NA	NP	NA
	MC Hamipur	Yes	Yes	NP	NA	NP	NA
	MC Kullu Dumping site	Yes	Yes	NP	NA	NP	NA
	MC Manali	Yes	Yes	NP	NA	NP	NA
	MC Bilaspur	Yes	Yes	NP	NA	NP	NA
	MC Mandi	Yes	Yes	NP	NA	NP	NA
	MC Joginder Nagar	Yes	Yes	NP	NA	NP	NA

State/UT	City/Town	Ambient	Air Quality	Leacha	te quality	Com	post quality
	MC Rampur	Yes	Yes	NP	NA	NP	NA
	N.P Narkanda	Yes	Yes	NP	NA	NP	NA
	MC Parwanoo	Yes	Yes	NP	NA	NP	NA
	M.C Parwanoo	Yes	Yes	NP	NA	NP	NA
	M.C Baddi	Yes	Yes	NP	NA	NP	NA
Manipur	MSWM Plant, Lamdeng	Yes	NP	Yes	NP	Yes	NP
	Bishnupur Landfill site	Yes	NP	Yes	NP	Yes	NP
	Kakching Landfill site	Yes	NP	Yes	NP	Yes	NP
	Jiribam Landfill site	Yes	NP	Yes	NP	Yes	NP
Meghalaya	Landfill site of Shillong Municipal Board	Yes	NP	Yes	NP	No	NA
Telangana	M/s. Integrated Municipal Solid Waste Management Project (IMSWMP), Jawharnagar, Shameerpet RR Dist.	Yes	NP	Yes	NP	No	NA
Uttarakhand	Dehradun Nagar Nigam	Yes	NP	Yes	NP	Yes	NP
	Haridwar Nagar Nigam	Yes	NP	No	NA	No	NA
Gujarat	SLF Ahmedabad Municipal Corporation	No	NA	No	NA	No	NA
	SLF of Vadodara Municipal Corporation	No	NA	Yes	NP	No	NA
	SLF of Surat Municipal Corporation	Yes	NP	Yes	NP	No	NA
	SLF of Rajkot Municipal Corporation	Yes	NP	Yes	NP	No	NA

3.0 State wise Observations/ Findings:

Based on annual reports received from 35 SPCBs/PCCs for the year 2019-20, observations on implementation of SWM Rules, 2016 are given below:

3.1 Andhra Pradesh:

There are 110 ULBs in Andhra Pradesh and among them 14 ULBs are Municipal Corporations and 96 ULBs are Municipalities/Nagar Panchayats. About 6766 TPD of Municipal Solid Waste is generated in the State out of which 6140 TPD is collected, 1059 TPD is treated and 203 TPD is landfilled. The waste is lifted by the local bodies. Door to door collection efficiency is about 99%. Municipal Corporations and major Municipalities have adopted door to door collection system covering 36.54 lakhs of households and also achieved 81% of segregation of Solid Waste at source, covering 29.60 lakhs of households and reported 100% to be achieved by March, 2021. 1922 Bulk waste generators are identified and 725 bulk waste generators have provided with wet waste processing plants and processing 63.4 tons of wet waste per day as on date.

Two Waste to Energy plants under PPP mode are under construction by M/s. Jindal Urban Waste Management Ltd. 77% of work completed in WtE plant in Greater Visakhapatnam Municipal Corporation (GVMC cluster with 4 ULBs to process 1133 TPD Solid Waste) and 90% of work completed in Guntur Municipal Corporation (Guntur Cluster with 9 ULBs to process 1202 TPD Solid Waste).

Out of 50 Waste to Compost plants awarded, covering 54 ULBs, 27 Waste to Compost plants, covering 30 ULBs are under operation and 23 Waste to Compost plants will be commissioned by March, 2021. For the 48 ULBs, which were earlier formed into 7 clusters, for establishment of Waste to Energy plants, restructuring is under process to go for Waste to Compost plants/Bio-methanation plants.

In addition to that individual vermi-compost plants are being proposed in residential localities at bulk waste generators. The compost is proposed to utilize for green belt development within the municipal limits. 1922 Bulk Waste Generators were

by October, 2020.

identified in the State and Wet Waste Processing Facilities are provided by 725 Bulk Waste Generators, processing 63.4 Tons of wet waste per day as on date.

Greater Visakhapatnam MC, Tirupati MC, Ongole MC & Chirala Municipality has developed Sanitary Landfill facility and disposing the solid waste regularly. The remaining ULBs are under process of developing Landfill facilities and compost plants in their respective municipalities. ULBs are under process of implementing bio-mining process for bio-remediation of existing municipal dump yards.

The MA&UD Dept. reported approx. 82.9 Lac MTs Legacy Waste identified in 110 ULBs, all the ULBs were instructed to investigate & analyze to take up bio-remediation/bio-mining (at least some portion initially on pilot basis). Bio-mining is taken up in Greater Visakhapatnam Municipal Corporation, Vijaywada, Tanuku and Tirupati Municipal Corporation. So far, 3 Lakh MTs of waste is treated in Greater Visakhapatnam Municipal Corporation, 2.8 Lakh MTs waste treated in Vijayawada, 500 MTs of waste treated in Tanuku & 1.56 Lakh MTs waste treated in Tirupati and Work Orders issued for 9 ULBs are under tender stage and in 27 ULBs are in DPR stage and comprehensive DPRs is being prepared in 62 ULBs and will be completed by end of September 2020 and subsequently, necessary action will be initiated. It is reported by MA&UD Dept. that CCTV cameras are installed at dump sites in 63 ULBs and in remaining 47 ULBs installation is in progress. All ULBs to be covered

The Government has constituted the State Level Advisory Body (SLAB) under G.O.Ms. No. 350, dt. 22.09.2017 under Solid Waste Management Rules, 2016 for implementation of said Rules in the State.

70 Census towns exist in Andhra Pradesh. 54 census towns are provided with Solid Waste Processing Centers (SWPCs), where the wet waste is treated with vermiseeding and recyclables are sent to recyclers and dry waste is disposed to Cement Plants/Waste to Energy Plants. 38 Census towns are provided with door to door collection. Apart from the census towns Solid Waste Management activity is being practiced in rural villages in the entire State.

3.2 Arunachal Pradesh

There are 23 local bodies (21 District Urban Development Agency and 2 ULBs)) in the State responsible for management of solid waste. There are 2 ULBs in the State namely Itanagar Municipal Council and Pasighat Municipal Council. Total solid waste generation in the State is 285.65 TPD out of which 223.56 TPD collected. Under the area jurisdiction of Itanagar Municipal Corporation, 2965 (out of 31959) households are covered in Door to Door collection. Segregation of waste at source not practiced by premises. In Pasighat Municipal Council, 3197 (out of 7584) households are covered in door to door collection and 1300 (out of 1466) nonresidential premises are covered. There are total 27 existing dumpsites in the State.

The status of the processing and treatment of solid waste in the State is as below:

- i) Solid Waste Processing facilities setup: 3 (Three) vermin-composting plant set up at Basar Town, Bomdila Town and Longding Town. 1 (one) MRF facility set up at Tawang Town.
- ii) Processing facility operational: Nil
- iii) Processing facility under installation/planned: 1(one). Solid waste plant of Itanagar Municipal Corporation is under augmentation.

3.3 Assam

There are 96 ULBs responsible for implementation of SWM Rules, 2016in the State. There are 8 Class-I and 6 Class II cities/towns in the State.

Total waste generated in the State is 1271.305 TPD out of which 922.4115 TPD is collected, 41.6625 is treated and 880.749 is landfilled. Door to door collection of waste is practiced in almost all ULBs either partially or completely. In terms of coverage of number of wards in D 2 D collection, 604 wards out of total 942 wards are covered compared to 403 wards in previous year as per reports submitted by ULBs. However, source segregation is not yet practiced and ULBs lack covered transportation. As per the reports submitted by District Authorities 38 ULBs have MRF. Only one ULB has a functioning waste processing facility (composting) at the

moment. However, many ULBs are operating small scale composter units at a community level. None of the ULBs have constructed sanitary landfill yet. 15 nos. of organic waste composters have been provided to 9 model towns.

3.4 Bihar

In Bihar, 142 ULBs (12 Corporations, 49 Municipal Council and 81 Nagar Panchayats) are responsible for MSW management. As per the annual reports submitted by the ULBs total waste generation has been observed to the tune of 4334 TPD (Municipal Corporation: 2396 TPD, Municipal Council: 1375 TPD & Nagar Panchayat: 563 TPD). The waste generation data indicates per capita solid waste generation is 394 grams per day, 305 grams per day & 269 grams per day in Municipal Corporation, Municipal Council & Nagar Panchayat respectively.

Three major cities (Munger, Muzaffarpur & Biharsharif) have been identified as model cities & towns in Bihar. Door to door collection started in 3341 wards pit pf 3398 wards. Source segregation started in 1734 wards out of 3398 wards in 105 ULBs. A toal of 103 ULBs have identified lands for development of sanitary landfills facilities and other 39 ULBs have been tagged to nearby ULBs.

As per annual report submitted by ULBs, there are 140 dumpsites which include 13 in Municipal Corporation, 48 in Municipal Council and 79 in Nagar Panchayat. The Patna Municipal Corporation is in process of development/setting up the processing of disposal facility of MSW (1000 TPD) including landfill site at BairiaDist- Patna. The Board has granted authorization for same during November, 2013. No progress reported in the development of the facility so far.

3.5 Chhattisgarh

There are total 168 ULBs responsible for implementation of the SWM Rules, 2016, in the State. Total Solid Waste generation in the State is about 1870 TPD.1860 TPD solid waste is collected, out of which ... TPD is treated. Solid waste management in 166 ULBs of the State is based on the waste management model (Mission Clean City) currently running successfully in Ambikapur. These Municipal Authorities have collection and transportation facilities for solid waste management. The source

segregated MSW is collected by SHG workers by tricycles and Mini tippers. These 166 Municipal Authorities have Garbage Clinic (Solid Liquid Resource Management Centers) for secondary segregation of MSW and are also operating their own composting plant. Municipal Corporation, Bilaspur and Municipal Corporation, Raipur have obtained Consent to Operate on 06/03/2019 and 11/06/2020 respectively for operation of Waste to RDF plant. The plants are in operation.

3.6 Goa

There are 14 ULBs responsible for implementation of the SWM, Rules, 2016, in the State. Total solid waste generation in the State is about 188.88 TPD, out of which 180.38 TPD is collected, 148.91 is treated and 15.59 TPD is landfilled. Good practices like house to house collection, segregation, storage and covered transportation are being practiced in 14 cities/towns.

There are 14 solid waste processing facilities (composting) setup in the State, out of which 13 facilities are operational. There is one Waste to Energy Plant in the State located at Saligao, Bardez, Goa which has a capacity of 0.6 MW. The Goa State Pollution Control Board has granted authorization to the Corporation of City of Panaji (CCP) for material recovery facility & composting station at P.T sheet no. 56 chalta no. 6 for setting up & operation of waste processing facility at three locations. CCP has setup decentralized composting units in housing societies as well as in Municipal market area and public gardens to treat the biodegradable waste.

3.7 Gujarat

Total 170 ULBs are responsible for MSW management in the State. Total Solid Waste collection in Gujarat is 10,755 TPD, out of which 6,924 TPD of waste is treated and 3,831 TPD of waste is landfilled /dumped. 38 Composting plants, 95 Vermi-compost plants, 3 Biogas and 2 RDF/Palletization have been set up in the State. It is reported that 28 Regional/Individual landfill sites are identified, 24 Landfill under planning stage and 12 Landfill sites are constructed. There are 170 dumpsites present in the State. About 100% door to door collection of mixed MSW has been

reported with 82% segregation at source. The status of implementation of SWM Rules in the State is not satisfactory.

3.8 Haryana

There are 86 ULBs in the State responsible for management of solid waste in the State under SWM rules. The Solid waste generation in the State is about 5231.9 TPD, out of which 4808.8 TPD is collected, 1620.6 TPD is treated and 3188.2 TPD is landfilled.

The Govt. of Haryana have adopted a cluster based Integrated approach for Solid Waste Management. The entire State has been broadly divided into 14 clusters out of which 4 will be Waste to Energy i.e. Faridabad, Rohtak, Sonepat, Ambala and 10 will be Waste to Compost/RDF processing i.e. Jind, Hisar, Dabwali with Sirsa, Rewari, Panchkula, Bhiwani, Farukhnagar, Yamunanagar, Punhana and Fatehbad. As per the status submitted by ULB department, the detail on progress made by Local Bodies in respect of waste collection, segregation, transportation and disposal is given below:

Waste Collection

Door to door collection is being done in around 1439 (93%) out of 1540 wards and existing waste collection vehicles are being modified into two covered compartments for collection of waste in segregated manner. Freshly, ordered vehicles will have two covered compartments for collection of wet and dry waste in a segregated manner. A Separate basket/bin is kept in waste collection vehicle/tricycle for segregated collection of domestic hazardous waste.

Urban local bodies are doing collection of domestic, trade and institutional food/biodegradable waste from the doorstep or from the community bin on a daily basis. Large containers kept in the fruit and vegetable markets and removed during night time or non-peak hours by the local body.

Transportation

Local bodies are using covered containerized handcarts/tricycles/ Tractor Trolly / Refuse Compactor or other similar means for the primary collection of waste

stored at various sources of waste generation. Existing waste collection vehicles are being modified into two covered compartments for collection of waste in segregated manner. Freshly, ordered vehicles will have two covered compartments for collection of wet and dry waste in a segregated manner. For secondary transportation of solid waste from the Primary Collection Centre (PCC) to the designated processing plant site or sanitary landfill site, "Dumper Placers with twin bin containers" is provided.

Segregation

Out of 1540 wards, source segregation has been achieved in 988 wards (64%) till February 2020 and for coverage in remaining wards rigorous IEC campaign is being organized across the State in all ULBs.

Disposal

Rejects and residues collected from the above mentioned processes are disposed in dumping sites and further proposed to be processed for energy recovery. Presently in the State there are 25 nos. Solid Waste Composting Facilities, 10 nos. Vermi Composting Facilities, I no. Bio Gas Plant and 03 nos. RDF Facilities.

Presently in the State there are 25 nos. Solid Waste Composting Facilities, 10 nos. Vermi Composting Facilities, I no. Bio Gas Plant and 03 nos. RDF Facilities. As per action plan submitted by ULB department. Government of Haryana has adopted cluster based integrated approach for Solid Waste Management. The entire State has been broadly' divided into fourteen 14 no. clusters out of which 4 nos. will be waste to energy and 10 nos. will be waste to compost/RDF processing plant.

Waste to energy projects in Gurugram-Faridabad &Sonepat-Panipat has already been allotted to the agenéies. The work of waste to energy plant at Sonepat is in progress and approximate 60% work has been completed. The plants is likely to be commissioned by March, 2021.

The total capacity of plant at Sonepat-Panipat will be 700 TPD. The work at Gurugam-Faridabad plant is likely to be completed by July, 2022.

3.9 Himachal Pradesh

There are 54 ULBs consisting of two Municipal Corporations, 31 Municipal Council, 21 Nagar Panchayats and 7 Cantonment Boards in the State of Himachal Pradesh. Solid waste generation in the State is approximately 393 TPD, out of which 354 TPD is collected, 230 TPD is treated and 124 TPD is landfilled. 3 landfill sites have been identified in the State and 57 existing dumpsites have been reported in the State. RDF section of the WtE plant under construction at Shimla is functional and all waste transported to WtE plant is processed and converted into RDF which is then sent to cement plant for co-processing Approx 70-80 MT waste is processed per day. Electricity generation section is under construction.

3.10 Jammu & Kashmir

The total Solid Waste generation in all the Corporation/Local bodies of UT of J&K is 1518.91 TPD out of which 1464.65 TPI) is collected, and 540.19 TPI) is treated. There is only one sanitary landfill in Kashmir at Saidapora, Achan where Municipal Solid Waste is dumped in a scientific manner and in all other local bodies there is no such facility except seven Compositing/Vermicomposting sites at different local bodies.

Collection of Municipal Solid Waste: -

In Jammu division, 100% collection of waste has been achieved by 13 local bodies; while Partial collection of waste is being done in 13 local bodies including JMC. Three No. of local bodies have reported negligible collection and nine no. of local bodies have still not started door to door collection at all. The waste from slaughter houses, meat & fish markets, fruit & vegetable market, which are biodegradable in nature, are not collected separately.

In Kashmir division, House-to-House collection of municipal solid waste is being undertaken in 80% of households in Srinagar city through Srinagar Municipal

Corporation. However, no point source segregation has been observed. Construction and demolition waste is separately collected and disposed. There is no separate provision for dairy. Waste (garbage, dry leaves) occasionally burnt. Since the storage facilities are generally open space/areas thus the stray animals find as easy access to them though their entry into the SMC landfill site at Achan, which has been restricted to some extent on the directions of this Board.

Out of 42 Urban local body the D2D collection is being done in all expect 12 Municipal Committee viz. Yaripora, Frisal, Kulgam in district Kulgam, Shopian Municipal Committee Khansahiv, Baramulla, Sopor, Pattan, Hajin in Bandipoura, Kupwara, Handwara, Langate in district Kupwara.

Segregation of municipal solid waste:

In Jammu division, the municipal solid waste is not being segregated of by any ULB except segregation of waste is being implemented partially by MC, Katra& Jammu Municipal Corporation only. Secondary waste segregation started by Katra town as a pilot project with segregation of approx. 1.5 TPD of waste and channelization for further recycling.

In Kashmir division, segregation of municipal Solid waste at source has been initiated by Srinagar Municipal Corporation. No point source segregation of waste is being carried out by any of ULB.

Storage of municipal solid waste

In Jammu division, only primary storage facilities have been established by ULBs in the form of RCC Bins, plastic bins, dumpers/ containers and few secondary storage facilities with closed sheds but with no segregation in place.

In Kashmir division, the waste from a few selected localities within the city is being stored in covered Municipal storage containers, whereas, in most of the areas of the city, the waste is dumped in open on road side in a scattered manner.

Transportation of municipal solid waste

In Jammu division, transportation of waste is carried out in heavy vehicles by ULBs.

In Kashmir division, Srinagar Municipal Corporation are equipped with waste transporting vehicles, and mostly wastes are transported under covered conditions thereby reducing littering of the waste on the way. However, separate transportation system for each cate o of waste is needed.

Processing of municipal solid waste

In Jammu division, there is no processing facility in the region except small scale vermicomposting being carried out at MC Bhaderwah, MC Doda and Jammu Municipal Corporation.

In Kashmir division, facilities available with SMC include, landfilling, mechanical segregator, composting and leachate treatment plant. No municipal body processes the waste for reuse.

Disposal of municipal solid waste

There is no authorized landfill site in operation till now except for open dumpsites. Periodic burying of the waste is however, carried out with the help of JCBs to minimise the visibility of waste. Disposal of waste is being carried out in unscientific manner on open lands or hill slopes. An advanced technology incinerator based on fuel free and pressurized air rotating technology has been installed at Sui, MC, Udhampur with approx. 03 TPI) capacity.

All kind of waste is disposed of in landfill site by Srinagar Municipal Corporation whereas none of the municipal councils/ committees have sanitary engineered land fill site.

The eco-fragile Tourists places like Pahalgam & Gulmarg, have come up with facilities with regard to the treatment and disposal of the solid waste generated from these areas. The segregated waste collected is processed in auto composters and magnetic disintegrator.

3.11 Jharkhand

In Jharkhand, 42 ULBs are responsible for MSW management in the State. Total solid waste generation in the State is 2188.97 TPD out of which 1847.38 TPD is collected, 731.76 TPD is treated and 1179.68 TPD is landfilled.

Land for sanitary landfill site as well as processing facility has been identified in 41 ULBs & is available to 34 ULBs, 1 landfill site is under identification due to rejection of MoEF&CC, 7 ULBs transfer/NOC/purchase of land is under process.

Out of 42 ULBs, DPRs for SWM Projects of 31 cities have been prepared as per guidelines in SWM Rules -2016. All DPRs prepared are based on waste to compost technology. Concessionaries have been appointed in 24 ULBs for SWM projects for 20 years, Reverse Vending Machine has been installed at Ranchi, Dhanbad& Jamshedpur cities for recycling of plastic bottles as pilot project. In Chas & Jamshedpur plastic has been used for construction of road.

Solid waste collection and processing has been improved in Jharkhand in comparison to previous years. Segregation at source and collection from door to door of waste has been initiated in almost all 42 ULBs. Transportation of waste in covered vehicles is being done. Bulk Garbage Generators (BGGs) have been identified in all ULBs. Presently, 183 BGGs doing on-site composting. ULBs are doing decentralized composting through pit/windorow in 353 units. Provision in DPR for creating green belt around the SLF and processing plant site is done by concessionaries of SWM Projects.

3.12 Karnataka

279 ULBs are responsible for MSW management in the State, comprising of 275 Urban Local Bodies and 4 Notified Area. Total Solid Waste generation in Karnataka is approx. 12258.2 TPD out of which approximately 10,011 TPD is collected and 4489 TPD of waste is treated. 183 composting plants, 68 vermi – compositing plants, 7 Biogas and 2 RDF/Palletization have been set up in the State. It is reported that 199 Regional/Individual landfill sites are identified and 178 Landfill sites are constructed. Local bodies have house to house collection system in place. Many ULBs collect mixed waste and transport it to the landfill sites or processing facilities.

Wherever processing facilities are established, segregation is done at the processing facilities; otherwise, mixed solid waste is dumped in the landfill sites without processing. Collection of solid waste is done in most of the local bodies by way of auto tippers and push carts including the BBMP. Covered transportation of waste is done in Mysore and BBMP limits. In BBMP limits, mostly compactors are used for transportation of waste. In some instances, they are also using tipper lorries for transporting the waste to the processing facilities. In Mangalore, Belagavi, and Hubli-Dharwar, Shivamogga, Davanagree partly compacters and partly conventional vehicles are used for transportation of waste. Conventional vehicles are not covered.

3.13 Kerala

In Kerala, there are 93 Municipal Authorities responsible for MSW management. Nearly 3521 TPD of MSW generated in the State, out of which 880 TPD waste is collected and 1837 TPD waste is treated. There are 2 large and 12 small centralized windrow composting plants and 7 vermi composting plants setup in the State. 2 landfill sites have been identified in the State and total 38 dumpsites have been reported. Work awarded for the waste to energy plant at Kozhikode and land identified for waste to energy plant in other model cities namely Thiruvananthapuram and Thrissur. More than 65% door to door collection for dry and wet waste achieved for both household and establishment in Khozikode Corporation. 87% door to door collection provided for establishment through 12 agencies by Thiruvananthapuram Corporation. Bio-mining started at Khozikode and clearing of landfills began at one place in Thiruvananthapuram Corporation and another one is undertaken under Smart City programme.

3.14 Madhya Pradesh

Total 378 Urban Local Bodies and 05 Cantonment Boards are responsible for implementation of SWM Rules, 2016 in the State. Total waste generation in the State is approximately7980 TPD, out of which 7193 TPD waste is collected and 6431 TPD is treated & 762 TPD is landfilled. It is reported that there are 51 landfill sites identified at present in the State, 5 landfill sites (Gwalior, Indore, Jabalpur, Katni and Ujjain) are in operation and 1 landfill site at Bhopal is under construction. There are 328 existing dumpsites in the State.

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. 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 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 and recycling.

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 population are required to have GPS fitted garbage collection and transportation vehicles.

Presently, the solid waste generated in the State is being processed through multiple approaches:

Waste to Energy: The waste to energy plant in Jabalpur is a fully operational Municipal Solid Waste plant with a capacity of 11 MW. This plant is currently processing waste o f16 ULBs. Two more integrated 'Waste to Energy' clusters are under implementation in Rewa Cluster and in Gwalior Cluster to process waste from 44 ULBs.

Waste to Compost through integrated approach: 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 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.

Decentralized 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.

Biomethanization/Bio-gas: Bhopal, Indore, Ujjain and Dewas have setup 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.

3.15 Maharashtra

Maharashtra is one of the highest urbanized states with nearly 50% population residing in urban areas. Total 387 ULBs are responsible for MSW management in the State of Maharashtra, comprising of 27 Municipal Corporation, 236 Municipal Councils and 124 Nagar Panchayats. There are 5 Cantonment Boards. Total Solid Waste generation in the State of Maharashtra for the year 2019-20 is 22945 TPD TPD, out of which 22682.81 TPD (98.85 %) is collected and 16037 TPD of waste is treated. ULBs installed 337 composting plants as a waste processing facility. Also 82 vermin-composing facilities are installed, 62 bio-methanization plants are installed, 01 waste to Energy plant and 26 RDF plant installed. The 320 landfill sites are identified and 18 sites under construction phase.

ULBs are practicing segregation of waste at source and adequate provisions are made in Solid Waste Management DPRs for achieving 100% segregation of waste at source. ULBs in state are segregating waste into three categories wet, dry and domestic hazardous waste.

Vehicles deployed for collection and transportation of waste have two compartments for dry and wet waste. Segregated waste is further segregated at processing facility and then scientifically processed. Maharashtra is the only state to have registered its own brand "HaritMaha City Compost" for promotion of marketing and sale of city compost which is as per the FCO standards and SWM Rules 2016.

Dry waste collected form the city is further segregated into paper, plastic, glass, metal etc. through secondary segregation process at transfer stations or the designated material recovery facility (MRF) in the city or at solid waste treatment facility. After secondary segregation of dry waste into paper, plastic, glass, metal etc.is being recycled through local sellers in the city, to recyclers in the region or to the waste processing plants in nearby metro cities through prescribed processes. For treatment of dry waste technical options such as preparation of Refused Derived Fuel (RDF), use of plastic in roads, preparation of oil or granules from

plastic etc. are also used in some municipal corporations.

In the Mumbai region, Municipal Corporation of Greater Mumbai has mandated all bulk generator of solid waste i.e. having area greater than 5000 sq. Mtr to provide in-situ treatment of solid waste generated in their premises. This practice is resulted

3.16 Manipur

in reduction of waste generation.

In Manipur, there are 27 towns/cities under MAHUD Department, GOM including a Class-Icity i.e. Imphal city. The remaining 26 towns are all below class II category. There are 27 ULBs comprising of one municipal corporation, 21 municipal councils and 5 Nagar Panchayats.

The municipal solid waste generation is estimated at 265TPD and the actual waste collection is about 192.40 TPD. Out of the actual waste collected 103.57 TPD is processed and the remaining 88.83 TPD is disposed at the existing landfill or dump sites.

Door to door collection is practiced by all 27 local bodies. All ULBs reported storage of waste at source prior to disposal. 22 ULBs reported source segregation. The

waste is transported in open vehicles. A mechanized composting plant has been in operation at the MSW management plant at Lamdeng. During the year of report, 97.5 TPD of waste was processed at the facility. The Waste to Energy plant using pyrolysis technology is under trial run. Four municipal councils are processing waste in mini compost pits. A sanitary landfill site has been in operation at Lamdeng. Non availability of suitable land continues to be the main constraint for the effective implementation of MSW Rules & setting up of waste processing facility for the local bodies.

3.17 Meghalaya

In the State of Meghalaya, there are total 07 Local Bodies responsible for management of solid waste. About 153.18 TPD of solid waste is generated in the State as reported, out of which 119.19 TPD of MSW is collected, nearly 9.64 TPD is treated and 0 TPD is landfilled.

Good practices like house to house collection are being practiced in 3 Municipal Boards (Shillong MB, Tura MB and Resubelpara MB). Segregation is being practiced in 2 Municipal Boards (Shillong Municipal Board and Resubelpara Municipal Board). Storage of waste is being practiced in 4 Municipal Boards while covered transportation is adopted in 5 municipal bodies. There are 6 existing dumpsties in the State. 1 dumpsite (Shillong Municipal Board) has been converted to sanitary landfill.

In Meghalaya, composting and recycling unit has been set up by Shillong Municipal Board at Mawiong for treating the municipal solid wastes. The total quantity of waste process through composting and recycling is 9.64 TPD. There is no incineration plant for Municipal Solid Waste in the State.

3.18 Mizoram

Total 03 ULBs are responsible for MSW management in the State. Total solid waste generation is 348.19 TPD out of which 313 TPD is collected and 278.40 TPD is treated. Solid Waste is being handled by Aizawl Municipal Corporation in Aizawl City and by Urban Development & Poverty Alleviation department in 23 notified Censes

towns/urban towns and Public Health Engineering Department in 692 target villages. The Construction and Demolition waste is being managed/collected by the generator and disposed in an AMC designated disposal sites. In Aizawl, segregation of Wet and Dry waste has been practiced in 57 Local Council out of 83 Local Councils. Provision has been made for segregation of waste at all localities (83 Local Councils). In urban towns, segregation of waste into Wet & Dry has been fully practiced in Biate. Other towns have also started segregation of waste.

A number of storage bins has been placed at various locations at Aizawl and urban towns by the UD& PA department which is being collected by the waste collector. In Aizawl, waste are transported by means of specially designed and covered waste transportation vehicles.

In Aizawl, Solid Waste Resource Centre which includes 1 mechanical composting plants, Vermi compost plant and Engineered landfill has been setup and operational since December 2019. In Biate town, at the outskirt of the village, a composed pit is constructed in which all the wet/compostable waste are being composted. The compost/manure are then sold. However, in other urban towns, Waste Resource Management Centre and Vermi Compost Centre are under construction. In Aizawl, all the segregated wastes are being collected and disposed in the Solid Waste Resource Centre.

The Board issued Consent for Vermi-compost plant at Tuirial, Aizawl after site inspection and all the necessary standards and conditions for processing and treatment of solid waste has been incorporated in the Consent Certificate. As the Solid Waste Resource Centre has been recently operational, no leachate has occurred.

3.19 Nagaland

There are total 32 ULBs responsible for implementation of the Solid Waste Management Rules, 2016, in the State. It is estimated that about 306.1 TPD of solid waste is generated daily, out of which only 255.9 TPD is collected, 24 TPD is treated and 6 TPD is landfilled.

Collection of waste is done by the Municipal Councils and Town Councils and transported to the dumping site and disposed off.

Door to door collection of solid waste is being carried out in most of the municipal town councils. In town councils where door to door is not being carried out, point to point source of collection is being carried out due to the inability for vehicles to ply in the hilly terrain.

Segregation of some recyclable waste is being carried out and outsourced from the source i.e. households, by the residents to the scrap dealers and by the rag pickers from community bins.

Kohima Municipal Council have covered vehicles with separate dry & wet waste compactors. However, in the other Municipal/Town Councils covered vehicles are not available for transportation of wastes. All the municipal solid waste collected is being disposed off by the Municipal/Town Councils at their respective landfill & dumping site. Kohima Municipal Council had setup a scientific landfill at Lerie landfill, Kohima attached with a plastic recycling unit. Under Dimapur Municipal Council, it is treating the existing dumpsite through bioremediation process and also carrying out bio mining process.

Chumukedima Town Council collects and transports the waste to Material Recovery Facility (MRF) and the unsegregated waste is further being segregated and only rejects are disposed.

3.20 Odisha

There are total 114 ULBs responsible for implementation of the SWM Rules, 2016 in the State. The estimated waste generation in these ULBs is 2208.6TPD, out of which 2123.3TPD is collected, 202.4 TPD is treated and 1920.9 TPD is landfilled (Open Dumping). A total of 54 landfill sites have been identified in the State. 12 ULBs applied for authorization/renewal this year and all are under process.

3.21 Punjab

Total 167 ULBs are responsible for MSW management in the State. There are 21. Class I, 44 Class-II, 27 Class-III cities/towns, 62 Nagar Panchayats & 10 Municipal Corporations in the State. Total Solid Waste generation in Punjab is around 4477.542 TPD, out of which 4413.952 TPD of waste is collected, 2112.457 TPD is treated and 2301.495 is landfilled.

House to house collection is practiced in 150 towns, segregation is practiced in 67 towns, storage facility is available in 114 towns and covered transportation is being practiced in 135 towns.

There are a total of 1515 composting facilities operation in the State along with 1 Vermi-composting (at Shamchaurassi) and 2 RDF/palletization facilities (at Bathinda and Ludhiana).

The Depart of Local Govt. (DLG) vide its policy notified on 09.07.2018 has decided to adopt the decentralized approach for management of solid waste. Total 1515 processing have been setup in the State till now. Channelization of recyclable waste will be done through MRF facilities and only inert waste will go to landfill sites. 1 Waste to Energy plant at Nakodar for Ludhiana cluster is installed but yet not in operation. Total 150 no. of solid waste dumping sites have been setup by the ULBs in the State. The DLG has planned to develop these sites as the sanitary landfill sites for dumping of inert waste.

3.22 Rajasthan

Total 193 ULBs are responsible for MSW management in the State. The total solid waste generation in the State is 6665.11 TPD out of which 6477.8 TPD is being collected through Door to door collection system from 3461 wards out of 6017 wards of Urban Local bodies. Currently 1135.03 TPD waste is being processed by ULBs.

Alwar: Municipal Solid Waste generated from Alwar city is door to door collected through Auto Tippers by Municipal Council, Alwar. Dumping site has been identified by Municipal Board, Behror, Rajgarh, Kherli, Kishangarhbas, Khairthal and solid waste is being dumped at identified sites. Door to door municipal waste is collected by all the municipal bodies through Auto Tippers (i.e. Alwar, Behror, Rajgarh, Kherli,

Kishangarhbas, Kahirthal and Thangazi.) Material Recovery Facility has been developed by Municipal Council, Alwar.

Udaipur: Municipal Solid waste generated from Udaipur city is door to door collected through Auto Tippers by Muncipal Corporation, Udaipur (MCU). MCU identified 2 dumping sites and Titardi village and Balicha village for setting up solid waste processing facilities as per census 2011, population of Udaipur city was 451, 100. Current population of the city is 5 lakhs and households under jurisdiction are 1.27 lakh. Dumping site has been idntifed by Municipal Council Kanod, Bhinder, Fatehnagar snward and Salumber and solid waste is being dumped at identified sites. 100% door to door collection/transportation – MCU has 115 auto tippers for door to door waste collection in all 70 wards. All vehicles are being monitor by GPS system. 100% source segregation is being done in 62 wards (90% of total wards) of MCU.

- 30TPD MRF plant at Titardi is functional.
- 60 TPD wet waste composting plant at Titrardi is operational.
- 50 TPD MRF plant is under construction process at Balicha.
- 20 TPD bio-methanization plant at Balicha is operational.

Bharatpur: MSW generated from cities/towns of all four district i.e. Bharatpur, Dholpur, Karauli and Swai Madhopur is door to door collected through Auto Tippers by local bodies and is being transported to identify dumping sites. Dumping has been identified by Municipal Board Bharatpur, Bayana, Deeg, Kumher, Bhusawar, Kaman, Rupbas, Weir, Karauli, Hindaun City, Todabhim, Swaimadhopur, Gangapur City, Dholpur, Rajakheru and Bari. Dumping site is yet to be identified by Municipal Board, Nadbai.

Bhilwara: All ULBs have provided door to door collection facility. Only one ULB (MC Bhilwara) has provided waste processing facility and landfill site (under construction). All other ULBs only having dump sites. No waste processing facility and landfill site has been developed by these ULBs. 1500 PTD Compost plant is functional at Municipal Council, Bhilwara. 75 TPD RDF plant is functional at Municipal Council, Bhilwara.

Sikar: Municipal Solid Waste generated from Sikar are door to door collected through Auto Tippers by ULBs. All ULBs have identified dumping sites except Nagar Palika Rajaldeshal, Nagar Palika Chirawa and Pilani.

Chittorgarh: MSW generated from Chittorgarh city is door to door collected through Auto Tippers by Municipal Council, Chittorgarh and is being sent to dumpsite. MC Chittorgarh have identified dumping site a Bojuna village for setting up solid waste processing facilities.

Kota: MSW generated from Kota City is door to door collected through Auto Tipper and tractors by MC Kota and are being sent to Dumping Yards Municipality of Kota. Population of Kota city is 1001694 and households under jurisdiction are 200000. Dumping site has also been identified by MC of Itawa, Kaithun, Ramaganjmandi and Sangod.

Jaipur: Jaipur Municipal Corporation has given the bio remediation and biomining project to M/s. Webcos for disposal of Legacy waste at Mahuradaspura and Sewapura landfill site. Dumping sites has also been identified by other Municipal Board and solid waste is being dumped at identified sites.

3.23 Sikkim

Total 07 ULBs are responsible for MSW management in the State. Total Solid waste generation in the State is around 74.7 TPD out of which 74.6 TPD is collected, 12.56 TPD is treated and 62.032 is landfilled/dumped. Door to door collection of segregated waste is being currently practiced in most of the ULBs of Sikkim through garbage collection vehicle. Practice of community bins/secondary waste storage facility has been stopped but GMC has placed bins for tourist and local public in main market area. Onetonne composting unit has been installed at Khangchendzonga vegetable market to convert vegetable waste to compost by Gangtok Municipal Corporation (GMC). Transportation of collected waste is done by assigned covered garbage vehicles with GPS facility. The waste is landfilled or dumped in designed sited at different locations across the State. The town of

Mnagan in North Sikkim process roughly about 80 kg/day of total solid waste generated through Organic Waste Convertor Machine. The compost generated is old in open Market.

A compost plant is in operation at Martam landfill site. It is reported that the compost generated is being sold by the GMC.

3.24 Tamil Nadu

There are 15 Corporations, 121 Municipalities and 528 Town Panchayats in the State of Tamil Nadu. The total quantity of solid waste generation is 14228 tons / day as reported by the local bodies out of which 13955 Tons / day of solid waste is being collected and 6620 Tons / day of solid waste is treated and 6765 tons / day of municipal solid waste is land-filled in the landfill and dumpsites located in the State of Tamil Nadu. Local bodies which generate 5 TPD of municipal solid waste have applied for Authorisation. So far 224 applications for authorization have been received during 2019 and Authorisation issued for the said applications with valid upto 31.03.2020. Collection, Transportation and Segregation of MSW in Tamil Nadu:

Collection, Transpiration and Segregation of MSW:

The urban local bodies at several places have organized collection of MSW by house to house collection, by using collection bins, compactor bins, lorries using dust bins, etc. All the urban local bodies have partly started the source segregation of municipal solid wastes generated in their limits and are partly composting the biodegradable waste. Transport facilities such as dumper placer, tipper lorry, tipper tractor, trucks, etc. have been used by the Corporations for transportation of wastes and in some cases the vehicle are closed or pneumatic compactors are used in few corporation areas. Similarly, Municipalities and Town Panchayats utilize the transport facilities such as tractor trailer, dumper placer, tipper, tricycle, push carts etc.

Solid waste Processing Facilities in Tamil Nadu:

In the state of Tamil Nadu, various waste processing facilities like windrow composting, Vermi composting, Micro Compost Centres (MCC), Onsite Composting (OCC) and Bio Methanation are being followed.

- 1016 MCC sanctioned to process 3744 TPD of wet waste in 15 Corporations and 121 Municipalities and 42 Town panchayats. So far, 787 MCCs with handling capacity of 2848 TPD have been established and processed for 1856 TPD. In GCC, 743 Mulch Pits, 262 Sintex Tank, 56 Earthen Pit and 3394 units of Well ring with handling capacity of 637 TPD are established and processed for 45 TPD
- 876 OCCs are established in Corporations & Municipalities with a handling capacity of 416 TPD as waste to compost and processed for 315 TPD.
- 106 Biomethanation plants are established to process 258 TPD of Wet Waste.
 526 Windrows and 263 Vermi Composting plants are functioning with capacity of 1171 TPD.

Scientific Landfill sites and dumpsites:

In the State of Tamil Nadu, 4 number of landfill sites have been identified, 4 landfills have been constructed and 3 numbers being operated, one landfill been exhausted & capped. Nearly 140 dumpsites are in existence in the State of Tamil Nadu, out of which 7 dumpsites vizKumbakonam, Pammal, Sembakkam, Poonammaalle, Chidambaram, Idappadi and Kankeyam have been reclaimed and the reclamation of the remaining 136 is under progress to be completed by 31.12.2021.

3.25 Telangana

There are 140 Urban Local Bodies (ULBs) existing in Telangana State and among them, 12 are Class-I Municipalities. About 8801 TPD of Municipal Solid Waste (MSW) is being generated from these ULBs and about 8801 TPD is collected every day, 57.85 TPD is treated, 593 is going to landfill and remaining is disposed on the open landfill. The following municipal solid waste processing plants are located in the State:

- M/s. Hyderabad Integrated Municipal Solid Waste Management Project (6275 TPD): The facility process and disposed the MSW generated in GHMC area. The provision of scientific landfill, green belt, reclamation etc. are under progress.
- ii. M/s. Shalivana (MSW) Green Energy Ltd, Karimnagar District: The facility obtained CFO of the Board to operate waste to energy project of capacity 12 MW by using Refuse Derived Fuel (RDF) generated from processing of 412 TPD of RDF using MSW generated in the municipalities of Karimanagar, Ramagundam, Jagitial, Siricilla, Karutla, Metpalli and Siddipet. The Board has issued CFO vide letter dated 12.01.2017 which was valid upto 31st October, 2019. Presently, the unit is not ijn operation due to non-viability of tariff.
- iii. **M/s.** Hema Sri Power Projects Ltd., Nalgonda District: The Municipal Administration & Urban Development (J2) Department by G.O.Ms.No.168 M.A. dated 15.04.2006 permitted M/s. Hema Sri Power Projects, Nalgonda District to establish and operate power plant (12.6 MSW), waste processing and waste disposal facility at Vibhalapuram (V), Mothey (M), Nalgonda District by allotting Warangal, Jangaon, Bhongir, Nalgonda, Miryalguda, Suryapet, Khammam, Yllandru, Kothaudem, Palwancha, Sattupally, Manuguru, Badrachalma, Jaggaiahpet. The total waste generated from ULBs allotted to M/s. Hema Sri Power Projects is 345 TPD. The Board vide order dated 10.06.2010 issued CFE to M/s. Hema Sir Power Projects to establish 12.6 MW power plant. Presently, the unit is not in operation.
- iv. **M/s. RDF Power Projects, Nalgonda District:** The facility is Waste to Energy project of capacity 11 MW by using 315 TPD MSW. The Board has issued CFE vide order dated 01.03.2006, 04.08.2011, 31.05.2012, 23.11.2012, 13.04.2015 & 10.08.2016 with validity upto 31.03.2018.

v. **M/s. SVGPPL, Yacharam, Ibrahmipatnam (12 MW):** Permission for granting extension of time to agency (M/s. SVGPPL) for entering into PPA with TSSPDCL is under examination of GHMC.

House to house collection of MSW has been started in all local bodies in the State. As per the information furnished by the Commissioner & Director of Municipal Administration, 100% of households are covered under door to door collection. About 53% of households in the State are covered under source segregation. In Hyderabad, most of the MSW transported in covered vehicles. In other municipalities, the waste is transported in trucks covered with nets to avoid scattering.

The Government of Telangana has also entered MoU with Government of Japan through Clean Authority of Tokyo (CAT 23) for establishment of Advance incineration plant at Warangal and for surrounding areas of GHMC and the studies are under process.

3.26 Tripura

There are total 20 ULBs responsible for implementation of the SWM Rules, 2016, in the State comprising of 1 Municipal Corporation, 14 Municipal Council & 5 Nagar Panchayats. Total Solid Waste generated in the State is about 411.32 TPD, out of which 380.8 TPD is collected, 253.6 TPD is collected and 127.2 TPD is landfilled. Good practices have been initiated in 07 towns/cities,

Door to door collection is being practiced in 295 wards in 20 ULBs. Segregation, storage and covered transpiration is being practiced in all 20 ULBs.

5 (five) ULBs namely Agartala, Mohanpur, Bishalgarh, Ranirbazar and Jirania are using Debendra Chandra Nagar Processing site for treatment and disposal of solid waste. 1 (one) ULB namely Kamalpur have 6 TPD capacity processing site for treatment and disposal of solid waste. Remaining 14 ULBs have identified landfill sites for treatment and disposal of solid waste.6 (six) ULBs namely Agartala, Mohanpur, Bishalgarh, Ranirbazar, Kamalpur and Jirania have constructed landfills. 2 (two) landfill sites (Agartala MC &Kamalpur MC) are in operation. There are total

14 number of existing dumpsite in the State. Action Plan has been submitted by all 20 ULBs.

3.27 Uttarakhand

There are total 91 ULBs and 09 Cantonment Boards responsible for implementation of the SWM Rules, 2016, in the State. Total solid waste generation in the State is about 1610.942 TPD, out of which 1481.057 TPD is collected and 716.637 TPD is treated. Good practices are implemented in the towns of Dehradun and Hardwar. Door to door waste collection is initiated in all 1139 wards. Source segregation of waste is being carried out in 735 wards. There are two compositing facilities operational in the State in Dehradun (30 TPD) and Haridwar (35 TPD). 2 landfill sites have been constructed and are in operation (Nagar Nigam Dehradun and Nagar Nigam Haridwar). Total number of existing dumpsites in the States are 53. Procurement of land has been completed for 63 ULBs (8 clusters having 30 ULBs and 33 standalone ULBs). 5 ULBs have land on rent. 13 ULBs have identified forest land and they are in process of different stages of procurement of land (2 clusters for 6 ULBs and 7 standalone). 7 ULBs have identified revenue land rest are in process of identification of land.

3.28 Uttar Pradesh

There are 652 ULBs in Uttar Pradesh comprising of 17 Nagar Nigams, 198 Nagar Palika Parishad and 437 Nagar Panchayats, which are responsible for management of solid waste in the State. Total Solid Waste Generation is 14468 TPD. The quantity of collected solid waste is 13955 TPD (96.5%). There are 15 MSW processing facilities functional with cumulative treatment capacity of 5395 TPD.

Door to door collection is done in 11801 wards out of 12022 wards. All the 17 Nagar Nigam have vehicle tracking system installed and GPS in enabled vehicles are being used. At present 582 ULBs have identified and allotted lands for setting up of processing and disposal facilities for Solid Waste Management. The State Level High Power Steering Committee has approved a comprehensive strategy for setting of processing facilities in all ULBs in decentralized manner for creating composting

of wet waste and material recovery facility for dry waste. 107871 compost pits have been made while 92077 compost pits are under construction in the State. At present 582 ULBs have identified and allotted lands for setting up of processing and disposal facilities for Solid Waste Management.

3.29 West Bengal

Total 125 ULBs are responsible for MSW management in the State. There are 54 Nos. Class I Towns and 33 Nos. of Class –II towns in the State. Total Solid Waste generation in the State is arojund 13980 TPD, of which 12062 (86.2%) of waste is collected, 916 TPD is treated and 334 TPD is landfilled. 22 municipalities have installed compost plants, out of which, 9 compost plants are operational at present. 13 sanitary landfills have been developed involving 25 ULBs including regional landfill developed by Kolkata Metropolitan Development Authority in Hooghly district for 6 municipalities namely, Uttarpara-Kotrung, Konnagar, Rishra, Serampore, Baidyabati and Chamdany Municipality. Out of these 02 landfills are operation at present including the aforesaid regional landfill. Apart from these, Department of Urban Development & Municipal Affairs, GoWB has proposed to setup 8 cluster projects involving 34 municipalities.

About 86.4% of ULBs have door to door collection system. 100% of ULBs are transporting waste in covered vehicles. Household level/source segregation is being practiced in about 18.4 % of ULBs.

3.30 Andaman & Nicobar Islands:

There is 01 ULB in Andaman & Nicobar Islands which is divided into 70 Gram Panchayats. Total waste generation in the UT in the year 2019-20 is approx.121 TPD out of which approx.115 TPD is collected, 50 TPD of waste is treated while 65 TPD is landfilled. Door to door collection is carried out in all 24 wards of Port Blair Town. 100% of solid waste at source is collected in segregated form. 100% of household waste is stored at source in domestic bins. Transportation of waste is carried out through tarpaulin covered vehicles. At present in Port Blair Town, 1

landfill site at Brookshabad has been identified by the Port Blair Municipal Corporation and for the rural area 24 clusters have been found.

3.31 Chandigarh

There is 1 ULB responsible for implementation of the SWM Rules, 2016, in the UT. Total solid waste generated in the State is approx. 450 TPD, out of which 450 TPD is collected, 179.61 TPD is treated and 270.39 TPD is landfilled. The Municipal Corporation, Chandigarh has facilitated door to door collection system in all the 26 wards of Chandigarh and 1415 no. of waste pickers and door to door collectors have been incorporated for collection and segregation of municipal solid waste. Municipal Corporation is using dumpers, tractors, trolleys, tippers for transportation of MSW to the garbage processing plant setup by M/s. Jai Prakash Associates where MSW is processed to produce Refuse Derived Fuel (RDF) and compost. The domestic hazardous waste is collected in separate bags, stored at the transfer stations and is further transported for incineration.

One RDF plant of 500 TPD capacity and one compost plant of 300 TPD capacity have been installed by M/s. Jai Prakash Associates for processing of MSW. Waste collected from vegetable, fruit, flower, meat, poultry and fish market is treated in a bio-methanation plant of 5 TPD capacity. The Municipal Corporation, Chandigarh has also started windrow composting at dumping ground having capacity 250-300 TPD. In addition, pit composting is in practice in 105 Gardens/parks in the city.

3.32 Daman & Diu

Total 06 ULBs are responsible for MSW management in the Union Territory. The total solid waste generation in the State is 184 TPD. 191 TPD waste is collected out of which 97 TPD is treated and 30 TPD is landfilled. 100 % of households practice storage of waste at source in domestic bins. 100% of non-residential premises practice storage of waste at source in commercial/institutional bins. 0% of households dispose or throw solid waste on the streets. Scientific landfill site of capacity 112 TPD will be constructed at Kharadpada Site, which is having 5.27 hectare of land.

3.33 Delhi

Total 5 ULBs are responsible for MSW management in Delhi, comprising of 01 town/city and 01 Number of Class I & class II town/city. Total Solid Waste generation in Delhi is approximately 10470.57 TPD out of which 10466.57 TPD waste is collected, 5193.57 TPD waste is treated and 5276 TPD waste is landfilled.

About 100% collection of solid waste, door to door collection and transportation in covered vehicles have been reported by the local bodies in Annual Reports. NDMC has reported that 90% premises in the area are segregating the waste at source. Delhi Cantonment Board (DCB) has reported that 90% premises in Civil Area & 60% premises in Army Area are segregating waste at source.

SDMC & EDMC have reported that 10% premises in their areas are segregating the waste at source. North DMC has reported that 80% premises in their 3 model wards are segregating the waste at source however information not provided for other wards in their areas.

MSW Processing and Disposal Facilities:

There is one Integrated Solid Waste Management Facility at Bawana for processing of 2000 TPD of municipal solid waste having Waste to Energy Plant, Compost Plant and Engineered Sanitary Landfill. This integrated Solid Waste Management facility is being operated by M/s. Delhi MSW Solutions Ltd. One Engineered Sanitary Landfill is proposed to be developed by South Delhi Municipal Corporation (SDMC) at Tehkhand. An integrated Solid Waste Management facility for 2000 TPD is proposed to be developed by East Delhi Municipal Corporation in joint venture with NTPC at GhondaGujran. Besides other facilities said facility will be having Waste to Energy Plant. There is one Centralised Compost Plant at Okhla with 200 TPD capacity.

Delhi has 3 Waste to Energy Plants (WTE plants) of combined capacity 5250 TPD at 3 different locations in Delhi namely Okhla, Ghazipur and Bawana. One new Waste to Energy Plant is proposed at Tehkhand and another in the Integrated Waste

Complex at GhondaGujran. After commissioning of these 3 proposed WTEs capacity of WTE plants will increase from 5250 TPD to about 9000 TPD by June, 2022.

Operational Waste to Energy Plants in Delhi

S.No.	Name of Waste to Energy Plant	Existing Capacity
		(in TPD)
1	TimarpurOkhla Waste Management Company Ltd.,	1950
	Old NDMC Compost Site, Okhla	
2	East Delhi Waste Processing Company Ltd.,	1300
	Ghazipur	
3	Delhi MSW Solutions Ltd, Narela Bawana Road,	2000
	Bawana	
Total		5250

Proposed Waste Processing Facilities & Sanitary Landfill in Delhi

S.No.	Particulars	Location	Area of	Capacity	Expected
			Local		Timeline
			Body		for
					Completion
1	Waste to Energy	Tehkhand	SDMC	2000 TPD	December,
	Plant				2021
2	Integrated Waste	Ghonda	EDMC	2000 TPD	June, 2022
	Management	Gujran			
	and Energy				
	Generation				
	Facility				
3	Engineered	Tehkhand	SDMC		Sept, 2021
	Sanitary Landfill				
4	Integrated Waste	3 zones of	North	2000 TPD	December,
	Collection,	North DMC	DMC		2021

Transportation, Karol
Processing & Bagh&Narela
Disposal zone)

100% of generated solid waste is collected in North DMC and 80% premises in model wards are segregating waste at source. Collected solid waste is transported by tractors, tipping trucks, dumper placers, refuse collectors, compactors, JCB/loaders, litter pickers, auto tippers and cycler rickshaw. Around 2000 TPD of waste from the area of North DMC is being processed/treated at the integrated solid waste management facility at Bawana by M/s Delhi MSW Solutions. Tenders were invited for integrated waste collection, segregation, transportation, processing & disposal in 3 zones of North DMC. The work is likely to be awarded by December 31, 2020. Expected time of completion for setting up processing facility is September 30, 2021. 4 plants accelerated composters/bio-methanation plant of 1 TPD each to be commissioned by September 30, 2020. 200 TPD Bio-methanation plant (based on cow dung) at Bhalaswa Dairy Colony is expected to be commissioned by 31.12.2020. 2 Bio-methanation plants of 5 TPD capacity each are expected to be commissioned by 30.09.2020.

Under South DMC, 10% premises are segregating waste at source. About 1800 TPD of generated solid waste is dumped at Okhla dumpsite. About 1700 TPD of waste generated from area of SDMC is being processed/treated at WTE Plant at Okhla. The Engineered Sanitary Landfill (SLF) at Tehkhand is being developed over an area of 32.346 acres.

Under East DMC, 10% premises are segregating waste at source. Collected solid waste is transported by non-tipping trucks, tipping trucks, Mini Refuse Collectors, MMV, JCB/loaders. 1450 TPD of waste is disposed at Ghazipur dumpsite.

Under New Delhi Municipal Corporation, 90% premises are segregating waste at source and about 185.57 TPD of waste generated from the area of New DMC is being processed/treated at WTE/compost plant at Okhla.

Under Delhi Cantonment Board (DCB), 90% premises in Civil area and 60% premises in Army area are segregating waste at source. Collected solid waste is transported by Refuse collectors and tippers. Around 26 TPD of waste from are of DCB is disposed at Okhla dumpsite.

Action plan submitted by SDMC, DCB, NDMC & North DMC.

3.34 Lakshadweep

Lakshadweep Administration has assigned the responsibility of management of solid waste to the Department of Environment & Forest, UT of Lakshadweep. Zonal offices of E&F of each island are managing the collection, segregation, transportation and disposal of solid waste.

Union Territory of Lakshadweep is implementing the various schemes for management of Solid Waste in the entire island of UT of Lakshadweep. In this regards the following progress made during the year 2019-20 in Lakshadweep under Solid Waste Management:

- Appointment of Swatch workers: A total of 455 Swatch workers engaged to carry out of various cleaning activities, collection, transportation, segregation, treatment and disposal of non-biodegradable and bio-degradable waste management in the islands.
- Door to door collection of bio-degradable (Kitchen waste): Door to door collection of bio-degradable waste has been started during July 2019 onwards at Kavaratti Island. A total 1800-2000 kg/day waste is being collected and treated with the facility of Thumboor model compost pit at Kavaratti Island.
- Implementation of user fee: As per the direction of Hon'ble NGT Orders and Lakshadweep Solid Waste Management Bye-Law 2018, the department implemented the use fee collection in Kavaratti Island in May, 2020.

- Procurement of Closed Vehicle: Five numbers closed vehicles are procured and distributed 2 numbers to Kavaratti, one each to Agatti, Andrott and Minicoy Islands for garbage collection and transportation in the islands.
- Procurement of machineries: Procured waste disposal and treat machineries like leaf shredder, PET bottle crusher, compost maker at Kavaratti island during the year 2019-20. The procurement of same machineries is under progress to the remaining 9 islands.
- Procurement of waste bins: The department procured blue, green and red
 coloured waste bins for collection of solid waste, plastic waste and sanitary
 diapers at Kavaratti island. The same proposal of waste bin procurement is
 under process for replicating the other islands.
- Management of single use plastic: The UT of Lakshadweep Administration banned 13 numbers of single use plastic items from its territory with effect from 26th January, 2019 as per Notification F.No.66/33/2019-E&F (P&L) dated 25.01.2019
- Transportation of recyclable waste: Due to the special geographical nature of the Lakshadweep, Lakshadweep Administration has initiated the transportation of recyclable waste including cement bags into recycling unit at mainland. A total 294 MT waste transported from various islands to Mainland during the year 2019-20 for recycling.
- IEC awareness: As a part of the management of Single Use Plastic in UT of Lakshadweep, the UT of Lakshadweep Administration has placed sing boards at various important corners of the all islands for the awareness of the public.
- Monitoring: The State Level and Island Level monitoring committee had constituted in all the Islands for strict monitoring and enforcement of solid waste management in UT of Lakshadweep. This committee has conducted frequent raid in major shops other wholesale markets in the Islands.

3.35 Puducherry

There are total 15 Local Bodies (5 Municipalities and 10 Commune Panchayats) responsible for implementation of the SWM Rules, 2016. Total estimated solid waste generation in the Union Territory is about 580 TPD. The estimated waste collection is 517 TPD, out of which 61 TPD is treated and 456 TPD is landfilled. In ten wards segregation of waste is being practiced into degradable and non-biodegradable waste. In other wards without segregation, door to door collection is being done. Segregation is being practiced in selected wards. Waste transportation is done in compactors and covered trucks. All local bodies have identified suitable land for Secured Landfilling (SLF) and Material Recovery Facility (MRF) and obtained authorization.

Segregation of solid waste at collection point is being done in selected areas of urban limit in some constituents. It will be extended for other wards in due course of time.

Two local bodies have taken initiatives for processing of solid waste of quantity 1.0 ton per day i.e. Bio-methanataion/Nisargruna Technology of BARC with the financial assistance of PPCC. Karaikal Municipality is doing composting and vermin-composting process of 30 tons and Mahe Municipality is doing pipe composting process of 8 tons/day.

4.0 Best Practices in Solid Waste Management

The best practices as reported by the SPCBs/PCCs in their Annual Report is summarized in table below:

SI. No	State	Best Practice
1	Andhra Pradesh	 CCTVs installed at 63 ULBs and is in progress in remaining 47 ULBs 100% training imparted to workers engaged in door-to-door collection system
2	Andaman & Nicobar Island	 100% waste collected in segregated form Spot fine imposed on littering Water ATMs installed Plastic waste collection centers established

SI. No	State	Best Practice
3	Chandigarh	 Waste collected from vegetable, fruit, flower, meat, poultry and fish market treated in biomethanation plant. Pit composting practiced I gardens/parks in the city
4	Chhattisgarh	 Percentage of waste processed: 82% Solid Liquid Resource Management centres established in 166/ 168 ULBs. Integrated waste management centres set up in remaining two Local bodies. Registration of waste pickers done and survey conducted to identify new waste pickers PPEs have been provided to sanitation workers to ensure the safety and hygiene Dumpsites in 160 ULBs have been remediated
5	Daman And Diu	 MoU signed with cement company and waste of 800 MT per month is lifted.
6	Karnataka	Waste processing facilities have been established in 215 out of 279 ULBs
7	Kerala	 Different types of composting including aero bins, bio bins, pipe compost and ring compost are practices adopted in the state.
8	Lakshadweep	 Blue and green bins distributed in each house to collect segregated waste. 454 swachh workers are engaged to carry out various SWM activities. 100 kg per hour incinerator installed for disposal of municipal solid waste. Thumboor model of Kerala for bio composting has been adopted
9	Nagaland	 Bailing machines have been provided in 11 district headquarters. Dimapur Municipal Corporation has begun developing existing dumpsite to develop solid waste processing.

SI.	State	Best Practice
No 10	Pondicherry	 17 out of 18 application received have been granted authorization for solid waste processing All local bodies have identified suitable land for SLF and MRF Local bodies have taken initiatives for processing of solid waste as per Nisarguna technology of BARC with financial assistance of PPCC. Pipe composting is practiced in one of the local body
11	West Bengal	Government of WB proposed to setup 8 cluster projects involving 34 municipalities
12	Arunachal Pradesh	Black Hole Tesla is being installed in Dibang Valley. It will completely restructure waste collection and disposal system.
13	Assam	 27 ULBs out of 96 ULBs have initiated registration of waste pickers and 19 ULBs have started issuing ID cards.
14	Delhi	 Local Bodies are implementing transport facility with GPS for transportation of solid waste.
15	Goa	 Waste processing is 79%. Decentralized composting in housing societies, municipal markets and public gardens to treat biodegradable waste.
16	Haryana	 Govt. of Haryana has adopted cluster based integrated approach for solid waste management. State has been divided in 14 clusters out of which 4 will be based on waste to energy and 10 will be based on compost/RDF.
17	J&K	 Composting of flower waste taken up by Jammu MC. Training for incense sticks making from flower waste. 3 leachate treatment plants based on Reverse Osmosis technology installed.
18	Jharkhand	 Concessionaire identified houses which give segregated waste by pasting green sticker and those given mixed waste by pasting red stickers.

SI.	State	Best Practice
No 19	Madhya Pradesh	 Composting setup in 100 towns, RDF palletization in 83 towns, biogas in 7 towns and vermi-composting in 2 towns. 50 out of 328 dumpsites reclaimed. Geo-tags waste processing facilities in 309 ULBs out of 374 ULBs. State actively promoting home composting to reduce waste at source. Total 260252 no. of households are practicing home composting. All Municipal Solid Waste vehicles are fitted with GPS.
20	Maharashtra	 70% of waste processed Maharashtra has registered its own brand "Harita Maha City Compost" for sale of city compost which are as per FCO standards. Board has developed web portal for ULBs for monitoring of daily and monthly data for solid waste management. Board has initiated concept of providing financial and technical assistance to Municipal Councils and Nagar Panchayats for setting up solid waste management facilities. Vasundhara Award Scheme has been started to recognize the effort of urban local bodies (ULBs) in solid waste management. Green Society Award started to encourage environmentally friendly management of waste generated from societies. Garbage collection vehicles are accompanied with workers to keep a log of families giving segregated waste. These workers are being trained on regular basis. Route timing of collection vehicles are displayed on prominent public places. Dustbins manufactured from recycled plastic waste are used for collection of waste. Conversion of wet waste into bio enzymes used in Hydroponic gardening.
21	Manipur	Trial run for Waste to Energy plant based on pyrolysis technology is under process at Langdeng site.

SI. No	State Best Practice								
22	Mizoram • Cleanliness Competition organized a level								
23	Tamil Nadu	 1016 micro composting sanctioned to process 3744 TPD of wet waste 876 onsite composting centre established with handling capacity of 416 TPD of waste 44 cities have been declared as Bin free towns/cites 							
24	Telangana	 Government of Telangana has entered into MoU with Government of Japan through Clean Authority of Tokyo for establishment of advance incineration plant at Warangal. 							

5.0 Environmental Performance (SWM) based rating of States/ UTs

The performance of States/ UTs in different components of Solid Waste Management has been assessed and the States/ UTs have been ranked based on their overall performance in Solid Waste Management. Different components included in the performance include

- a) Waste processed, landfilled, gap in waste management vis-à-vis total waste generated in the State/ UT
- b) Authorization granted to and monitoring of Solid Waste Management facilities in the State/ UT by the concerned SPCBs/PCCs
- c) Technology adopted for waste management
- d) Number of landfills vs Number of dumpsites(total/ reclaimed/ converted to landfill) in the States/ UTs
- e) Best practices for Solid Waste Management adopted in the State/ UT
 The template of the performance assessment is placed at **Annexure I** and Environment
 Performance based rating is placed at **Annexure II**.

Following are the findings of the assessment:

a) Ranking of States:

The score awarded to individual States/ UTs is given in Table 12 and the comparative assessment is illustrated in Figure 7. As can be seen from the information presented –Madhya Pradesh has obtained the highest score (75.75) followed by Maharashtra (70.5), Goa (70) & Chandigarh (68) and Tamil Nadu (63.5) in that order. States/UTs which have obtained the lowest score in the

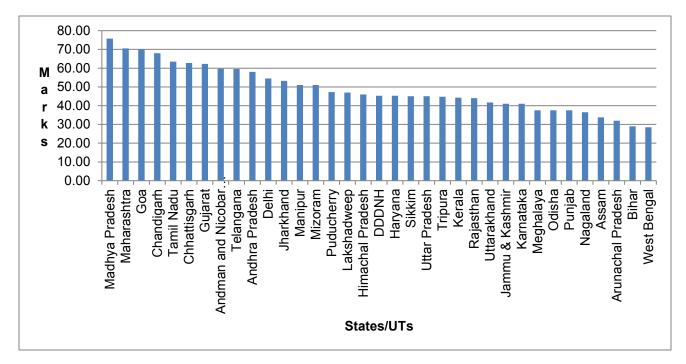
performance in Solid Waste management are West Bengal, Bihar, Arunachal Pradesh, Assam & Nagaland of which West Bengal (28.5) has obtained the lowest score.

TABLE 12: Environmental Performance (SWM) based ranking of States/ UTs

Rank	State	Total Marks
1	Madhya Pradesh	75.75
2	Maharashtra	70.5
3	Goa	70
4	Chandigarh	68
5	Tamil Nadu	63.5
6	Chhattisgarh	62.75
7	Gujarat	62.25
8	Andaman and Nicobar Islands	59.75
9	Telangana	59.5
10	Andhra Pradesh	58
11	Delhi	54.5
12	Jharkhand	53.25
13	Manipur	51
14	Mizoram	51
15	Puducherry	47.25
16	Lakshadweep	47
17	Himachal Pradesh	46
18	Haryana	45.25
19	DDDNH	45.25
20	Sikkim	45
21	Uttar Pradesh	45
22	Tripura	44.75
23	Kerala	44.25
24	Rajasthan	44
25	Uttarakhand	41.75
26	Jammu & Kashmir	41
27	Karnataka	41
28	Meghalaya	37.5
29	Odisha	37.5
30	Punjab	37.5

Rank	State	Total Marks
31	Nagaland	36.5
32	Assam	33.75
33	Arunachal Pradesh	32
34	Bihar	29
35	West Bengal	28.5

Figure 7: Environmental Performance (SWM) based ranking of States/ UTs



b) Waste Processing

Only 11 States/ UTs (Chhattisgarh. DDDNH, Goa, Gujarat, Himachal Pradesh, Kerala, MP. Maharashtra, Mizoram, Telangana & Tripura) have reported more than 50% of waste being processed in their States/ UTs of which the highest percentage of waste processing has been reported from Chhattisgarh (~ 84%). Remaining 24 States/ UTs are processing less than 50% of solid waste being processed in their States/ UTs of which Arunachal Pradesh and Bihar have reported that "Nil" Solid waste is being processed in their jurisdiction.

c) Gap in Waste SWM

Four States/ UTs (Chandigarh, Chhattisgarh, Gujarat and Maharashtra) are managing all the waste generated in their jurisdiction. 11 States/UTs (Andhra

Pradesh, Arunachal Pradesh, Bihar, Jammu & Kashmir, Karnataka, Lakshadweep, Meghalaya, Nagaland, Uttar Pradesh, Uttarakhand & West Bengal) have reported higher than 50% gap in their waste management of which Bihar has indicated 100 % gap in SWM

d) Grant of Authorization to Solid Waste Processing Facilities:

10 SPCBs/ PCCs (Andhra Pradesh, Chandigarh, Madhya Pradesh, Manipur, Meghalaya, Nagaland, Sikkim & Tamil Nadu, Tripura & Uttar Pradesh) have issued authorization to all applications submitted for obtaining the Authorization. Of these, Tamil Nadu has granted maximum number (224) of the total number of 334 Authorization granted by SPCBs/ PCCs. 19 SPCBs/PCCs have not granted any authorization. 19 SPCBs/ PCCs (Andaman and Nicobar Islands, Arunachal Pradesh, Assam, Bihar, DDDNH, Delhi, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Lakshadweep, Mizoram, Odisha, Punjab, Rajasthan, Telangana, Uttarakhand, West Bengal) have not granted Authorization to any SWM facility operating in their jurisdiction. Of these, six SPCBs/PCCs(Delhi, Karnataka, Mizoram, Odisha, Rajasthan, Uttarakhand) have not processed any application for obtaining Authorization. Others have not received any application.

e) Technology for waste management

There is substantial variation in the technology adopted for Solid Waste Management across different states/UTs in the country. While composting as a technology for Solid Waste Processing has been adopted by all States/ UTs; Waste to Energy Plants have been provided in only 8 States/ UTs (Andhra Pradesh, Delhi, Goa, Madhya Pradesh, Maharashtra, Tamil Nadu, Telangana and Uttar Pradesh). Biomethanation plants have not been provided in 16 States / UTs (Arunachal Pradesh, Bihar, Chhattisgarh, DDDNH,Himachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Punjab, Sikkim, Tripura, Uttar Pradesh, Uttarakhand, West Bengal) and14 States/ UTs (Andaman, Arunachal, Assam, Bihar, DDDNH, Haryana, Himachal Pradesh, Jharkhand, Kerala, Lakshadweep, Meghalaya, Odisha, Puducherry & Punjab) have not provided landfill

f) Environmental Monitoring at Solid Waste Management facilities

8 States & UTs (Andhra Pradesh, Assam, Himachal Pradesh, Manipur & Meghalaya, Telangana, Gujarat, Uttarakhand) have carried out monitoring at 35 Waste Processing & Disposal Sites. Of these, only two States – Manipur & Uttarakhand have monitored all three components – Ambient Air , Leachate as well as compost

g) Landfill vs Dumpsites

In 4 States/ UTs (Chandigarh, Karnataka, Mizoram, Sikkim) the number of landfill sites exceeds the number of dumpsites. In the remaining States/ UTs- number of dumpsites far exceeds the number of landfill sites

Reclamation of Dumpsites: 2 States/UTs (Andaman & Chandigarh) have reclaimed all the dumpsite in their jurisdiction. 20 States/ UTs (Arunachal Pradesh, Assam, Bihar, Chhattisgarh, DDDNH, Delhi, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Lakshadweep, Manipur, Mizoram, Nagaland, Odisha, Punjab, Uttar Pradesh, Uttarakhand) have not reclaimed any dumpsites during 2019-20 in their jurisdiction. 7 States/UTs Andhra Pradesh, Maharashtra, Rajasthan, Tamil Nadu, Telangana, Tripura, West Bengal have reclaimed less than 10% of dumpsites in their jurisdiction Conversion of Dumpsites to Landfill: 7 States/UTs (Chandigarh, Andhra Pradesh, Karnataka, Meghalaya, Rajasthan, Sikkim, Telangana) have initiated conversion of dumpsites to landfill. Remaining States/ UTs have not initiated any action in this regard

h) Best practices in Solid Waste Management

The States/ UTs were ranked on a rank of 15 as per the best practices for solid waste management followed in their jurisdiction. Maharashtra & Madhya Pradesh have obtained the highest score of "14" in this section. 8 States/ UTs (Andhra Pradesh, Andman and Nicobar Islands, Arunachal Pradesh, Chandigarh, Chhattisgarh, Jharkhand, Lakshadweep, Puducherry) have obtained a score of greater than 10 in this section.

6.0 Observations & Recommendations

(a) Overall Solid Waste Management

- i It is observed that the total quantity of Solid waste generated in the country is 150847.1 TPD of which 146053.7TPD of waste is collected with overall collection efficiency of 96.8%. 70973.2 TPD (47.01%) of waste is treated and 40863.2 (27.16%) TPD is landfilled. 38928 TPD which is 25.8% of the total waste generated remains unaccounted.
- ii Authorization has been granted to 334 Solid waste management facilities in the country.
- iii 13 State/UTs have provision for 100 % collection of waste, whereas, only 4 states have provision for 100% segregation of waste.
- iv There are only 379 landfills in operations whereas there are 3084 solid waste dumpsites in the country.
- v Environmental monitoring (Ambient Air, Leachate, Ground water monitoring) is carried out at 35 Solid Waste Management facilities in eight states/UTs.

(b) Critical gaps & concerns

- i. Unaccounted waste: More than 25% of the solid waste generated in the state remains unaccounted for as per the Solid waste Management Report
- ii. **State-to State variation in SWM**: In addition to the overall gap of >25% reported in overall solid waste management, wide variation observed (0-100%) in state- to state solid waste management. State-to-state processing of solid waste also shows wide variation (0-85%).
- iii. **Technology Adoption for SWM**: While composting as a technology for Solid Waste Processing has been adopted by all States/ UTs; Waste to Energy Plants have been provided in only 8 States/ UTs (Biomethanation plants have not been provided in 16 States/UTs
- iv. **Landfill vs Dumpsites**: Number of dumpsites in the country far exceeds the number of landfills sites; many states/UTs still do not have

- any landfill sites. Reclamation of dumpsites has started at a slow pace and some of the states/ UTs are yet to start the reclamation.
- Vi Grant of Authorization and monitoring of Solid Waste Management Facilities by SPCBs/PCCs: Some of the SPCBs/PCCs are yet to start granting authorization to the solid waste management facilities operational in their jurisdiction. Further monitoring of the same is yet to be initiated by most of the SPCBs/ PCCs.
- vii Quality of information reported by SPCBs/PCC: Incomplete and in some instances inconsistent data on SWM is being reported by SPCBs/PCCs.

(c) Areas requiring priority action

- Strengthening of infrastructure of SWM: State Urban Deptt need to take up intensive measures for strengthening of infrastructure for Solid Waste Management including Solid Waste processing and remediation of dumpsites as well as adoption of technology for SWM.
- ii. **Monitoring mechanism**: SPCBs/ PCCs to follow a stringent mechanism to review implementation of Solid Waste Management Rules. Periodic review with District Administration/ State Urban Deptt. to be conducted in accordance with Rule 16 (a) of SWM Rules. Issuing of Directions to concerned local authorities, Stakeholder consultation, and review through online portal to be adopted to strengthen enforcement.
- iii. **Strengthening enforcement of SWM Rules**: SPCBs/ PCCs need to strengthen enforcement both in terms of issuing authorization to Solid Waste Management facilities but also intensify environmental monitoring to ensure compliance with stipulated norms.
- iv. Data validation by SPCBs/ PCCs: SPCBs/ PCCS to validate the data submitted by the local authorities to ensure its authenticity & consistency, prior to submitting the Annual to CPCB. This could be done through random

inspection, cross- checking of data or any other mechanism found suitable for the validation.

ANNEXURE I

The template of the performance assessment of Solid Waste Management

S.No	Criteria	Marks	Total
Α	Overview of Waste Management	43	
1	Per capita Solid Waste Generation (g/day)	0-100= 5 marks 100-200= 4 marks 200-300= 3 marks 300-400= 2 marks 400-500= 1 marks	5.00
3	% of Waste Processed	>95=15 marks >90= 14.25 marks >85=13.5 marks >5=1.5 marks >0= 0.75 marks	15.00
4	% of Waste Landfilled	<30 = 3 marks <60= 2 marks <100= 1 marks	3.00
5	% of Waste Segregated	>90=10 marks >80= 9 marks >10=2 >0= 1 marks	10.00
6	% Gap	80-100= 2 marks 60-80= 4 marks 40-60= 6 marks 20-40= 8 marks 0-20= 10 marks	10.00
В	Waste Processing	27	
7	% of granted application for authorization of waste processing units against received applications	80-100= 6 marks 60-80= 5 marks 40-60= 4 marks 20-40= 3 marks 10-20= 2 marks 0-10= 1 mark	6.00
8	Type of waste processing facility including landfill - Y/N		
	Landfill (01 Marks)		
	Waste to Energy (05 Marks)		15.00
	Biomethanation (05 Marks Composting (04 Mark)		-
9	Monitoring of waste processing facility (Without documents-1.5; with documents-3)		

	Ambient air quality- Y/N	2	
	Leachate- Y/N	2	6.00
	Compost quality- Y/N	2	
С	Waste Disposal		
10	Number of landfills v/s Number of Dumpsites	15	
11	% of Dumpsite Reclaimed vs total Dumpsite	>80= 5 marks >60= 4 marks >20= 2 Marks >0= 1 marks	5.00
12	% of Landfill vs total disposal sites (Landfill+Dumpsite)	do	5.00
13	% Dumpsite converted to Lanfillsite	do	5.00
D	Other		
14	Best Practices adopted	15	15.00
		Total	100.00

ANNEXURE II Environment Performance based rating of States/UT

		SI. No.	1.	2.	3.	4.	5.	6.	7.
	2019-20	State	Andhra Pradesh	Andman and Nicobar Islands	Arunachal Pradesh	Assam	Bihar	Chandigarh	Chhattisgarh
	Marks Distributi on	Population	54533280	601000	1367000	33856000	108372000	2122000	27066000
		Solid Waste Generation Per Capita (Grams/day)	124.07	201.33	208.96	37.55	39.99	212.06	60.96
	5	Marks Obtained	4	3	3	5	5	3	5
		Total ULBs	110	1	2	96	142	1	168
		Solid waste generated (TPD)	6766	121	285.65	1271.305	4334	450	1650
		Processed (TPD)	1059	50	0	41.6625	0	179.61	1385
		% Processed	15.65	41.32	0.00	3.28	0.00	39.91	83.94
Overview of	15	Marks Obtained	3	6.75	0	.75	0	6	12.75
Waste Management		Landfilled (TPD)	203	65	127.72	880.749	0	270.39	265
		% Landfilled	3.00	53.72	44.71	69.28	0.00	60.09	16.06
	3	Marks Obtained	3	2	2	1	3	1	3
		Gap	5504	6	157.93	348.8935	4334	0	0
		% Gap	81.35	4.96	55.29	27.44	100.00	0.00	0.00
	10	Marks Obtained	2	10	6	8	2	10	10
		% of Waste Segregated	81	100	39	0	51.03	80	100
	10	Marks Obtained	9	10	4	0	6	8	10

		SI. No.	1.	2.	3.	4.	5.	6.	7.
	2019-20	State	Andhra Pradesh	Andman and Nicobar Islands	Arunachal Pradesh	Assam	Bihar	Chandigarh	Chhattisgarh
		Total Application received for Authorization To Waste Processing /Disposal Facilities	1	0	0	0	0	1	2
		No. of Authorization Granted To Waste Processing /Disposal Facilities	1	0	0	0	0	1	1
Waste Processing		% Authorization Granted To Waste Processing /Disposal Facilities	100	0	0	0	0	100	50
	6	Marks Obtained	6	1	1	1	1	6	4
		Landfill (Y/N)	Y	N	N	N	N	Y	Y
	1	Marks Obtained	1	0	0	0	0	1	1
		WtoE (Y/N)	Y	N	N	N	N	N	N
	5	Marks Obtained	5	0	0	0	0	0	0
		Biomethanation (Y/N)	Y	Y	N	Y	N	Y	N
	5	Marks Obtained	5	5	0	5	0	5	0

		SI. No.	1.	2.	3.	4.	5.	6.	7.
	2019-20	State	Andhra Pradesh	Andman and Nicobar Islands	Arunachal Pradesh	Assam	Bihar		Chhattisgarh
		Composting (Y/N)	Υ	Y	Y	Y	Y	Y	Y
	4	Marks Obtained	4	4	4	4	4	4	4
		Monitoring of AAQ (Y/N) (Without documents- 2; with documents- 1)	Y	N	N	Y	N	N	N
	2	Marks Obtained	1	0	0	1	0	0	0
Waste Processing		Monitoring of Leachate (Y/N) (Without documents-2; with documents-1)	N	N	N	N	N	N	N
	2	Marks Obtained	0	0	0	0	0	0	0
		Monitoring of Compost quality (Y/N) (Without documents- 2; with documents- 1)	N	N	N	N	N	N	N
	2	Marks Obtained	0	0	0	0	0	0	0

		SI. No.	1.	2.	3.	4.	5.	6.	7.
	2019-20	State	Andhra Pradesh	Andman and Nicobar Islands	Arunachal Pradesh	Assam	Bihar	Chandigarh	Chhattisgarh
		No. of Landfill Site	4	0	0	0	0	1	2
		No of Dumpsite	110	1	27	66	140	1	8
		Dumpsite Reclaimed	4	1	0	0	0	1	0
		% Dumpsite Reclaimed	3.64	100.00	0.00	0.00	0.00	100.00	0.00
	5	Marks Obtained	1	5	0	0	0	5	0
Waste Disposal		% Landfill vs total disposal sites	3.51	0.00	0.00	0.00	0.00	50.00	20.00
	5	Marks Obtained	1	0	0	0	0	3	1
		No. of dumpsite converted to landfill site	3	0	0	0	0	1	0
		% Dumpsite converted to Lanfillsite	2.73	0.00	0.00	0.00	0.00	100.00	0.00
	5	Marks Obtained	1	0	0	0	0	5	0
		Best Practice (Y/N)	Y	Y	Y	Y	N	Y	Y
Other	15	Marks Obtained	12	13	12	8	8	11	12
	100	Total Marks Obtained	58.00	59.75	32.00	33.75	29.00	68.00	62.75

		SI. No.	8.	9.	10.	11.	12.	13.	14.
	2019-20	State	DDDNH	Delhi	Goa	Gujarat	Haryana	Himachal	Jammu &
			(2018-19 information)					Pradesh	Kashmir
	Marks Distributi on	Population	877000	23818000	2170000	639,07,200	29002000	7311000	12888000
		Solid Waste Generation Per Capita (Grams/day)	209.81	439.61	87.04	149.45	180.40	53.75	117.85
	5	Marks Obtained	3	1	5	4	4	5	4
		Total ULBs	3	5	14	170	86	54	80
		Solid waste generated (TPD)	184	10470.57	188.88	9551	5231.9	393	1518.91
		Processed (TPD)	97	5193.57	148.91	6924	1620.6	230	540.19
		% Processed	52.72	49.60	78.84	72.50	30.98	58.52	35.56
Overview of	15	Marks Obtained	8.25	7.5	12	11.25	5.25	9	6
Waste Management		Landfilled (TPD)	30	5276	15.59	3831	3188.2	124	0
		% Landfilled	16.30	50.39	8.25	40.11	60.94	31.55	0.00
	3	Marks Obtained	3	2	3	2	1	2	3
		Gap	57	1	24.38	0	423.1	39	978.72
		% Gap	30.98	0.01	12.91	0.00	8.09	9.92	64.44
	10	Marks Obtained	8	10	10	10	10	10	4
		% of Waste Segregated	100	56	100	82	64	76	15
	10	Marks Obtained	10	6	10	9	7	8	2

		SI. No.	8.	9.	10.	11.	12.	13.	14.
	2019-20	State	DDDNH (2018-19 information)	Delhi	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu & Kashmir
		Total Application received for Authorization To Waste Processing /Disposal Facilities	0	3	5	33	0	0	0
		No. of Authorization Granted To Waste Processing /Disposal Facilities	0	0	1	10	0	0	0
Waste Processing		% Authorization Granted To Waste Processing /Disposal Facilities	0	0	20	30.30	0	0	0
	6	Marks Obtained	1	1	3	3	1	1	1
		Landfill (Y/N)	N	Y	Y	Y	N	N	Y
	1	Marks Obtained	0	1	1	1	0	0	1
		WtoE (Y/N)	N	Y	Y	N	N	N	N
	5	Marks Obtained	0	5	5	0	0	0	0
		Biomethanation (Y/N)	N	Y	Y	Y	Y	N	Y
	5	Marks Obtained	0	5	5	5	5	0	5

		SI. No.	8.	9.	10.	11.	12.	13.	14.
	2019-20	State	DDDNH (2018-19 information)	Delhi	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu & Kashmir
		Composting (Y/N)	Y	Y	Y	Y	Y	Y	Y
	4	Marks Obtained	4	4	4	4	4	4	4
		Monitoring of AAQ (Y/N) (Without documents- 2; with documents- 1)	N	N	N	Y	N	Y	N
	2	Marks Obtained	0	0	0	1	0	2	0
Waste Processing		Monitoring of Leachate (Y/N) (Without documents-2; with documents-1)	N	N	N	Y	N	N	N
	2	Marks Obtained	0	0	0	1	0	0	0
		Monitoring of Compost quality (Y/N) (Without documents- 2; with documents- 1)	N	N	N	N	N	N	N
	2	Marks Obtained	0	0	0	0	0	0	0

		SI. No.	8.	9.	10.	11.	12.	13.	14.
	2019-20	State	DDDNH (2018-19 information)	Delhi	Goa	Gujarat	Haryana	Himachal Pradesh	Jammu & Kashmir
		No. of Landfill Site	0	1	4	4	0	0	1
		No of Dumpsite	3	3	9	170	69	57	62
		Dumpsite Reclaimed	0	0	0	0	0	0	0
		% Dumpsite Reclaimed	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	5	Marks Obtained	0	0	0	0	0	0	0
Waste Disposal		% Landfill vs total disposal sites	0.00	25.00	30.77	2.30	0.00	0.00	1.59
	5	Marks Obtained	0	2	2	1	0	0	1
		No. of dumpsite converted to landfill site	0	0	0	0	0	0	0
		% Dumpsite converted to Lanfillsite	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	Marks Obtained	0	0	0	0	0	0	0
		Best Practice (Y/N)	Y	Y	Y	N	Y	N	Υ
Other	15	Marks Obtained	8	10	10	10	8	5	10
	100	Total Marks Obtained	45.25	54.50	70.00	62.25	45.25	46.00	41.00

		SI. No.	15.	16.	17.	18.	19.	20.	21.
	2019-20	State	Jharkhand	Karnataka	Kerala	Lakshadw eep	Madhya Pradesh	Maharasht ra	Manipur
	Marks Distributi on	Population	35278000	64410000	36410000	85000	82134000	125711000	2698000
		Solid Waste Generation Per Capita (Grams/day)	62.05	190.32	96.70	382.94	97.16	182.52	98.22
	5	Marks Obtained	5	4	5	2	5	4	5
		Total ULBs	42	279	93	0	383	394	27
		Solid waste generated (TPD)	2188.97	12258.2	3521	32.55	7980	22945.256	265
		Processed (TPD)	731.76	4489	1837	11.44	6431	16037.26	103.57
		% Processed	33.43	36.62	52.17	35.15	80.59	69.89	39.08
Overview of Waste	15	Marks Obtained	5.25	6	8.25	6	12.75	10.5	6
waste Management		Landfilled (TPD)	1179.68	0	0	0	762	6907.98	88.63
		% Landfilled	53.89	0.00	0.00	0.00	9.55	30.11	33.45
	3	Marks Obtained	2	3	3	3	3	2	2
		Gap	277.53	7769.2	1684	21.11	787	0.016	72.8
		% Gap	12.68	63.38	47.83	64.85	9.86	0.00	27.47
	10	Marks Obtained	10	4	6	4	10	10	8
		% of Waste Segregated	90	0	10	100	74	89	82
	10	Marks Obtained	9	0	1	10	8	9	9

		SI. No.	15.	16.	17.	18.	19.	20.	21.
	2019-20	State	Jharkhand	Karnataka	Kerala	Lakshadw	Madhya Pradesh	Maharasht	Manipur
						eep	Prauesii	ra	
		Total Application received for Authorization To Waste Processing /Disposal Facilities	0	42	35	0	1	117	1
		No. of Authorization Granted To Waste Processing /Disposal Facilities	0	0	8	0	1	56	1
Waste Processing		% Authorization Granted To Waste Processing /Disposal Facilities	0	0	22.86	0.00	100.00	47.86	100
	6	Marks Obtained	1	1	3	1	6	4	6
		Landfill (Y/N)	N	Y	N	N	Y	Y	Y
	1	Marks Obtained	0	1	0	0	1	1	1
		WtoE (Y/N)	N	N	N	N	Y	Y	N
	5	Marks Obtained	0	0	0	0	5	5	0
		Biomethanation (Y/N)	Y	Y	Y	Y	Y	Y	N
	5	Marks Obtained	5	5	5	5	5	5	0

		SI. No.	15.	16.	17.	18.	19.	20.	21.
	2019-20	State	Jharkhand	Karnataka	Kerala	Lakshadw eep	Madhya Pradesh	Maharasht ra	Manipur
		Composting (Y/N)	Y	Y	Y	Y	Υ	Y	Υ
	4	Marks Obtained	4	4	4	4	4	4	4
		Monitoring of AAQ (Y/N) (Without documents- 2; with documents- 1)	N	N	N	N	N	N	Υ
	2	Marks Obtained	0	0	0	0	0	0	1
Waste Processing		Monitoring of Leachate (Y/N) (Without documents-2; with documents-1)	N	N	N	N	N	N	Y
	2	Marks Obtained	0	0	0	0	0	0	1
		Monitoring of Compost quality (Y/N) (Without documents- 2; with documents- 1)	N	N	N	N	N	N	Y
	2	Marks Obtained	0	0	0	0	0	0	1

		SI. No.	15.	16.	17.	18.	19.	20.	21.
	2019-20	State	Jharkhand	Karnataka	Kerala	Lakshadw eep	Madhya Pradesh	Maharasht ra	Manipur
		No. of Landfill Site	0	191	0	0	5	18	4
		No of Dumpsite	41	157	38	0	328	327	21
		Dumpsite Reclaimed	0	21	6	0	50	1	0
		% Dumpsite Reclaimed	0.00	13.38	15.79	0.00	15.24	0.31	0.00
	5	Marks Obtained	0	1	1	0	1	1	0
Waste Disposal		% Landfill vs total disposal sites	0.00	54.89	0.00	0.00	1.50	5.22	16.00
	5	Marks Obtained	0	3	0	0	1	1	1
		No. of dumpsite converted to landfill site	0	6	0	0	0	0	0
		% Dumpsite converted to Lanfillsite	0.00	3.82	0.00	0.00	0.00	0.00	0.00
	5	Marks Obtained	0	1	0	0	0	0	0
		Best Practice (Y/N)	Y	Y	Υ	Y	Y	Y	Y
Other	15	Marks Obtained	12	8	8	12	14	14	6
	100	Total Marks Obtained	53.25	41.00	44.25	47.00	75.75	70.50	51.00

		SI. No.	22.	23.	24.	25.	26.	27.	28.
	2019-20	State	Meghalaya	Mizoram	Nagaland	Odisha	Puducherry	Punjab	Rajasthan
	Marks Distributi on	Population	2887000	1106000	2477000	43762000	1944000	30101000	76759000
		Solid Waste	53.06	314.82	123.58	50.47	298.35	148.75	86.76
		Generation Per							
		Capita (Grams/day)							
	5	Marks Obtained	5	2	4	5	3	4	5
		Total ULBs	7	3	32	114		167	193
		Solid waste generated (TPD)	153.18	348.19	306.1	2208.6	580	4477.542	6659.38
		Processed (TPD)	9.64	278.4	24	202.4	61	2112.457	1190.93
		% Processed	6.29	79.96	7.84	9.16	10.52	47.18	17.88
Overview of	15	Marks Obtained	1.5	12	1.5	1.5	2.25	7.5	3
Waste Management		Landfilled (TPD)	0	0	6	1920.9	456	2301.495	5112.66
J		% Landfilled	0.00	0.00	1.96	86.97	78.62	51.40	76.77
	3	Marks Obtained	3	3	3	1	1	2	1
		Gap	143.54	69.79	276.1	85.3	63	63.59	355.79
		% Gap	93.71	20.04	90.20	3.86	10.86	1.42	5.34
	10	Marks Obtained	2	10	2	10	10	10	10
		% of Waste Segregated	66	68	34	94	20	44	54
	10	Marks Obtained	7	7	4	10	2	5	6

		SI. No.	22.	23.	24.	25.	26.	27.	28.
	2019-20	State	Meghalaya	Mizoram	Nagaland	Odisha	Puducherry	Punjab	Rajasthan
		Total Application received for Authorization To Waste Processing /Disposal Facilities	6	1	1	12	18	0	1
		No. of Authorization Granted To Waste Processing /Disposal Facilities	6	0	1	0	17	0	0
Waste Processing		% Authorization Granted To Waste Processing /Disposal Facilities	100	0	100	0	94.4	0	0
	6	Marks Obtained	6	1	6	1	6	1	1
		Landfill (Y/N)	N	Y	Y	N	N	N	Y
	1	Marks Obtained	0	1	1	0	0	0	1
		WtoE (Y/N)	N	N	N	N	N	N	N
	5	Marks Obtained	0	0	0	0	0	0	0
		Biomethanation (Y/N)	N	N	N	N	Y	N	Y
	5	Marks Obtained	0	0	0	0	5	0	5

		SI. No.	22.	23.	24.	25.	26.	27.	28.
	2019-20	State	Meghalaya	Mizoram	Nagaland	Odisha	Puducherry	Punjab	Rajasthan
		Composting (Y/N)	Y	Y	Y	Y	Y	Y	Y
	4	Marks Obtained	4	4	4	4	4	4	4
		Monitoring of AAQ (Y/N) (Without documents- 2; with documents- 1)	Y	N	N	N	N	N	N
	2	Marks Obtained	1	0	0	0	0	0	0
Waste Processing		Monitoring of Leachate (Y/N) (Without documents-2; with documents-1)	Y	N	N	N	N	N	N
	2	Marks Obtained	1	0	0	0	0	0	0
		Monitoring of Compost quality (Y/N) (Without documents- 2; with documents- 1)	N	N	N	N	N	N	N
	2	Marks Obtained	0	0	0	0	0	0	0

		SI. No.	22.	23.	24.	25.	26.	27.	28.
	2019-20	State	Meghalaya	Mizoram	Nagaland	Odisha	Puducherry	Punjab	Rajasthan
		No. of Landfill Site	0	1	1	0	0	0	36
		No of Dumpsite	6	1	23	112	3	150	172
		Dumpsite Reclaimed	1	0	0	0	1	0	2
		% Dumpsite Reclaimed	16.67	0.00	0.00	0.00	33.33	0.00	1.16
	5	Marks Obtained	1	0	0	0	2	0	1
Waste Disposal		% Landfill vs total disposal sites	0.00	50.00	4.17	0.00	0.00	0.00	17.31
	5	Marks Obtained	0	3	1	0	0	0	1
		No. of dumpsite converted to landfill site	1	0	0	0	0	0	1
		% Dumpsite converted to Lanfillsite	16.67	0.00	0.00	0.00	0.00	0.00	0.58
	5	Marks Obtained	1	0	0	0	0	0	1
		Best Practice (Y/N)	N	Y	Y	N	Y	N	N
Other	15	Marks Obtained	5	8	10	5	12	4	5
	100	Total Marks Obtained	37.50	51.00	36.50	37.50	47.25	37.50	44.00

		SI. No.	29.	30.	31.	32.	33.	34.	35.
	2019-20	State	Sikkim	Tamil	Telangana	Tripura	Uttar	Uttarakhand	West
				Nadu			Pradesh		Bengal
	Marks Distributi on	Population	673000	70617000	40619360	3983000	231425000	11129000	96633000
	0	Solid Waste Generation Per Capita (Grams/day)	111.00	201.48	228.59	103.27	62.52	144.75	144.67
				3	3	4	5	4	4
	5	Marks Obtained Total ULBs	4 7	664	140	4 20	652	91	125
		Solid waste	74.7	14228	9285	411.32	14468	1610.942	13980
		generated (TPD)	14.1	14220	9203	711.52	14400	1010.942	13300
		Processed (TPD)	12.56	6620	6070	253.6	5395	716.637	916
		% Processed	16.81	46.53	65.37	61.66	37.29	44.49	6.55
Overview of	15	Marks Obtained	3	7.5	10.5	9.75	6	6.75	1.5
Waste Management		Landfilled (TPD)	62.032	6765	593	127.2	0	0	334
managomon		% Landfilled	83.04	47.55	6.39	30.92	0.00	0.00	2.39
	3	Marks Obtained	1	2	3	2	3	3	3
		Gap	0.108	843	2622	30.52	9073	894.305	12730
		% Gap	0.14	5.92	28.24	7.42	62.71	55.51	91.06
	10	Marks Obtained	10	10	8	10	4	6	2
		% of Waste Segregated	20	80	53	6.8	50	65	18.4
	10	Marks Obtained	2	8	6	1	5	7	2

		SI. No.	29.	30.	31.	32.	33.	34.	35.
	2019-20	State	Sikkim	Tamil Nadu	Telangana	Tripura	Uttar Pradesh	Uttarakhand	West Bengal
		Total Application received for Authorization To Waste Processing /Disposal Facilities	1	224	0	1	3	21	0
		No. of Authorization Granted To Waste Processing /Disposal Facilities	1	224	0	1	3	0	0
Waste Processing		% Authorization Granted To Waste Processing /Disposal Facilities	100	100	0	100	100	0	0
	6	Marks Obtained	6	6	1	6	6	1	1
		Landfill (Y/N)	Y	Υ	Y	Y	Y	Y	Y
	1	Marks Obtained	1	1	1	1	1	1	1
		WtoE (Y/N)	N	Y	Y	N	Y	N	N
	5	Marks Obtained	0	5	5	0	5	0	0
		Biomethanation (Y/N)	N	Y	Y	N	N	N	N
	5	Marks Obtained	0	5	5	0	0	0	0

		SI. No.	29.	30.	31.	32.	33.	34.	35.
	2019-20	State	Sikkim	Tamil Nadu	Telangana	Tripura	Uttar Pradesh	Uttarakhand	West Bengal
		Composting (Y/N)	Y	Y	Y	Y	Y	Y	Y
	4	Marks Obtained	4	4	4	4	4	4	4
		Monitoring of AAQ (Y/N) (Without documents- 2; with documents- 1)	N	N	Y	N	N	Y	N
	2	Marks Obtained	0	0	1	0	0	1	0
Waste Processing		Monitoring of Leachate (Y/N) (Without documents-2; with documents-1)	N	N	Y	N	N	Y	N
	2	Marks Obtained	0	0	1	0	0	1	0
		Monitoring of Compost quality (Y/N) (Without documents- 2; with documents- 1)	N	N	N	N	N	Y	N
	2	Marks Obtained	0	0	0	0	0	1	0

		SI. No.	29.	30.	31.	32.	33.	34.	35.
	2019-20	State	Sikkim	Tamil Nadu	Telangana	Tripura	Uttar Pradesh	Uttarakhand	West Bengal
		No. of Landfill Site	3	3	1	2	86	2	7
		No of Dumpsite	2	143	123	14	611	53	100
		Dumpsite Reclaimed	1	7	2	1	0	0	1
		% Dumpsite Reclaimed	50.00	4.90	1.63	7.14	0.00	0.00	1.00
	5	Marks Obtained	3	1	1	1	0	0	1
Waste Disposal		% Landfill vs total disposal sites	60.00	2.05	0.81	12.50	12.34	3.64	6.54
	5	Marks Obtained	3	1	1	1	1	1	1
		No. of dumpsite converted to landfill site	1	0	1	0	0	0	0
		% Dumpsite converted to Lanfillsite	50.00	0.00	0.81	0.00	0.00	0.00	0.00
	5	Marks Obtained	3	0	1	0	0	0	0
		Best Practice (Y/N)	N	Y	Y	N	N	N	Y
Other	15	Marks Obtained	5	10	8	5	5	5	8
	100	Total Marks Obtained	45.00	63.50	59.50	44.75	45.00	41.75	28.50