Service Level Benchmarking - Solid Waste Management

S.No	Code	Input Nomenclature			Logic/Remark
					65+17 input fields
	I	**HOUSEHOLD LEVEL COVERAGE OF SOLID WASTE MANAGEMENT SERVICES**		99.97	KE*100/(XE+XT)
		Door to Door Collection - Number of HHs and establishments covered by Door to Door Collection			
1	KA	Number of Households covered by Door to Door Collection	Number	198886	Input field
2	KB	Number of Hotels and Restaurants covered by Door to Door Collection	Number	195	Input field
3	KC	Number of Commercial Establishments (institutions, offices) covered by Door to Door Collection	Number	21885	Input field
4	KD	Number of any other establishments (incl. markets) covered by Door to Door Collection	Number	5	Input field
5	KE	Total Number of Households and Establishments covered by Door to Door Collection	Number	220971	KA+KB+KC+KD
	II	**EFFICIENCY OF COLLECTION OF MUNICIPAL SOLID WASTE**		100.00	IF(KO=0,(LO*100/KL),(KO*100/KL))
		Waste Generation			
6	KF	Waste Generated by Households	MT/month	12625.12	Input field
7	KG	Waste Generated by Street Sweeping	MT/month	0	Input field
8	KH	Waste Generated by Hotels and Restaurants	MT/month	19.5	Input field
9	KI	Waste Generated by Markets (Vegetable Markets, Mandis etc)	MT/month	2.7	Input field
10	KJ	Waste Generated by Commercial Establishments (eg. Institutions, etc)	MT/month	2456	Input field
11	KK	Waste Generated by other sources (eg. debris, horticulture waste etc)	MT/month	1350	Input field
12	KL	Total Waste Generated	MT/month	16453.32	KF+KG+KH+KI+KJ+KK
		Waste Collection and Transportation - Details of waste received at Processing/ Disposal Facilities			
13	KM	Quantity of waste received at processing and recycling facilities	MT/month	13900.33	Input field
14	KN	Quantity of waste received at disposal sites	MT/month	2453.86	Input field
15	KO	Total waste received at processing/disposal facility and recycled	MT/month	16454.09	KM+KN+LQ-ME
		Waste Collection and Transportation - Details of waste transported to Processing/ Disposal Facilities			
16	KP	Number of Tipper Trucks/compactor used for transportation of waste to processing site (Karsada)	Number	30	Input field
17	KQ	Capacity of each lorries/trucks	Metric Tons (MT)	2.516	Input field
18	KR	Total number of trips made by each lorries/trucks each day to the disposal site	Trips per day	1	Input field
19	KS	Total quantity of waste collected by mini lorries/trucks	MT/month	2264.4	KP*KQ*KR*30
20	KT	Number of dumper placers used for transportation of waste	Number	9	Input field
21	KU	Capacity of each dumper placer	Metric Tons (MT)	1.5	Input field
22	KV	Total number of trips made by each dumper placers each day to the disposal site	Trips per day	1	Input field
23	KW	Total quantity of waste collected by dumper placers	MT/month	405	KT*KU*KV*30
24	KX	Number of mini lorries used for transportation of waste	Number	104	Input field
25	KY	Capacity of each mini lorry	Metric Tons (MT)	1.5	Input field
26	KZ	Total number of trips made by each mini lorries each day to the disposal site (transfer station)	Trips per day	1	Input field
27	LA	Total quantity of waste collected by mini lorries	MT/month	4680	KX*KY*KZ*30
28	LB	Number of tractor trailers used for transportation of waste	Number	14	Input field
29	LC	Capacity of each tractor trolly	Metric Tons (MT)	2	Input field
30	LD	Total number of trips made by each tractor trailer each day to the disposal site (Transfer station)	Trips per day	2	Input field
31	LE	Total quantity of waste collected by tractor trailer	MT/month	1680	LB*LC*LD*30
32	LF	Number of Refuse compector used per day for transportation of waste to processing site	Number	33	Input field
33	LG	Capacity of each Refuse Compector	Metric Tons (MT)	6.5	Input field
34	LH	Total number of trips made by each tipper trucks each day to the Processing site (Karsada)	Trips per day	1	Input field
35	LI	Total quantity of waste collected by tipper trucks	MT/month	6435	LF*LG*LH*30
36	LJ	Number of 3 wheeler auto tippers used for transportation of waste	Number	11	Input field
37	LK	Capacity of each 3 wheeler auto tipper	Metric Tons (MT)	1	Input field
38	LM	Total number of trips made by each 3 wheeler auto tippers each day to the disposal site (Transfer station)	Trips per day	3	Input field
39	LN	Total quantity of waste collected by 3 wheeler auto tippers	MT/month	990	LJ*LK*LM*30
40	LO	Total quantiy of waste collected and transported to disposal site	MT/month	16454.4	KS+KW+LA+LE+LI+LN
	III	**EXTENT OF SEGREGATION OF MUNICIPAL SOLID WASTE**		1.51	((LP+LQ)/IF(MH=0,LO,MH))*100
		Segregation of Waste			
41	LP	Quantity of waste arriving at Processing/ Disposal facility in segregated manner	MT/month	148.958	Input field
42	LQ	Quantity of waste taken away by recyclers from intermediate points	MT/month	99.9	Input field
	IV	**EXTENT OF MUNICIPAL SOLID WASTE RECOVERED**		83.15	(MF/IF(KO=0,LO,KO))*100
		Quantity of Waste Processing			
43	LR	Installed Capacity of Composting Plant	MT/month	18000	Input field
44	LS	Waste Quantity Input at the Composting Plant	MT/month	13432.135	Input field
45	LT	Installed Capacity of Vermi-composting Plant	MT/month	0	Input field
46	LU	Waste Quantity Input at the Vermi-composting Plant	MT/month	0	Input field
47	LV	Installed Capacity of Refuse Derived Fuel	MT/month	0	Input field
48	LW	Waste Quantity Input at the Refuse Derived Fuel	MT/month	0	Input field
49	LX	Installed Capacity of Bio Methanation/ Waste-to-Energy Plants	MT/month	450	5 TPD capacity each plant per day *30
50	LY	Waste Quantity Input at Bio methanation/ Waste-to-Energy plants	MT/month	148.9583	All three plants (Waste to energy)
51	LZ	Installed Capacity of any other processing facilities	MT/month	0	Input field
52	MA	Waste Quantity Input at other processing facilities	MT/month	0	Input field
53	MB	Total Installed Capacity of Processing facilities	MT/month	18450	LR+LT+LV+LX+LZ
54	MC	Total Waste Quantity Input at all types of processing facilities	MT/month	13581.093	LS+LU+LW+LY+MA
55	MD	Quantity of waste rejected by processing facilities at intake point	MT/month	0	Input field
56	ME	Quantity of post-processing rejects sent to dumpsite/ landfills	MT/month	0	Input field
57	MF	Total Waste Processed in the ULB	MT/month	13680.993	IF(MC<MB,(MC+LQ-MD),(MB+LQ-MD))
	V	**EXTENT OF SCIENTIFIC DISPOSAL OF MUNICIPAL SOLID WASTE**		100.00	(MG*100/(MG+MH)
		Quantity of Waste Disposal			
58	MG	Quanity of waste disposed in compliant landfill sites	MT/month	2553.86	Input field
59	MH	Quanity of waste disposed in open dump sites	MT/month	0	Input field
	VI	**EFFICIENCY IN REDRESSAL OF CUSTOMER COMPLAINTS**		91.03	(MJ*100/MI)
		Customer Service			
60	MI	Complaints received during the year	Number	3389	Input field
61	MJ	Complaints resolved within 24 hours during the year	Number	3085	Input field

	VII	**EXTENT OF COST RECOVERY IN SWM SERVICES**		**34.55**	(NA*100/MR)
		Financial Information - Operational Expenditure on SWM during previous year			
62	MK	Regular Staff & Administration	Rs. In Lakhs	**8513.52**	Input field
63	ML	Outsourced/Contracted Staff Costs	Rs. In Lakhs	**1233.21**	Input field
64	MM	~~Electricity Charges~~/Fuel Costs	Rs. In Lakhs	**590.08**	Input field
65	MN	Chemical Costs	Rs. In Lakhs	**0**	Input field
66	MO	Repair/Maintenance Costs	Rs. In Lakhs	**48.69**	Input field
67	MP	Contracted Services Cost (Samvida)	Rs. In Lakhs	**1609.25**	Input field
68	MQ	Other Costs (Specify)	Rs. In Lakhs	**0**	Input field
69	MR	Total Operational Expenses	Rs. In Lakhs	**11994.75**	MK+ML+MM+MN+MO+MP+MQ
		Financial Information - Operational Revenues from SWM during previous year			
70	MS	Arrears at the end of previous year	Rs. In Lakhs	**0**	Input field
71	MT	Tax / Cess - Solid Waste only	Rs. In Lakhs	**0**	Input field
72	MU	User Charges	Rs. In Lakhs	**13.57**	Input field
73	MV	Fixed Charges based on Property Tax/ State Taxes/Cess/Surcharges	Rs. In Lakhs	**4122.95**	Input field
74	MW	Sale of Recyclables	Rs. In Lakhs	**7.3**	Input field
75	MX	Sale from processing - compost/energy	Rs. In Lakhs	**0**	Input field
76	MY	Royalty	Rs. In Lakhs	**0**	Input field
77	MZ	Others (Specify)	Rs. In Lakhs	**0**	Input field
78	NA	Total Revenue Demand Raised for the previous year	Rs. In Lakhs	**4143.82**	MT+MU+MV+MW+MX+MY+MZ
	VIII	**EFFICIENCY IN COLLECTION OF SWM CHARGES**		**0.24**	(NC*100/NA)
79	NA	Total Revenue Demand Raised for the previous year	Rs. In Lakhs	**4143.82**	NA
80	NB	Collection against arrears	Rs. In Lakhs	**0**	Input field
81	NC	Collection against Current Demand	Rs. In Lakhs	**10**	Input field
		Additional Information (Optional)			
		Staff Information			
82	ND	Senior Management-Health Officer (Sanctioned)	Number	**3**	Input field
83	NE	Senior Management-Health Officer (Working)	Number	**1**	Input field
84	NF	Sanitary Inspector (Sanctioned)	Number	**25**	Input field
85	NG	Sanitary Inspector (Working)	Number	**16**	Input field
86	NH	Sanitary Supervisor (Sanctioned)	Number	**104**	Input field
87	NI	Sanitary Supervisor (Working)	Number	**37**	Input field
88	NJ	Maistries/Safai Karam chari (Sanctioned)	Number	**3261**	Input field
89	NK	Maistries/Safai Karam chari (Working)	Number	**2337**	Input field
90	NL	Cleaners/Drivers (Sanctioned)	Number	**203**	Input field
91	NM	Cleaners/Drivers (Working)	Number	**173**	Input field
92	NN	Labourers (Sanctioned)	Number	**0**	Input field
93	NO	Labourers (Working)	Number	**0**	Input field
94	NP	Others Specify	Number	**0**	Input field
95	NQ	Total (Sanctioned)	Number	**3596**	ND+NF+NH+NJ+NL+NN
96	NR	Total (Working)	Number	**2564**	NE+NG+NI+NK+NM+NO+NP
97	NS	Are daily records of waste received at compliant landfill maintained (MSW 2000)	Yes/No	**Yes**	Input field
98	NT	Is weighbridge available at landfill site?	Yes/No	**Yes**	Input field
99	NU	Are daily records of waste received at open dumpsites maintained?	Yes/No	**yes**	Input field
100	NV	Is weighbridge available at dumpsite?	Yes/No	**Yes**	Input field
		SOLID WASTE MANAGEMENT INDICATORS			
Sl No		***Indicators***	*Unit*	***Result***	**Reliability**
1		Household level coverage of solid waste management services	%	**100.0**	
2		Efficiency of collection of municipal solid waste	%	**100.0**	B
3		Extent of segregation of municipal solid waste	%	**1.5**	
4		Extent of municipal solid waste recovered	%	**83.1**	
5		Extent of scientific disposal of municipal solid waste	%	**100.0**	
6		Extent of cost recovery in solid waste management services	%	**34.5**	
7		Efficiency in collection of solid waste management charges	%	**0.2**	
8		Efficiency in redressal of customer complaints	%	**91.0**	B