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संयुक्त सचिव एवं मिशन निदेशक

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सत्यमेव जयते



भारत सरकार  
आवासन और शहरी कार्य मंत्रालय  
निर्माण भवन

GOVERNMENT OF INDIA  
MINISTRY OF HOUSING AND URBAN AFFAIRS  
NIRMAN BHAWAN

नई दिल्ली-110011, तारीख 20  
New Delhi-110011, dated the 20

D.O. No. Q-16019/5/SBM-2016-CPHEEO

9<sup>th</sup> November, 2017

**Subject: Template for Gap Analysis of Municipal Solid Waste Management Infrastructure and Services in Urban Local Bodies**

Dear Sir / Madam,

Government of India has launched the Swachh Bharat Mission on 2nd October, 2014 with the target to make the country clean by 2nd October, 2019. Ministry of Housing and Urban Affairs is making efforts to strengthen the solid waste management infrastructure in ULBs by providing technical and financial assistance from time to time.

2. In the course of implementation of Swachh Bharat Mission, it is felt that guidance is needed to ULBs to carry out gap analysis of equipment, vehicles, manpower and the operation & maintenance requirements for putting in place proper solid waste management systems. To enable ULBs to assess these gaps, a template has been prepared namely **"Template for Gap analysis of Solid Waste Management Infrastructure and Services in ULB"** and is enclosed herewith.

3. Based on assessment of gap in infrastructure and services, ULBs/ States can make necessary action plans and projects to expeditiously achieve the objectives of "Swachh Bharat". The gap analysis data is for use of ULBs at their end and need not be forwarded to Swachh Bharat Mission (U), Ministry of Housing and Urban Affairs.

With regards,

Encl: As above


Yours sincerely,

(V. K. Jindal)

To

State Mission Directors (SBM), All States & UTs

Municipal Commissioners / Chief Officers of all ULBs



# TEMPLATE FOR GAP ANALYSIS OF MUNICIPAL SOLID WASTE MANAGEMENT INFRASTRUCTURE AND SERVICES IN URBAN LOCAL BODIES



Ministry of Housing and Urban Affairs  
November, 2017



## 1. Introduction

Government of India has launched the Swachh Bharat Mission on 2nd October, 2014 with the target to make the country clean by 2nd October, 2019. Ministry of Housing and Urban Affairs is making efforts to strengthen the sanitation and waste management infrastructure in ULBs by providing technical and financial assistance as required. Necessary advisory and guidelines are released from time to time to assist Urban Local Bodies (ULBs) to achieve “Swachh Bharat” objectives. In the course of implementation by ULBs, it is observed that guidance is needed for them to carry out gap analysis of equipment, vehicles, manpower and then operation & maintenance requirements for proper solid waste management.

## 2. Objective and requirement for the Template

To enable ULBs in assessing the gap in infrastructure, manpower and other resources in solid waste management, its operations and maintenance, this template has been prepared for ULBs on “Gap analysis of Solid Waste Management Infrastructure and Services in ULB”. It is at **Annexure- I**.

The template comprises of general information of the city and gap analysis of

- (i) equipment/ vehicles in waste collection and transportation vis-a-vis per norms
- (ii) infrastructure for processing and disposal; and
- (iii) manpower
- (iv) IEC strategy and
- (v) financial sustainability

This template aims at helping ULBs & States/UTs not only to maintain uniformity in stocktaking of SWM facilities all over their jurisdiction but also to identify gaps in respect of components such as collection & transportation, processing, disposal, manpower, IEC and financial sustainability etc. Based on template assessment, ULBs/ States can prioritise and take up required measures in bridging the gap in infrastructure and services for achieving the target of 100% scientific solid waste management services in the ULBs.

## 3. Way forward

All ULBs/ States/ UTs may use the template and make necessary action plans and projects to expeditiously achieve the objective of “Swachh Bharat” and service level delivery benchmarks as per **Annexure-II**. The same need not to be forwarded to Swachh Bharat Mission (U), Ministry of Housing and Urban Affairs.

## Assessment of Solid Waste Management Services in ULB- Template for Fact Sheet

### A. General

1. Name of ULB: \_\_\_\_\_
2. Name of District: \_\_\_\_\_
3. Name of State/UT: \_\_\_\_\_
4. Population (as per 2011 Census): \_\_\_\_\_
5. MSW total generation (TPD): \_\_\_\_\_ Per Capita generation (Kg): \_\_\_\_\_
6. a. Total number of electoral Wards: \_\_\_\_\_  
 b. No. of wards covered with door to door garbage collection: \_\_\_\_\_  
 c. No. of wards not covered with door to door garbage collection: \_\_\_\_\_

### B. Gap analysis of infrastructure – Door to Door Garbage Collection

S. No.	Functional Equipments/ vehicles	Require-ment as per Norms	Usable Existing equipment/ vehicles	Gap	Indica-tive Cost (Rs.)	Fund require-ment
i.	Segregation Bins- 10-12 Liters capacity (two for each household)				80-100 per bin	
ii.	Push Carts (One for 150- 200 HH)				7,000	
iii.	Tricycle (One for 200- 300 HH)				18,000	
iv.	Auto Tipper having 300 to 500 kg capacity (One for 1000-1500 HH)				5,50,000	

### C. Gap analysis of infrastructure – Storage and Transportation

The number of bins suggested below for placing along main road need to be assessed based on population density in the area and availability of space. This is not applicable to those ULBs who have achieved high level of collection efficiency by putting more vehicles and have streamlined waste collection mechanism and have removed bins from streets.



S. No.	Functional Equipments/ vehicles	Requirement as per Norms	Usable Existing equipment/ vehicles	Gap	Indicative Cost (Rs.)	Fund requirement
i.	Bins -1.1 m <sup>3</sup> (One or more bin at every 1000 mt on main road depending on assessed waste collection varying from locality to locality)				9,000	
ii.	Bins- 2.5/3.0 m <sup>3</sup> (One bin for operational areas of 1000 HH)				36,000	
iii.	Bins- 4.5 m <sup>3</sup> (One bin at the midpoint of 2 operational areas of 1000 HH each)				58,000	
iv.	Light Commercial Vehicles > 700 kg capacity (One for 1500-2000 HH)				16,00,000	
v.	Refuse Compactors				24,00,000	
vi.	Backhoe loader (JCB)				28,00,000	
vii.	GPS (One per vehicle)				8,000	

7. Timeline for procurement of machines and equipment:

8. Estimated cost (Rs. In Cr.):

9. Funds available (including mission allocation under SBM):

10. Gap in funds available (9-8):

#### **D. Gap analysis of infrastructure- Processing and Disposal**

11. Quantity of Municipal Solid Waste treated currently (Tonnes per day):

12. Type of waste treatment technology used/available except crude dumping & proposed as per DPR / Swachh City Plan/ any other assessment (Please ✓):

Technology	Used/ Available	Proposed
i. Composting		
ii. Biomethanation		
iii. C&D Waste Processing		
iv. Mass burning based WTE processing		

v.	RDF and/ or WTE processing		
vi.	Only RDF		
vii.	Inert landfilled in SLF		
viii.	CRUDE Dumping		

13. Gap in treatment capacity (MTD) (5-11):

14. Availability of Sanitary Landfill: Y/N

15. Fund requirement for treatment & disposal (Rs. In Cr):

16. Funds available (Rs. In Cr):

17. Gap in fund availability (Rs. In Cr) (16-15):

#### **E. Gap analysis of Manpower**

S. No.	Category / Norms	Existing Manpower	Requirement As per Norms*	Gap	Timeline to fill-up
i.	Waste Collector (One for every 1250 persons)				
ii.	Sweeper (One for every 10,000 persons)				
iii.	Driver (One per vehicle)				
iv.	Helper (One per Vehicle)				
v.	Sanitary Inspector (1 for every 50,000 persons)				

#### **F. IEC Strategy**

18. No. of NGOs/SHGs active in the ULB:

19. No. of NGOs/SHGs involved in IEC related activities:

20. Funds available for involving NGOs/SHGs in IEC (Rs. In Cr):

21. Expenditure estimated (Rs. In Cr):

22. Gap in fund availability (Rs. In Cr) (21-20):

#### **G. Financial Sustainability for operation and maintenance:**

23. Current expenditure on the SWM per annum (Rs. In Cr):



Capital	O&M	Salary

24. Source of Funding (Rs. In Cr):

Source	Property Tax	Gol	State/ Others
Capital			
O&M			
Salary			

25. Whether user charges notified: Y/N

26. User charges/ SWM related revenue collected per annum (Rs. In Cr):

27. Provision of byelaws to prevent littering: Y/N

28. If No, timeline to enact the same:

## Annexure-II

### Service Level Benchmark indicators for Solid Waste Management

S. No	Indicator	Benchmark
1.	Household level coverage of solid waste management services	100%
2.	Efficiency of collection of municipal solid waste	100%
3.	Extent of segregation of municipal solid waste	100%
4.	Extent of municipal solid waste recovered	80%
5.	Extent of scientific disposal of municipal solid waste	100%
6.	Efficiency in redressal of customer complaints within service level parameters	80%
7.	Extent of cost recovery in SWM services	100% for O&M + 20% of Capital Cost
8.	Efficiency in collection of SWM charges	90%

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