Capacity building training module
Workbook for Chief Officer

Workbook prepared by – Kushaagra Innovation Foundation

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सत्यमेव जयते
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Table of Contents:

Objective of the Workbook:

This workbook is prepared with the intention to provide Chief Officers (COs) of Urban Local Bodies (ULBs) a format to pen down their thoughts, aspirations and strategies for Solid waste management in their cities. The workbook is designed to be used along with the training modules and to apply the information, knowledge and tools provided to develop and implement effective Solid Waste Management (SWM) strategies within their jurisdictions.

Through a series of modules and exercises, COs will gain a comprehensive understanding of:

- **Strategic Planning:** Setting short, medium, and long-term goals for SWM, including waste segregation, resource recovery, and sustainable practices.
- **SWM Challenges and Opportunities:** Identifying strengths, weaknesses, and opportunities in existing waste management systems.
- **Policy and Regulatory Framework:** Understanding relevant central and state government regulations and navigating challenges in implementation.
- **Informal Waste Pickers:** Strategies for successful integration of informal waste pickers into the formal SWM system.
- **Behavior Change for Source Segregation:** Analyzing current strategies and identifying best practices for promoting waste segregation at the source.
- **Sustainable SWM Models:** Evaluating different contracting models for various SWM processes like collection, transportation, processing, and disposal.
- **SWM Economy:** Exploring user fees, revenue sources, financing options, and the role of Extended Producer Responsibility (EPR) in SWM.
- **Circularity and Sustainability:** Learning about circular economy principles and their application in waste management to optimize resources and minimize environmental impact.
- **Waste Management Systems:** Evaluating current collection and transportation systems, identifying gaps and outlining plans to address them.
- **Processing and Treatment Technologies:** Exploring various waste streams (wet waste, dry waste, e-waste, etc.) and their processing methodologies, along with cost-benefit analysis.

- **Construction & Demolition Waste (C&D Waste) Management:** Learning best practices for C&D waste management, including notification procedures, user fees, processing facilities, and recycling opportunities.
- **Sanitary Landfills:** Understanding proper waste acceptance criteria for landfills and scientific disposal methods.
- **Legacy Waste Remediation:** Assessing models for remediating legacy waste dumpsites and selecting the most suitable approach for the ULB.

This workbook serves as a valuable resource for COs to lead their ULBs in achieving efficient and sustainable SWM practices.

- Develop and implement a customized SWM action plan for their ULB.
- Make informed decisions regarding SWM practices and technologies.
- Effectively manage resources and finances allocated to SWM.
- Increase waste diversion and resource recovery rates.
- Promote environmental sustainability through responsible waste management practices.

ULB Basic Information:

ULB Name with code	District	Division

Name of CO:

_____

City profile details:

ULB Current population	
Class of ULB	
Area in km^2	
Total waste generation (TPD)	
Total Dry waste generation (TPD)	
Total wet waste generation (TPD)	

1. Strategy Planning:

a. **What is your vision for the _____ (Name of ULB) for Solid waste management?**

_____

_____

_____

b. **What are the objectives you wish to achieve in Solid waste management?**

Obj 1: _____

Obj 2: _____

Obj 3: _____

2. Solid waste management Challenges:

Identify strengths, weaknesses, and opportunities in the ULB's SWM system.

Analyze SWM challenges through a SWOT analysis: (SWOT stands for Strengths, Weaknesses, Opportunities, and Threats)

Strengths	Weakness
Opportunities	**Threats**

3. Action Planning

The exercise focuses on setting short-term, medium-term, and long-term goals, along with specific targets to achieve milestones in the strategy plan.

1. Short-term planning:

What are the short-term goals for solid waste management to be achieved in the next 6 months to 1 year?	**1.** **2.** **3.**

2. Medium-term planning:

Building upon your short-term goals, identify medium-term goals for solid waste management to be achieved in the next 1 year to 3 years.?	**1.** **2.** **3.**

3. Long-term planning:

Long-term goals for solid waste management to be achieved in the next 3 years to 10 years? (Include the strategy relevance for next Chief officer)	**1.** **2.** **3.**

4. Strategy for Integration of the informal waste pickers:

Write down the steps you can take in your ULB for the successful integration of waste pickers.

1. ……
2. ……
3. ……
4. ……

5. Behaviour change strategy

An efficient waste management program, regardless of the strategy, requires significant cooperation from waste generators and active community participation.

What are the certain focus areas for Behavior change within the citizens in your town?

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……

……

……

What are the modes of communications you would priorities to use in your ULB?

***……**

***……**

***……**

What are certain activities you would suggest your team to incorporate in the Behaviour Change program for your ULB?

1……

2……

3……

4……

6. Instituting Sustainable Solid Waste Management

Contracts and tenders:

ULBs may decide to bundle certain services while contracting out MSWM operations to build accountability and efficiency in the system:

1. **What is the current model used in your ULB?**

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2. **What is the model you would adopt, if you decide to change the system to increase efficiency in your ULB?**

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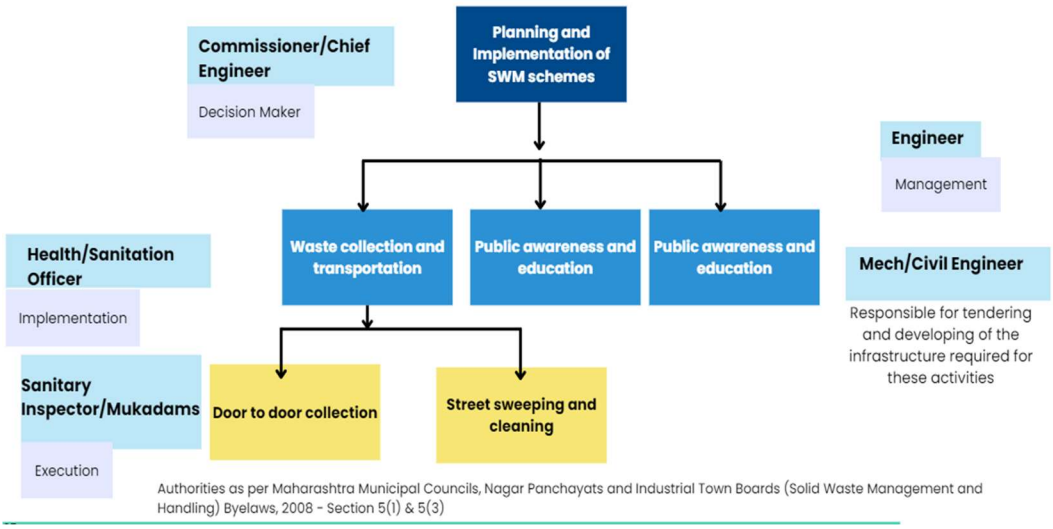
3. **What will be the advantages of this model?**



Flow diagram: Roles and Responsibilities

7. SWM Economy

a. **List the current sources of income for SWM in your ULB:**

1 ……
2 ……
3 ……
4 ……

b. **As per your estimate, what is the annual budget required for each of the following parameters for your ULB?**

	Current Budget	Required Budget
Citizen awareness		
Collection,		
Transportation		
Processing of waste		
Disposal of waste		
Other - pl specify		

c. **What can be the potential new Revenue sources that you attempt to procure for SWM for your ULB**?

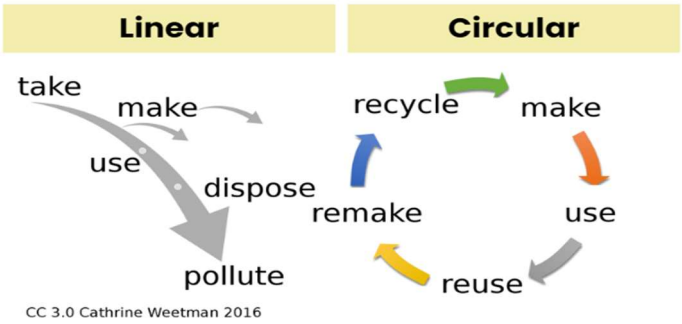
1._____

2._____

3._____

8. Circularity and sustainability

Implementation of circularity in the field for waste management can open up opportunities for public private partnership thus optimizing resources and finances available with the government and creating positive environmental and social impact.

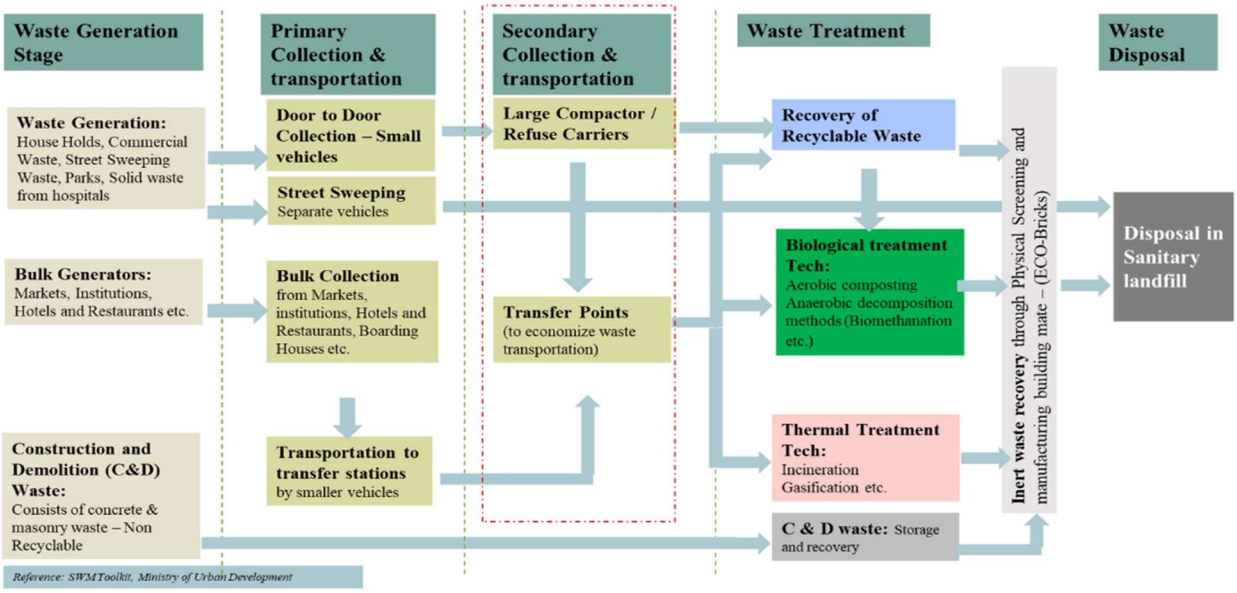


Flow diagram: Liner and Circularity economy

a. What are the opportunities in Implementing Circularity in waste in your ULB:

Waste	Opportunities	Implementation hurdles
Wet waste		
Dry waste		
Other waste		

9. Collection and Transportation system



Flow diagram: Overview of SWM

Similar to the above flow diagram, please depict the waste flow in your ULB.

Waste generators → Primary collection → Secondary collection → Waste treatment → Waste disposal

a. How can you ensure 100% collection and transportation of segregated waste in your ULB?

_____

_____

10. Processing and treatment of various waste streams

a. What are the current processing methodology & how can you achieve 100% processing in these?

Waste	Current processing methodology	Proposed actions to achieve 100% processing
Wet waste (Biodegradable)		
Dry waste (Non-Biodegradable)		
Sanitary hazardous waste		
Domestic hazardous waste		
Electronic waste		
Slaughterhouse waste		
Carcass waste (Dead Animal)		

Please refer the flowcharts provided in the Reference book.

11. Managing Construction & Demolition Waste

a. What are the initiatives that you can take for C&D waste management in your ULB?

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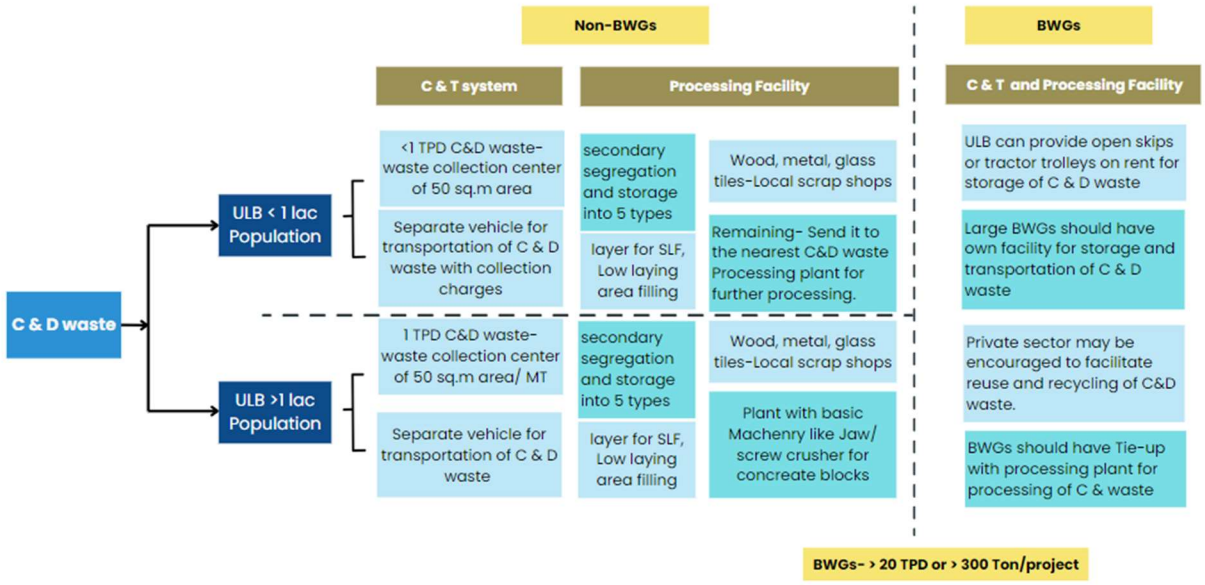


Flow diagram: C & D waste flow diagram

12. Remediation of legacy waste

a. Has Biomining been undertaken at the landfill site at your ULB?

_____

b. If it has been successfully completed, please share your story here. If you are still to complete the Biomining, please mention the challenges you are facing.

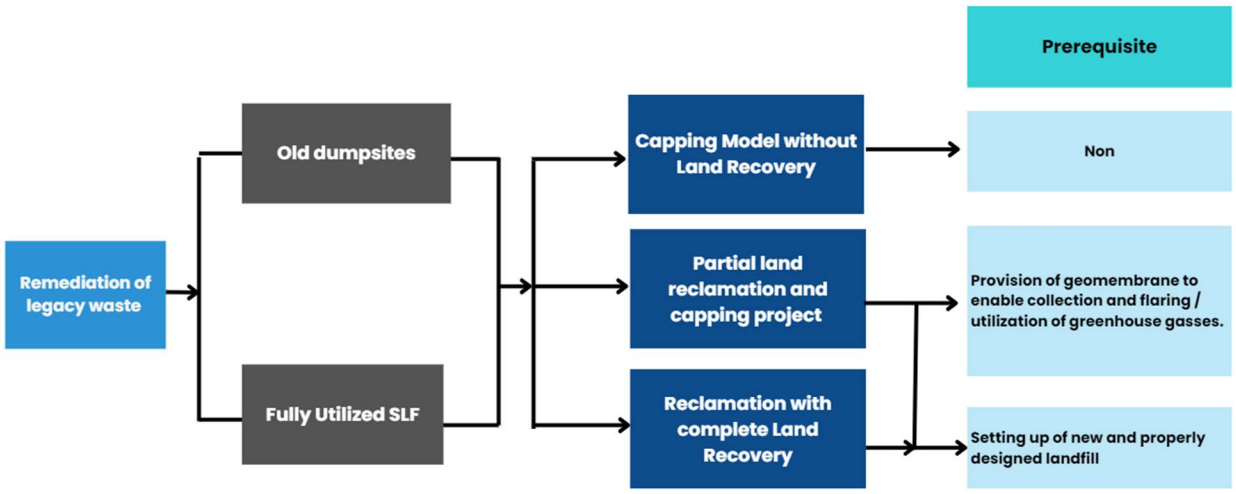
_____

_____

c. What are your plans for remediating the legacy waste?

_____

_____



Flow diagram: Methods for Remediation of legacy waste

Notes: