PROFILING AND RANKING AFRICAN CITIES ON SOLID WASTE MANAGEMENT

A TOOLKIT

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Contents

INTRODUCTION

Municipal solid waste management is an essential function of municipal authorities. It is imperative that all municipal authorities provide waste management and sanitation services in an environmentally sustainable and socially acceptable manner. Developing countries are currently witnessing urban expansion and rapid population growth. In fact, in most cases, population growth and economic advancement has severely compromised the ability of municipalities to provide basic services such as waste management and sanitation services. This situation is pertinent for the entire Global South and particularly, for towns and cities in Africa. The increasingly large amounts of solid waste generated each day at the municipal level raises heavy concern. Clearly, the waste sector is marred by weak policies and funding constraints; its burdens exacerbated by the effects of hyper-consumerism and the over-exploitation of natural resources. In order to overcome these challenges, collective action is required at the community level.

Centre for Science and Environment (CSE) has decades of experience in research and policy advocacy on waste management, in India and the Global South. In 2022, CSE formed the Global Forum of Cities for Circular Economy (GFCCE) as a platform to promote cross-learning among countries in the Global South. An important goal of GFCCE is to adopt sustainable solid waste management practices in the region. CSE has used the GFCCE platform to facilitate discussions around contemporary issues and share new knowledge, practices, and evidence-based learnings to improve the solid waste management ecosystem in the Global South. Over the past year the forum has grown to

include more states. Between July 2022 and May 2023, three rounds of trainings, workshops and exposure visits have been organized for the GFCCE member states. During this period, two important publications were released—"Solid Waste Management in Africa" and "Plastic Waste Management in Africa". Both studies revealed one common truth—the absence of government data at the local, regional and national level that would enable a credible assessment of the waste management scenario or planning to improve the current state of governance for sanitation and waste management. Additionally, the third training-cum-exposure visit of 19 GFCCE member states to India that was conducted in May 2023, exposed the forum to the Indian policy space and practices on the ground with reference to the flagship, Swachh Bharat Mission 2.0 (Clean India Mission 2.0). During the event, the GFCCE member states had the opportunity to learn about Swachh Survekshan, an annual cleanliness survey that is conducted every year by the Indian Ministry of Housing and Urban Affairs in nearly 5,000 Indian cities to gauge and incentivize sanitation performances across the nation. The exercise not only creates healthy competition among cities, but also helps administrators and policy makers view cities objectively through the lenses of different measurable parameters, scores, ranks and ratings. To take GFCCE's initiative forward and push forum members and cities towards the adoption of effective waste management systems, CSE realized the importance of introducing the learnings from the implementation of Swachh Survekshan in India. This assessment toolkit, therefore, is expected to help cities and policymakers take informed decisions on improving

the existing solid waste management ecosystem in their respective cities and countries.

This toolkit provides a framework in the form of a "ranking system" to assess the state of solid waste management at the municipal-level in African cities. It is expected that this toolkit will assist GFCCE countries in evaluating current challenges in their solid waste management systems and work towards implementing appropriate measures to improve them. Under this initiative, GFCCE cities will be ranked based on their performance in various parameters, such as waste source separation initiatives, efficient waste collection and transportation, scientific treatment, and the final disposal of waste. It is anticipated that sustainable waste management models can be established in GFCCE cities by reducing waste generation at the source, conserving resources through the promotion of circular economy models, enhancing decentralized and community-based initiatives, creating livelihoods for the urban poor through micro-enterprises and informal waste recycling cooperatives, and promoting public and private actions to develop integrated waste management systems. Our toolkit is designed to help African cities improve their quality of life, waste management infrastructure, and overall well-being. We hope it will serve as a catalyst for positive change in urban environments and contribute to sustainable urban development in the continent.

Our toolkit to rank African cities is an initiative aimed at evaluating and promoting cleanliness, sanitation, and the overall quality of life in African urban centers.

FRAMEWORK USED TO DEVELOP THE TOOLKIT

The toolkit for ranking African cities has been inspired by the Swachh Survekshan model that has been implemented across the nation by the Government of India. The Swachh Survekshan program is an annual cleanliness and sanitation assessment initiative for Indian cities where they are ranked based on various cleanliness and sanitation parameters. The program was launched in 2016 as a part of the Swachh Bharat Abhiyan (Clean India Mission), which is a nationwide cleanliness and sanitation drive aimed at making India clean and garbage-free. The ongoing Swachh Survekshan program has been successful in fostering cleanliness and hygiene in cities across the country to a certain extent, making it an excellent model to be adapted for African and Asian cities. However, it is important to start with some basic parameters of assessment and ranking in the initial stages and then modify the parameters as cities progress in the initiative. Our approach is elaborated below:

1. OBJECTIVES AND SCOPE

The primary objective of our toolkit is to create an inventory of data for GFCCE member states. The data would be critical in assessing and ranking African cities based on their cleanliness and related parameters, with a particular focus on their waste management systems. The broader goal is to establish an environmentally, socially and economically self-sustainable waste management ecosystem in our partner countries; this aligns well with the objectives of United Nations Sustainable Development Goal 17 (SDG 17) which is "partnerships for goals."

2. SELECTION OF PARAMETERS

The toolkit has been developed with preliminary parameters based on our understanding of various crucial factors for ensuring a sustainable solid waste management system in a city. These parameters will be further discussed with our partner country representatives during the fourth GFCCE workshop in Accra, Ghana before being finalized. The selection of parameters for city ranking will be a collaborative effort, and the resulting inputs will be integrated into this toolkit.

3. DATA COLLECTION

Collecting reliable and consistent data is a crucial step in the ranking process. The GFCCE member states are expected to administer the implementation of the toolkit for obtaining data from their cities using day-to-day records on municipal solid waste and other sources, including government reports, surveys, and field assessments. Ensuring data accuracy and reliability is of utmost importance, and CSE will also provide capacity building and handholding support to the GFCCE member states to implement the toolkit on the ground.

4. SCORING SYSTEM AND TRANSPARENCY

The toolkit employs a scoring system that allocates scores or weightages to the cities based on their performance in the defined parameters as mentioned in the current toolkit. A city's total score will reflect its overall performance in municipal solid waste management. The methodology, data and ranking criteria are mentioned in this toolkit.

5. DATA ANALYSIS AND RANKING OF CITIES

Upon completion of data collection from the cities by GFCCE members, CSE will conduct a thorough analysis to rank the African cities. Rankings will be updated from time to time to track progress and encourage ongoing improvements in waste management of the cities. For ease of administration, CSE will try and introduce an open-source, mobile application-based platform with automated collation, validation, compilation and reporting, as an option to GFCCE.

6. FEEDBACK FOR IMPROVEMENT AND RECOMMENDATIONS

Cities will receive feedback and recommendations based on their rankings. This feedback will highlight existing challenges, areas of improvement and areas of strengths, serving as a guidance tool for municipal authorities and stakeholders involved.

7. EXPANSION OF GFCCE MEMBER COUNTRIES AND CITIES

Alongside the growth of GFCCE, CSE intends to expand the toolkit to cover more cities and regions across Africa and the Global South. The toolkit will go through a series of need-based revisions to make it adaptable to various city sizes, and socio-economic status of the cities and countries.

8. USING THE TOOLKIT FOR CRITICAL POLICY DECISIONS

CSE will facilitate data-driven planning and focus on influencing policy-level changes upon the completion of the first round of implementation of the toolkit. CSE will especially focus on issues like source separation, efficient collection and transportation, treatment, disposal, decentralization, integration of informal sector, sustainable procurement, disincentivizing dumping, revenue generation from waste management etc.

SCORING METHOD

Parameters	Score	Weightage (%)
Segregation efficiency	150	7.5
Collection and transportation efficiency	200	10
Treatment and processing	350	17.5
Plastic waste management	230	11.5
Decentralized management of wet waste	100	5
Treatment and processing of special wastes	100	5
Disposal in landfill and dumpsite closure/remediation	300	15
Inclusion and involvement of the informal sector in the waste management system	100	5
Stakeholder engagement in solid waste management planning	20	1
Information, Education and Communication (IEC) activities and capacity building initiatives	100	5
Monitoring	100	5
Financial performance	150	7.5
Enactment of solid waste management bye-laws and their enforcement	100	5
Total Score	**2,000**	**100**

STAR RATING :
Ranking and award of best performing cities

Star rating	Overall score
5 Star ★★★★★	>90%
4 Star ★★★★	70–89%
3 Star ★★★	50–69%
2 Star ★★	30–49%
1 Star ★	10–29%

Category of ranking

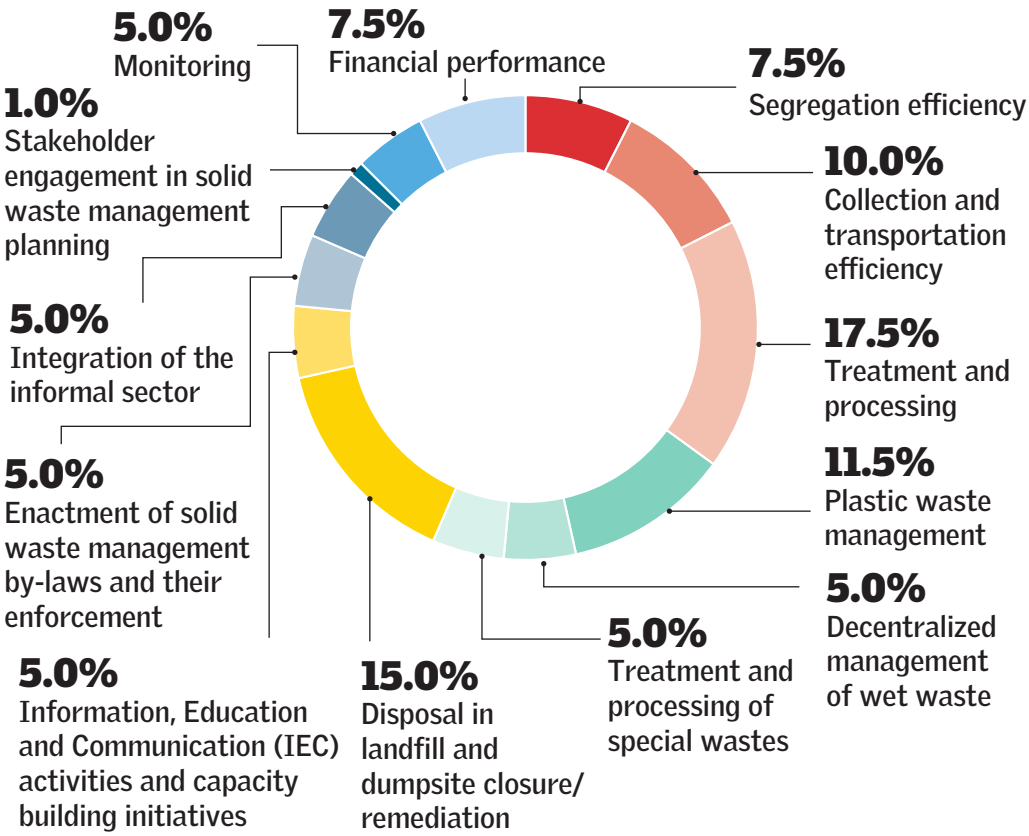
1. Overall star rating of best performing cities

2. Overall star rating of best performing cities in different categories:

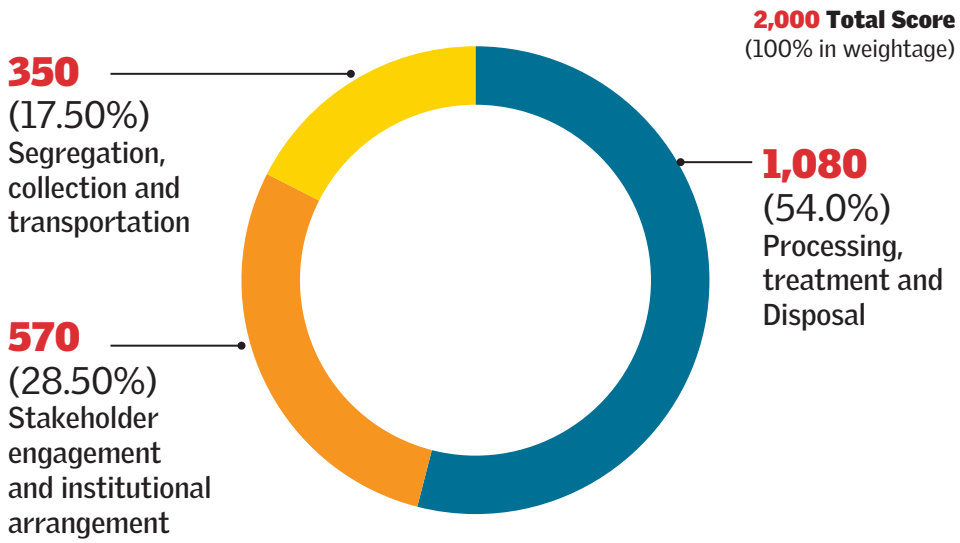
- Segregation, collection and transportation
- Processing, treatment and disposal
- Stakeholder engagement and institutional arrangement

3. Overall star rating of best performing cities based on population

Individual weightage of different parameters



Category-wise distribution of parameters



CITY PROFILE

CITY PROFILE

Name of the city:

Name of the region/province:

Name of the country:

S. No.	Data point	Response
1	Area in sq km	
2	Present number of municipal wards	
3	Number of zones (if applicable)	
4	Total population as per last official census	
5	Year the last population census was conducted	
6	Estimated current population (2023)	
7	Floating population (population visiting the city for business, leisure, tourism etc. in 2023)	
8	Total no. of households as per the last officials census	
9	Total no. of commercial establishments (markets, shops, shopping malls etc.)	
10	Total no. of institutional establishments (schools, colleges, offices etc.)	
11	Total no. of bulk waste generators (if applicable)	
12	Total sanitation staff (door-to-door collection, transportation, processing and disposal)	
13	Total managerial staff for the management of sanitation activities (sanitation engineers, supervisors etc.) at the intermediate field level and the city-government level)	
14	Total number of elected representatives	

Notification of municipal bye-laws for solid waste management (if applicable)

S. No.	Data point	Response
15	Solid waste management (Yes/No)	
16	Plastic waste management (Yes/No)	
17	Special category waste (Yes/No)	
18	User fee notification (Yes/No)	
19	Any other (please mention waste type)	

Waste generation

S. No.	Details	Tonnes/Day
20	Total waste generated	
21	Wet waste (bio-degradable) generated	
22	Dry waste (non-biodegradable) generated	
23	Hazardous waste generated	
24	Biomedical (healthcare) waste generated	
25	C&D waste generated (if treated as a separate category)	
26	E-waste generated (if treated as a separate category)	

Transportation

S. No.	Vehicle details	Numbers
27	Number of push carts and tricycles	
28	Total no. of mechanized vehicles (auto tipper/ dumper placer/ compactors/ tractors/ tippers/hywa)	
29	Average no. of vehicles used per ward	
30	Average no. of households covered by each vehicle meant for door-to-door collection per day	
31	Number of vehicles that have compartments for segregated collection	
32	Total no. of vehicles with GPS tracking system.	

Waste collection facilities

S. No.	Facility details	Numbers
33	Total no. of primary garbage collection points	
34	Total no. of community bins/ garbage vulnerable points	
35	Total no. of secondary collection points/ transfer station	

Waste processing infrastructure

S. No.	Infrastructure details	Numbers	Capacity in Tonnes/ Day	Total quantity of waste being processed
36	Total no. of households practicing home composting			
37	Total no. of BWGs (if applicable) processing organic waste			
38	Number of decentralized organic waste processing facilities (composting)			
39	Number of centralized organic waste processing facilities (composting)			
40	Number of bio-methanation plants			
41	Number of decentralized material recovery facilities (MRF) for processing dry waste			
42	Number of centralized MRF			
43	Number of Refuse Derived Fuel (RDF) Plants			
44	Number of waste-to-energy facilities available			
45	Number of hazardous waste processing facilities			
46	Number of sanitary waste processing facilities			
47	Number of C&D waste processing facility			
48	Number of biomedical (healthcare) waste treatment facilities			

Collection schedule

S. No.	Component	Response
49	Door-to-door (D2D) collection and transportation is being done by (ULB/concessionaire/both)	
50	Number of wards where D2D collection is done by informal waste pickers	
51	Processing and disposal done by (ULB/Concessionaire/ Both)	
52	Frequency of door-to-door collection in residential areas (daily/thrice a week/ twice a week/ once a week/ not collected/others – please specify)	
53	Frequency of Door-to-Door Collection in Commercial/ institutional Areas (Daily/Thrice a week/ Twice a week/ Once a week/ Not collected/Others – please specify)	
54	Number of wards where D2D collection service is provided	
55	Percentage of households covered under D2D Collection	
56	Number of wards where waste is collected in a segregated manner	
57	Percentage of households giving segregated waste	
58	Frequency of Road Sweeping and cleaning (Daily/ Thrice a week/ Twice a week/ Once a week/ Fortnightly/ Monthly Not at all)	

Inclusion of informal waste pickers

S. No.	Parameters	Response
59	**Approximate number of informal sector working in the city (waste-pickers)**	
60	Whether the Informal Waste collectors have been integrated **(Yes/No)**	
61	Percentage of Informal Waste Pickers been Integrated **(Number)**	
62	Whether ID card issued to Informal Waste Pickers **(Yes/No)**	
63	Whether Health Insurance, PPE, Health facilities provided to Informal Waste Pickers **(Yes/No)**	
64	Whether incentives such as right to waste are given to the informal waste pickers **(Yes/No)**	

Landfill/Dumpsite Remediation

S. No.	Parameters	Details
65	Number of dumpsite/landfills	
66	Total area **(acre)**	
67	Type **(Engineered Landfill / Dumpsite)**	
68	Is fresh waste is being dumped in the same dumpsite **(Yes/No)**	
69	Approx. daily quantities of fresh waste received at the dumpsite **(tonnes per day)**	
70	Status of the legacy (old) waste wreatment **(on-going/planned/not planned)**	
71	Age of the landfill in terms of years **(number of years)**	
72	Quantity legacy waste being treated/day **(tonnes)**	
73	What percentage of legacy waste has been treated so far **(percentage)**	
74	Method of treating legacy waste **(bio-capping/biomining/both)**	

Capital, operational cost and revenue from waste management (per month)

S. No.	Parameters	Cost in USD/ Month
75	Expenditure on Municipal Solid Waste (MSW) collection and transportation	
76	Expenditure on MSW processing	
77	Expenditure on MSW disposal	
78	Total expenditure on MSW management	
79	Users fee collected	
80	Revenue generated from selling of compost, biogas	
81	Revenue generated from selling of recyclables, RDF	
82	Total revenue generated	

Engagement with citizens / waste generators through communication activities

S. No.	Parameters	Details
83	Number of Information Education Communication (IEC) activities conducted in the last two financial years	
84	Number of municipal wards covered through communication activities	
85	Percentage of population reached through communication activities	
86	Type of communication strategy adopted (in-person engagement/ engagement through print or electronic media/ engagement through social media / engagement through leaflet / wall writin/ hoarding / posters etc.)	
87	The year the communication campaign was carried out	
88	What was the objective of the communication campaign (to promote source separation/ to promote home composting / to reduce waste at source / to reduce open littering or burning	
89	Has the objective been achieved? (fully / partially / not achieved)	

Good practices (to be explained briefly)

S. No.	Parameters	Response
90	Does the city have any good practices to showcase? (Yes/No)	
91	Type of good practice (source separation / waste reduction / waste collection and transportation / waste processing and treatment / decentralized waste management / landfill management / communication campaign / technological innovation / monitoring and grievance management	

ASSESSMENT CRITERIA


NEWS

CATEGORY-I

SEGREGATION, COLLECTION AND TRANSPORTATION

TOTAL MARKS
350

PARAMETERS SCORE

SEGREGATION EFFICIENCY
150

COLLECTION AND TRANSPORTATION EFFICIENCY
200

Segregation efficiency

Waste segregation efficiency refers to how effectively waste materials are sorted and categorized into their respective categories during the waste management process. This indicator indicates separation of different fractions of municipal solid waste at the source of generation.

Waste segregation or waste separation refers to the process of sorting and categorizing waste materials into different categories based on their characteristics, composition and potential for recycling or disposal. This practice is essential for ensuring scientific treatment and for the effective management of waste. This process is essential to effectively manage the growing volumes of waste generated by households, businesses and industries.

Typically, waste is classified into several groups including organic waste, recyclables, hazardous waste and non-recyclable or residual waste. The exact categories may vary from one location to another, depending on local waste management regulations and infrastructure.

Organic waste, for example, comprises biodegradable material like food waste and yard waste, typically referred to as "greens." These materials can be composted or subjected to biomethanation and transformed into nutrient-rich compost or biogas, reducing the burden on landfills and incineration facilities. Recyclables encompass materials that can be reused or recycled, such as paper, cardboard, glass, plastics, and metals. Properly sorted recyclables are sent to recycling facilities where they can be processed and turned into new products. Similarly, others fractions of municipal solid waste such as household hazardous waste and sanitary waste can be sorted in different categories as per the country's norms.

List of indicators

S. No.	Sub-indicators	Scheme of marking	Marks
1.1	Whether source separation/ segregation of waste is mandated in the policy	Yes	20
		No	0
1.2	Whether the policy mentions the number of fractions in which waste is to be segregated (dry waste, wet waste, etc.)	Yes	20
		No	0
1.3	Percentage of source segregation / source separation Households and other establishments* segregating their waste at the source of generation (segregation should at least be in two fractions—wet waste and dry waste)	Segregation > 75% establishments	60
		Segregation in 50–74% establishments	45
		Segregation in 25–49% establishments	30
		Segregation in 5–24% establishments	15
		Less than 5%	0
1.4	Number of fractions in which waste is segregated	More than three fractions – wet, dry, sanitary and domestic hazardous wastes	50
		Three fractions	40
		Two fractions—wet waste and dry waste	30
		No separation	0

* Here other establishments include schools, offices, marketplaces, restaurants, hotels and healthcare facilities

Collection and transportation

This indicator assesses the city for having a system in place for collection and transportation of segregated municipal solid waste in a timely and economical manner from the point of generation or disposal to the point of treatment/processing or final disposal at the landfill site.

This process involves the systematic collection of waste materials from households, commercial establishments, and institutions etc. within a municipality or urban area, followed by their transportation to appropriate disposal or processing facilities. Efficient collection and transportation are essential for maintaining public health, avoid littering of waste in the surrounding environment, environmental sustainability, and the overall well-being of a community.

List of indicators

S. No.	Sub-indicators	Scheme of marking	Marks
2.1	Whether collection and transportation of waste is mandated by the policy	Yes	20
		No	0
2.2	Collection frequency: how often is the waste collected by the authorized waste collector (door-to-door collection)	Yes	
		No	
		Daily	30
		Alternate Day	25
		4-5 times a week	20
		2-3 times a week	15
		Once a week	10
		Irregular collection system based on the availability of vehicle and manpower (more than week)	0
		No collection system	0
2.3	Collection coverage: percentage of residential and other establishments that are covered by daily collection system	Daily collection in > 75% establishments	30
		Daily collection in 50-74% establishments	20
		Daily collection in 25-49% establishments	10
		Daily collection in <25% establishments	5
		Nil	0

S. No.	Sub-indicators	Scheme of marking	Marks
2.4	Percentage of the total municipal wards covered under the collection service	> 75%	30
		50–74%	20
		25–49%	10
		<25%	5
		Nil	0
2.5	Percentage of total waste collected by the urban local body and/or authorized waste collector (private/informal waste association) within the jurisdiction of the ULB, excluding waste recovered and recycled/processed by informal waste sector that is not yet officially organized/ integrated	> 75%	30
		50–74%	20
		25–49%	10
		<25%	5
		nil	0
2.6	Percentage of segregated waste collected from residential and other establishments	segregated collection in > 75% establishments	30
		segregated collection in 50–74% establishments	20
		segregated collection in 25–49% establishments	10
		segregated collection in 5–24% establishments	5
		No segregation	0
2.7	Whether separate containers/ compartments are setup for collection of different fractions of waste	Yes	10
		No	0
2.8	Whether containers/compartments transporting waste are covered	Yes	10
		No	0
2.9	Whether vehicles transporting waste are fitted with a GPS (Global Positioning System) to enable real-time monitoring of vehicle movement	Yes	10
		No	0

CATEGORY-II

PROCESSING, TREATMENT AND DISPOSAL

TOTAL MARKS
1,080

PARAMETERS SCORE

TREATMENT AND PROCESSING
350

PLASTIC WASTE MANAGEMENT
230

DECENTRALIZED MANAGEMENT OF WET WASTE
100

TREATMENT AND PROCESSING OF SPECIAL WASTES
100

DISPOSAL IN LANDFILL AND DUMPSITE CLOSURE/ REMEDIATION
300

Processing and treatment

This indicator assesses the city on their system that is in place for ensuring the scientific treatment of all fractions of municipal solid waste generated in the city.

The scientific treatment of municipal solid waste (MSW) involves the use of advanced technologies and processes to manage and process waste materials in an environmentally friendly and efficient manner. The primary goal of scientific MSW treatment is to minimize the negative environmental impacts of waste disposal (avoiding dumping, landfilling, burning), recover valuable resources, and reduce the overall volume of waste that ends up in landfills or incineration. There are several methods and technologies used for the scientific treatment of MSW, such as biological treatment (composting, biomethanation, Mechanical Biological Treatment (MBT), Material Recovering Facility (MRF)) for the sorting and segregation of dry recyclables etc.

The choice of technology and methods depends on factors such as the composition of the waste stream, local regulations, and available infrastructure. Sustainable waste management practices, including recycling, composting, and energy recovery, are essential components of integrated waste treatment systems.

List of indicators

S. No.	Sub-indicators	Scheme of marking	Marks
3.1	Whether scientific treatment of waste fractions is mandated in the policy	Yes	50
		No	0
3.2	Whether land has been identified and allocated for solid waste treatment/recycling facilities (processing, treatment, etc.)	Yes	10
		No	0
3.3	Suitability of available/allocated land for treatment and processing facilities (free of encumbrances, adequate buffer areas, statutory clearances like environmental clearances etc.)	Yes	10
		No	0
3.4	Whether weighbridges have been set up at transfer stations or enroute to processing and disposal facilities	Yes	10
		No	0

S. No.	Sub-indicators	Scheme of marking	Marks
3.5	Whether waste collected from the city is weighed at weighbridges and records are maintained	Yes	10
		No	0
3.6	Whether there is a waste processing/treatment plant for wet waste processing*	Yes	50
		No	0
3.7	Whether there is a waste processing/recovery plant for dry waste processing *	Yes	50
		No	0
3.8	Percentage of total collected waste recovered/recycled/processed by the local body or authorized service provider (private contractor/ informal waste association)	> 75% of total collected waste treated/processed	100
		50–74% of total collected waste treated/processed	70
		25–49% of total collected waste treated/processed	40
		10–24% of total collected waste treated/processed	30
		5–10 %	15
		No treatment (less than 5%)	0
3.9	Percentage of total collected wet waste treated, either by decentralized or centralized processing	> 75%	30
		50–74%	20
		25–49%	10
		<25%	0
3.10	Percentage of total collected dry waste treated, either by decentralized or centralized processing	> 75%	30
		50–74%	20
		25–49%	10
		< 25%	0

** Efficiency and feasibility of a particular technology may depend upon certain selection criteria such as quantity of waste generated, physical and chemical properties of waste, land availability, terrain, climatic conditions, market for the product, capital investment etc. to maximize resource conservation and minimize health and environmental impacts.

Decentralized management of wet waste

This indicator assesses whether the city has a mechanism in place to promote and implement the scientific treatment of municipal solid waste, particularly the biodegradable fraction, in a decentralized manner.

Decentralized processing of municipal solid waste (MSW) involves the local or on-site treatment of waste materials at or near the point of generation or within specific communities. This approach is in contrast to centralized waste management systems where waste is transported to a distant processing facility. Decentralized processing offers several advantages, including reduced transportation costs, energy savings, and lower environmental impact.

List of indicators

S. No.	Sub-indicators	Scheme Of marking	Marks
4.1	Any provision in the law or policy promoting of decentralisation of waste management activities	Yes	30
		No	0
4.2	Whether any provision for Bulk Waste Generators (BWGs) in the policy*	Yes	10
		No	0
4.3	Whether BWGs have been identified	Yes	10
		No	0
4.4	Whether BWGs have been notified	Yes	10
		No	0
4.5	Percentage of identified BWGs practicing onsite processing of their wet waste	> 75% of total identified BWGs	30
		50–74% of total identified BWGs	20
		25–49% of total identified BWGs	10
		< 25% of total identified BWGs	0
4.6	Whether any provision for penalty for non-compliant BWGs	Yes	10
		No	0

* Bulk Waste Generators (BWGs) refer to entities, businesses, or institutions that produce a significant quantity of waste materials, typically exceeding a specified threshold established by local or regional waste management authorities. For example, in India, Solid Waste Management (SWM) Rules, 2016 defines Bulk-waste Generators (BWGs) as waste generators that generate more than 100 kg of waste per day.

Plastic Waste Management

Materials like plastic are non-degradable which means they will not be absorbed and recycled. Plastic waste management refers to managing the plastic waste generated, and processing it to make it reusable. This indicator assesses whether the city has a dedicated policy and mechanism in place to promote and implement scientific treatment of plastic waste generated within its jurisdiction.

List of indicators

S. No.	Sub-indicators	Scheme of marking	Marks
5.1	Whether there is a dedicated policy exists for plastic waste management	Yes	50
		No	0
5.2	Whether ban in manufacture, import, stocking, distribution, sale and usage of single use plastic items (such as carry bags, plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays, wrapping or packing films etc.) is mandated in the legislation	Yes	10
		Yes	50
5.3	Percentage of total collected plastic waste recycled	No	0
		> 50%	50
		40–49%	40
		30–39%	30
		20–29%	20
		10–19%	10
		5–9 %	5
		Less than 5%	0
5.4	Whether legislation has mandated polluters pay (reference to EPR policy in India) principle in their policy to deal with plastic waste	Yes	15
		No	0
5.5	Whether voluntarily EPR initiatives have been adopted (for instance, retail take-back programs, etc.)	Yes	15
		No	0
5.6	Whether the EPR scheme has targets for collection and recycling	Yes	50
		No	0

Treatment and processing of special wastes

This indicator assesses whether the city has a mechanism in place to manage the special wastes including sanitary, health care (bio-medical), construction and demolition (C&D), and domestic hazardous wastes.

Sanitary waste, also known as hygiene waste or personal hygiene waste or household biomedical waste are typically generated from practices related to personal cleanliness and hygiene such as soiled sanitary pads, used diapers, tampons, incontinence products, and related items. Proper disposal and management of sanitary waste are essential to maintain hygiene, prevent the spread of infections, and mitigate environmental concerns.

C&D waste stands for "Construction and Demolition waste." It refers to the waste materials generated during the construction, renovation, or demolition of buildings and infrastructure. C&D waste typically includes a wide range of materials, such as wood, concrete, brick, metal, drywall, roofing materials, insulation, and more. This category of waste is distinct from municipal solid waste (MSW) and poses unique challenges and opportunities for recycling and disposal.

Domestic hazardous waste refers to hazardous waste materials that are generated by households. Unlike hazardous waste generated by industrial, commercial, or institutional sources, domestic hazardous waste originates from typical household activities and consumer products. These materials are often considered hazardous due to their potential harm to human health or the environment if not handled and disposed of correctly. They possess characteristics such as corrosiveness, flammability, reactivity and toxicity. Some examples are empty bottles of pesticides, rodenticides, mosquito repellants etc.

E-waste is electronic products that are unwanted, not working, and nearing or at the end of their "useful life." Computers, televisions, VCRs, stereos, copiers, and fax machines are everyday electronic products which are typically generated by the households and commercial establishments.

List of indicators

S. No.	Sub-indicators	Scheme of marking	Marks
6.1	Whether policy mentions treatment and processing of special wastes:		
	4.1.1 Sanitary waste	Yes	10
		No	0
	4.1.2 Household Hazardous waste	Yes	10
		No	0
	4.1.3 Bio-medical waste	Yes	10
		No	0
	4.1.4 Construction and Demolition (C&D) waste	Yes	10
		No	0
	4.1.5 E-waste	Yes	10
		No	0
6.2	Whether policy mentions treatment and processing of special wastes:		
	4.2.1 Sanitary waste	Yes	10
		No	0
	4.2.2 Domestic Hazardous waste	Yes	10
		No	0
	4.2.3 Bio-medical waste	Yes	10
		No	0
	4.2.4 Construction and Demolition (C&D) waste	Yes	10
		No	0
	4.2.5 E-waste	Yes	10
		No	0

Disposal in landfill and dumpsite closure/ remediation

Unlined and unscientifically designed landfill are typically referred to as dump sites. Dump site remediation is of paramount importance due to its far-reaching implications for the environment, public health and overall quality of life. Dump sites, often characterized by uncontrolled waste disposal, emit harmful gases like methane, contribute to air and water pollution and pose serious health risks to nearby communities.

Dump site remediation is the process of removing waste from a dumping site to not only reclaim the valuable land area, but also eliminate hazardous products and mitigate potential contamination from the site into groundwater

List of indicators

S. No.	Sub-indicators	Scheme of marking	Marks
7.1	Whether landfill site has been identified and allocated for disposal	Yes	10
		No	0
7.2	Type of landfill facility/dumping site		
	uncontrolled dumping	Yes	0
	controlled dumping	Yes	40
	State-of-art landfill facility (with leachate collection and treatment system, gas collection system, and other control measures)	Yes	100
7.3	Suitability of landfill site for disposal (statutory clearances like environmental clearances etc.)	Yes	50
		No	0
7.4	Whether landfill site is operated and maintained as per set standards (daily soil cover, compaction etc.)	Yes	50
		No	0

S. No.	Sub-indicators	Scheme of marking	Marks
7.5	Percentage of waste disposed at landfill site	< 10%	50
		10-19%	40
		20-29%	30
		30-39%	20
		40-49%	10
		> 50%	0
7.6	Whether the country has its own design and operation standards, policy or guidelines for landfill design and site selection criteria or they are using USEPA standards/ other standards	Yes	20
		No	0
7.7	Whether existing dumpsites have been identified	Yes	10
		No	0
7.8	Whether existing dump sites have been remediated/planned to be remediated	Yes	10
		No	0

CATEGORY-III

STAKEHOLDER ENGAGEMENT AND INSTITUTIONAL ARRANGEMENT

TOTAL MARKS
570

PARAMETERS SCORE

INCLUSION AND INVOLVEMENT OF THE INFORMAL SECTOR IN THE WASTE MANAGEMENT SYSTEM
100

STAKEHOLDER ENGAGEMENT IN SOLID WASTE MANAGEMENT PLANNING
20

INFORMATION, EDUCATION AND COMMUNICATION (IEC) ACTIVITIES AND CAPACITY BUILDING INITIATIVES
100

MONITORING
100

FINANCIAL PERFORMANCE
150

ENACTMENT OF SOLID WASTE MANAGEMENT BY-LAWS AND THEIR ENFORCEMENT
100

Inclusion and involvement of the informal sector in the waste management system

The informal sector refers to individuals or groups of workers who are not part of formal, organized waste management systems but are engaged in waste collection, recycling, and related activities independently or in small, decentralized operations. Engaging the informal sector can have numerous benefits, including enhancing waste collection coverage, promoting recycling, reducing environmental impacts, and supporting livelihoods.

The role of the informal sector is critical, and the livelihoods of large numbers of the urban poor depend on collecting, sorting and recycling waste. These workers provide a vital service and also lessen the cost burden on municipalities enormously. This indicator emphasizes on the organization and inclusion of the informal sector in the formal waste management system.

In many places across the globe, the informal sector plays a significant role in waste management, especially in resource-constrained areas. By recognizing their contributions, providing support, and integrating them into formal waste management systems, it is possible to achieve more effective and sustainable waste management practices while improving the livelihoods of those involved in the informal sector.

Informal sector may refer to waste pickers, waste collectors, itinerant buyers, 'recyclers', 'reclaimers', etc. operating as individuals, communities, or private/micro enterprises performing informal waste services in the value chain of solid waste management.

Informal sector may be involved in waste collection, sorting recyclable material at source of generation/material recovery facility/processing facility, setting up and managing recyclable or reusable waste take-back or buy-back processing facilities, etc.

Capacity building and training programs may include waste management and handling, occupational hygiene and safety, maintenance of work ethics and team work, managerial skills (business management, marketing, negotiation skills), etc.

List of indicators

S. No.	Sub-indicators	Scheme of marking	Marks
8.1	Whether policies and strategies acknowledge/recognize the role played by the informal waste sector in reducing waste	Yes	10
		No	0
8.2	Whether the policies and strategies provide guidelines regarding integration of the informal waste sector in the formal waste management system	Yes	10
		No	0
8.3	Whether any initiatives undertaken to identify and map the informal waste pickers	Yes	10
		No	0
8.4	Percentage informal waste pickers formally integrated/organized through contractors/cooperatives/ membership-based associations/ non-governmental organizations (NGOs)/self-help groups (SHGs)	> 50%	50
		40–49%	40
		30–39%	30
		20–29%	20
		10–19%	10
		< 10%	0
8.5	Whether the waste workers/ waste pickers are provided with training programmes, ID cards immediate first-aid measures; personal protection equipment required to do their task safely, and periodically changed	Yes	10
		No	0
8.6	Whether the informal waste pickers are provided with informal waste pickers provided access to health care services/medical coverage or insurance facility	Yes	10
		No	0

Stakeholder engagement in solid waste management planning

Stakeholder participation plays an effective role in sustainable SWM as they include waste generators, waste managers, Government officials and the public at large. Stakeholder participation, particularly involving communities could help in building local capacities and competencies. This could help to substantially improving the aptitude of local population to negotiate with authorities at the local body and thereby bringing in better waste management services to the ground. Also, the involvement of multiple stakeholders in the decision-making process could ensure more effectiveness in grass-root level governance.

List of indicators

S. No.	Sub-indicators	Scheme of marking	Marks
9.1	Whether any opportunities for public participation or involvement in the decision-making processes related to solid waste management planning	Yes	10
		No	0
9.2	Whether women – as providers of solid waste management services or beneficiaries of these services – are involved in the stakeholder consultations and decision-making processes	Yes	10
		No	0

Information, Education and Communication (IEC) activities and capacity building initiatives

This Indicator assess if some IEC activities are conducted at a city level or not.

Information, Education, and Communication (IEC) activities in waste management play a vital role in creating a culture of responsible waste management and environmental consciousness. These activities help to minimize waste generation, promote recycling, and ensure that hazardous waste is handled and disposed of safely. IEC also plays pivotal role in promoting source separation, home composting, reducing littering, timely payment of user charges for doorstep collection of waste etc. They also contribute to a cleaner, healthier, and more sustainable environment. These activities are designed to raise awareness, educate, and engage individuals and organizations in sustainable waste management practices.

List of indicators

S. No.	Sub-indicators	Scheme of marking	Marks
10.1	Percentage of waste generators (households) provided with IEC/ BCC activities	> 75	50
		50–74	40
		25–49	30
		< 25	20
		No activity	0
10.2	Percentage of sanitation provided with capacity building programmes	> 75	50
		50–74	40
		25–49	30
		< 25	20
		No activity	0

Monitoring

This Indicator assesses if the city continuously monitors several aspects of solid waste management. The city authorities and organizations can make informed decisions, improve waste management practices, and work towards more sustainable and environmentally responsible waste management systems by continuous monitoring and improving the systems.

Monitoring is a critical component of waste management systems and practices. It involves the systematic and continuous collection of data and information to assess, track, and manage various aspects of the waste management process. Monitoring serves several purposes, including ensuring the efficient operation of waste management, tracking progress, identifying areas for improvement, and complying with regulatory requirements.

List of indicators

S. No.	Sub-indicators	Scheme of marking	Marks
11.1	Whether the existing policy and strategic framework mandated monitoring of solid waste management at the city government level	Yes	50
		No	0
11.2	Whether the current monitoring system is functional to track collection / transportation / treatment / disposal on daily / weekly / monthly basis	Yes	10
		No	0
11.3	Whether the current monitoring mechanism is comprised of receiving and addressing grievances from citizens with regard to solid waste management services	Yes	20
		No	0
11.4	Whether attendance of sanitation staff is part of the monitoring system	Yes	10
		No	
11.5	Whether the current monitoring system generates reports and shared with the higher tier of administration	Yes	10
		No	0

Financial performance

This Indicator assess the fact that whether the waste management system in the city is economically sustainable or not. It helps prioritize investments, optimize resource allocation, and develop strategies that balance the economic, environmental, and social aspects of waste management.

Financial assessment or cost benefit analyses in waste management is a critical aspect of planning, implementing, and maintaining effective waste management systems. It involves evaluating the financial aspects of waste collection, transportation, processing, disposal, and the overall sustainability of waste management practices. A thorough financial assessment helps ensure that waste management programs are economically viable, cost-effective, and environmentally sustainable.

List of Indicators

S. No.	Sub-indicators	Scheme of marking	Marks
12.1	Whether the ULB has been able to recover operating expenses related to SWM services from operating revenues		
	Able to recover 100 % Opex	100	
	Able to recover 70 % Opex	70	
	Able to recover 50 % Opex	50	
	Able to recover 25 % Opex	25	
	No recovery	0	
12.2	Whether bye-laws prescribe criteria for levying of spot fine for non-compliance	Yes	10
		No	0
12.3	Whether user fee is levied	Yes	10
		No	0
12.4	Whether revenue is earned from selling of recyclables, compost, biogas	Yes	30
		No	0

Enactment of solid waste management bye-laws and their enforcement

The term "bye-laws" means regulatory framework notified by local body, census town and notified area townships. This parameter indicates whether the local body has drafted and notified bye-laws for the purpose of governing monitoring, compliance and effective management of municipal solid waste within the jurisdiction of the local body.

List of Indicators

S. No.	Sub-indicators	Scheme of marking	Marks
13.1	Whether bye-laws for solid waste management drafted by the city	Yes	50
		No	0
13.2	Whether bye-laws for solid waste management applicable within the jurisdiction of the local body	Yes	50
		No	0

IMPLEMENTATION PROCEDURE

1. SETTING UP AN INSTITUTIONAL MECHANISM AT THE NATIONAL LEVEL:

In order to create an inventory of all the cities, it is critical to set up an institutional mechanism, or a committee headed by a senior officer assigned with the task of coordinating with the city government through the regional/provincial administration, wherever applicable.

2. SETTING UP A DEADLINE:

To ensure that a task is undertaken and carried out by all the cities at the same time, it is critical to fix a deadline and communicate it to the city governments and regional administration. The national nodal institution must review the progress on the ground to provide the necessary impetus. A period of *two to three months* would be adequate to create the inventory for the baseline and for profiling the cities.

3. ASSIGNING A NODAL OFFICER AT THE CITY GOVERNMENT LEVEL

The task of profiling cities and furnishing data for the assessment and ranking of cities must be supervised by a designated nodal officer at every city government level. While communicating with the city government through the regional/provincial administration, the institution responsible for implementing the entire drive must direct the city administration to designate a nodal officer and inform the national government for the record and ease of review and monitoring. The nodal officer will deploy and mobilize necessary resources on the ground to collect and furnish the required data to be furnished within the stipulated timeline.

4. BACK-CHECK AND QUALITY AUDIT OF DATA

The institutional mechanism for the implementation of the initiative must include a system for quality audits and back-check of data for consistency. Ideally, the administrative political head of the city administration may be given the responsibility of validating and signing off the data to the national government. This will ensure transparency and accountability of the data which can be used by the government and various institutions for critical policy decisions in the future.

5. TECHNOLOGY FOR DATA COLLECTION, COMPILATION AND REPORTING

The scale and complexity of the entire mission calls for the adoption of appropriate technology solutions for ranking and profiling cities in the Global South in a manner that is helpful in ensuring stakeholders stay connected all the time. The technology must also provide all possible validation tools like date and time stamps, geo-tagging of specific data points, photo and video transfer, auto-compilation, dashboard creation, customized reporting etc. The technology platform should be able to keep all the stakeholders connected for data collection, validation and final approval before it is used for report generation and dashboard creation etc.

6. CAPACITY BUILDING

It is of paramount importance that everyone involved in the mission is properly trained to understand all the templates, data collection procedures, validation and back-check for quality audits, concurrent monitoring and reporting. The national government may designate a nodal officer as a master trainer who will supervise the intiative.

Centre for Science and Environment (CSE) will provide the necessary capacity building and handholding support to all the member states so that they are able to successfully roll out the ranking and profiling drive following the agreed timeline.

7. CUSTOMIZATION

The toolkit for profiling and ranking African cities will be released and discussed at length during the fourth GFCCE meeting-cum-workshop in Ghana. GFCCE member states will have the liberty to make changes in the profile template and assessment criteria depending on their requirements. CSE will facilitate such changes upon discussion and mutual agreement.

8. PREPARATION OF REPORT ON THE BASIS CITY RANKING AND PROFILING

CSE will analyze the collected data for profiling and ranking African cities and prepare a comprehensive report and share the same with all the member states within the GFCCE forum. The states may consider the report as a baseline for driving policy revisions, designing and redesigning implementation modalities and institutional arrangement, and continue to use the toolkit to measures changes on specific performance criteria.

MEANS OF VERIFICATION DOCUMENTS

Declaration Template: 1.1, 1.2, 1.3 and 1.4

City/Municipality Name					
SEGREGATION EFFICIENCY					
If source separation/segregation of waste is mandated in the policy, please provide the details;					1. Date of notification 2. Attachment of policy
Ward no.	Ward name	Type of the area	Total establishment	Segregation percentage	Category (wet, dry, sanitary and domestic hazardous wastes)
Signature and stamp of (Signatures/Stamps of the officers are compulsory):					Designated Signatory City name

Declaration Template: Indicators 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8 and 2.9

City/Municipality Name							
COLLECTION AND TRANSPORTATION EFFICIENCY							
If collection and transportation of waste is mandated by the policy provide the details;					1.Date of notification 2.Attachment of policy		
Sl. No.	Ward no.	Ward name	Collection frequency (daily/ alternate day/ 4-5 times a week/2-3 times a week/once a week/ irregular collection system)	Total no. of establishment	Total no of establishment covers under daily collection	Total no of establishment handover waste in segregated manner	Collection provided by ULB or authorized waste pickers (Yes/No)
Signature and Stamp of (Signatures/Stamps of the officers are compulsory):					Designated Signatory City name		

City/Municipality Name													
COLLECTION AND TRANSPORTATION EFFICIENCY													
Sl. No.	Ward no.	Ward name	Vehicle details					Total daily waste collection (In Ton)	Cateogry of waste				
			Vehicle No	Vehicle capacity	GPS equipped (Yes/No)	Compar tementa-lized (Yes/ No)	Covered transpor-tation of waste (Yes/No)		Wet waste	Dry waste	Mix waste	Sani-tary	Domestic hazardous
Signature and stamp of (Signatures/Stamps of the officers are compulsory):									Designated Signatory City name				

Declaration Template: Indicators 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10, 6.1 and 6.2

City/Municipality Name	
Processing and treatment	
If scientific treatment of waste fractions mandated in the policy; provide details	1. Date of notification 2. Attach policy document
If policy also mandates the processing and treatment of special waste (sanitary/domestic hazardous/biomedical/C&D/ e-waste); provide details	1. Date of notification 2. Attach policy document
Details suitability of available/allocated land for treatment and processing facilities	Attach statutory clearances document
Percentage of total area allocated for buffer zone (In percentage)	
Weighbridges are set up at transfer stations or enroute to processing and disposal facilities (Yes/No)	
Details of transfer station or weighbridge facility	
Name location 1	Lattitude and Longitute
Name location 2	Lattitude and Longitute
Name location 3	Lattitude and Longitute
Name location 4	Lattitude and Longitute
Name location 5	Lattitude and Longitute

Processing and treatment								
Details of waste processing plant					Mandated in the policy (Yes/No)	Number processing facility (in count)	Total capacity (in Ton)	Whether the plant design capacity is sufficient to process daily waste generation (Yes/No)
Wet waste								
Dry waste								
Sanitary								
Domestic hazardous waste								
Biomedical waste								
Construction and Demolition (C&D) waste								
E-waste								
SI. No	Name of plant	Location of the plant	Lattitude, Longitude	Type of processing plant (wet/dry/ sanitary/ domestic hazardous/ biomedical/ C&D/e-waste)	Cateogry of plant (centralized /decentra-lized)	Operating by (ULB/ authorized service provider)	Processing capacity (TPD)	Status (functional / non-functional /under contsruction / planned)

Processing and treatment

Total Waste Generated (in MT)								
Month	Wet (A)	Dry (B)	Sanitary (C)	Domestic Hazardous (D)	Biomedical (E)	E-waste (F)	C&D (G)	Total waste generated (A+ B + C + D + E + F + G)
Grand total (in MT)								
Daily avg. (in TPD)								

Total Waste Collected (in MT)

Month	Wet (H)	Dry (I)	Sanitary (J)	Domestic Hazardous (K)	Biomedical (L)	E-waste (M)	C&D (N)	Total waste collected (H + I + J + K + L + M + N)
Grand total (in MT)								
Daily avg. (in TPD)								

Processing and treatment

Total Waste PROCESSED (in MT)									
Month	Wet (O)	Dry (P)	Sanitary (Q)	Domestic Hazardous ®	Biomedical (S)	E-waste (T)	C&D (U)	Total waste Processed (O + P + Q + R + S + T + U)	Process rejects/ inerts
Grand total (in MT)									
Daily avg. (in TPD)									
Signature and stamp of (Signatures/Stamps of the officers are compulsory) :							Designated Signatory City name		

Declaration Template: Indicators of 4.1, 4.2, 4.3, 4.4, 4.5 and 4.6

City/Municipality Name				
DECENTRALISED MANAGEMENT OF WET WASTE				
If provision in the law or policy promoting of decentralization of waste management activities				1. Date of notification 2. Attach policy document
Policy also included the BWG provision				1. Date of notification 2. Attach policy document
If BWG has been identified				1. Date of notification 2. Attach policy document
BWG compliance				
Total BWG identified				
Total BWG complying				
Total BWG penalized for non-compliance				
SI. No	Name of identified BWG	Whether practicing onsite wet waste processing (Yes/No)	Total waste generation (Tonne)	What method they have adopted (composting/biogas)
Signature and Stamp of (Signatures/Stamps of the officers are compulsory) :				Designated Signatory City Name

Declaration Template: Indicators 5.1, 5.2, 5.3, 5.4, 5.5 and 5.6

City/ Municipality Name			
PLASTIC WASTE MANAGEMENT			
If legislation has mandated polluters pay (reference to EPR policy in India) principle in their policy to deal with plastic waste; provide the details;			1. Date of notification 2. Attach policy document
If voluntarily EPR initiatives have been adopted (for instance, retail take-back programs, etc.); provide the details;			1. Date of notification 2. Attach policy document
If EPR scheme has targets for collection and recycling; provide details; provide the details;			1. Attach details mentioning such mandate
Month	Total plastic waste generated (Tonne)	Total plastic waste collected (Tonne)	Total plastic waste recycled (Tonne)
Signature and stamp of (Signatures/Stamps of the officers are compulsory) :		Designated Signatory City name	

Declaration Template: Indicators of 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7 and 7.8

City/Municipality Name											
DISPOSAL IN LANDFILL AND DUMPSITE CLOSURE/REMEDIATION											
If landfill site has been identified and allocated for disposal; provide details;									1. Name of the standards 2. Attach landfill site identification and clearance document		
Details of standard followed by city for design and operation , policy or guidelines for landfill design and site selection criteria or they are using USEPA standards/ other standards									1. Name of the standards 2. Attach guidelines/standards document		
SI. No	Name of the landill	Loca-tion of Landfill	Lattitude and Longi-tude	Area (Acre)	Type of landfill/ dumpsite (uncontrol dumping/ control dumping/ state-of-art facility)	Status of statura-tory/ environ-ment clearance (Yes/No)	Whether landfill site is operated and maintai-ned as per set standards (Yes/No)	Percen-tage of total daily waste recei-ved at landfill (%)	Whether existing dumpsite for the remed-iation idenfied	Status of existing dumspite manage-ment (remed-iated / planned to remed-iated)	Quantity of waste to be remediated
Signature and stamp of (Signatures/stamps of the officers are compulsory) :									Designated Signatory City name		

Declaration Template: Indicators of 8.1, 8.2, 8.3, 8.4, 8.5 and 8.6

City/Municipality Name						
INFORMAL SECTOR						
If policies and strategies acknowledge/recognize the role played by the informal waste sector in reducing waste					1. Date of notification 2. Attach policy document	
If policies and strategies provide guidelines regarding integration of the informal waste sector in the formal waste management system					1. Date of notification 2. Attach guidelines document	
SI. No	Name of informal waste picker	Integrated or Organized (Yes/No)	Type organization (trade union/ cooperatives/ membership-based associations/ non-governmental organizations (NGOs)/self-help groups (SHGs))	Id Card provided (Yes/No)	PPE kit provided (Yes/No)	Access to health care services/ medical coverage or insurance facility provided (Yes/ No)
Signature and stamp of (Signatures/Stamps of the officers are compulsory) :					Designated Signatory City name	

Declaration Template: Indicators of 9.1 and 9.2

CITY/MUNICIPALITY NAME							
STAKEHOLDER ENGAGEMENT IN SOLID WASTE MANAGEMENT PLANNING							
SI. No	Type of stakeholder engaged with	Issue discussed (collection/ transportation/ segregation/ processing and disposal/ dumpsite remediation)	Date of the event	Number stakeholders participated	Number of male stakeholders participated	Number of female stakeholders participated	Photo
Signature and stamp of (Signatures/Stamps of the officers are compulsory):						Designated Signatory City name	

Declaration Template: Indicators 10.1 and 10.2

City/ Municipality Name				
Information, Education and Communication (IEC) activities and capacity building initiatives				
SI. No	Objective of IEC / BCC activity (collection/ transportation/ segregation/ processing and disposal/ dumpsite remediation, any other (specify))	Date of activty conducted	Number of household/establi-shments covered	Photo
Signature and stamp of (Signatures/Stamps of the officers are compulsory):				Designated Signatory City name

Declaration Template: Indicators 11.1, 11.2, 11.3, 11.4 and 11.5

City/ Municipality Name	
MONITORING	
If existing policy and strategic framework mandated monitoring of solid waste management at the city government level	Attach internal order/communication from leader of the city to staff ion monitoring and performance evaluation
If current monitoring system generates reports and shared with the higher tier of administration	Attach internal order/communication from leader of the city to staff ion monitoring and performance evaluation
Whether monitoring system is online or offline	
If current monitoring system is functional to track collection / transportation / treatment / disposal on daily / weekly / monthly basis	1. Attach daily, weekly and monthly report 2. Link of the dashboard
If current monitoring mechanism is comprised of receiving and addressing grievances from citizens with regard to solid waste management services	1. Attach city or central grievances redressal dashbord / App link 2. Attach offline document of grievances record
If attendance of sanitation staff is part of the monitoring system	Attach sanitation staff details with attendence
Signature and stamp of (Signatures/ Stamps of the officers are compulsory):	Designated Signatory City name

Declaration Template: Indicators 12.1, 12.2, 12.3 and 12.4

City/Municipality Name			
FINANCIAL PERFORMANCE			
Whether bye-laws prescribe criteria for user fee collection against SWM service and levying of spot fine for non-compliance			1. Date of notification 2. Attach policy document
Expenses			
S. NO	Particulars	Total amount (Last FY)	
		In local currency	In USD
1	Vehicle and fuel expenses		
2	Vehicle Repair and maintenance expenses (including insurance, Spares, tyres etc.)		
4	Cost of equipment and PPE		
5	Salary expenses		
6	Other		
A	TOTAL EXPENSES		
Revenue			
S. NO	Particulars	Total amount (Last FY)	
		In local currency	In USD
1	User charges (door-to-door waste collection charges)		
2	Revenue from sale of compost and biogas		
	Revenue from sale of dry recyclable, RDF, SCF etc		
3	Penalty recovered from violator		
5	C&D user charges and fine		
6	Plastic ban fines		
7	Other		
B	TOTAL REVENUE		
C	Percentage of total SWM expenses recovered from revenue (100% - (A-B)/A) * 100)%		
Signature and stamp of (Signatures/Stamps of the officers are compulsory) :		Designated Signatory City name	

Declaration Template: Indicators 13.1 and 13.2

City/Municipality Name	
ENACTMENT OF SOLID WASTE MANAGEMENT BYE-LAWS AND THEIR ENFORCEMENT	
If bye-laws for solid waste management drafted and notified by the city	1. Date of notification 2. Attach policy document
If bye-laws for solid waste management applicable within the jurisdiction of the local body	1. Date of notification 2. Attach public notification document
Signature and stamp of (Signatures/Stamps of the officers are compulsory):	Designated Signatory City name

This toolkit serves as a comprehensive framework for evaluating the state of solid waste management at the municipal level in African cities. By assessing the performance of the cities across various critical parameters, including waste source separation initiatives, efficient collection and transportation, scientific treatment, and final disposal, this toolkit empowers African cities to identify their strengths and challenges, enabling them to implement targeted measures for improvement.

This toolkit paves the way for GFCCE cities towards sustainable waste management models, encompassing strategies to reduce waste generation at the source, conserve resources through the adoption of circular economy principles, enhance decentralized, community-based initiatives, foster livelihoods for the urban poor through micro-enterprises and informal waste recycling cooperatives, and promote collaborative public and private actions to develop integrated waste management systems. It is envisioned to serve as a catalyst for positive transformation in urban environments, driving sustainable urban development across the continent.

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