



POLICY GUIDELINES

CONTENT

Part 1: Solid Waste Management Rules and Guidelines

Part 2: Integration of the informal sector in the value chain

Part 3: Planning for Solid waste Management

POLICY GUIDELINES AND SWM STRATEGY

SOLID WASTE MANAGEMENT RULES AND GUIDELINES

CONTENT

- 1. Directive Authorities and their role**
- 2. Important Rules and guidelines regulate MSWM**
- 3. Waste Management streams- Rules, amendments, and Guidelines**
 - a.MSW
 - b.Plastic waste
 - c.E-waste
 - d.C & D waste
 - e.HHW

THE REGULATORY FRAMEWORK AND OTHER DIRECTIVES



Ministry of Environment, Forest
& Climate Change

MOEFCC – Rules



CPCB/MPCB/Guidelines



Maharashtra Pollution Control Board
महाराष्ट्र प्रदूषण नियंत्रण मंडळ



एक कदम स्वच्छता की ओर

SBM Guidelines & GFC Protocol



Ministry of Housing
and Urban Affairs

Government of India

सत्यमेव जयते

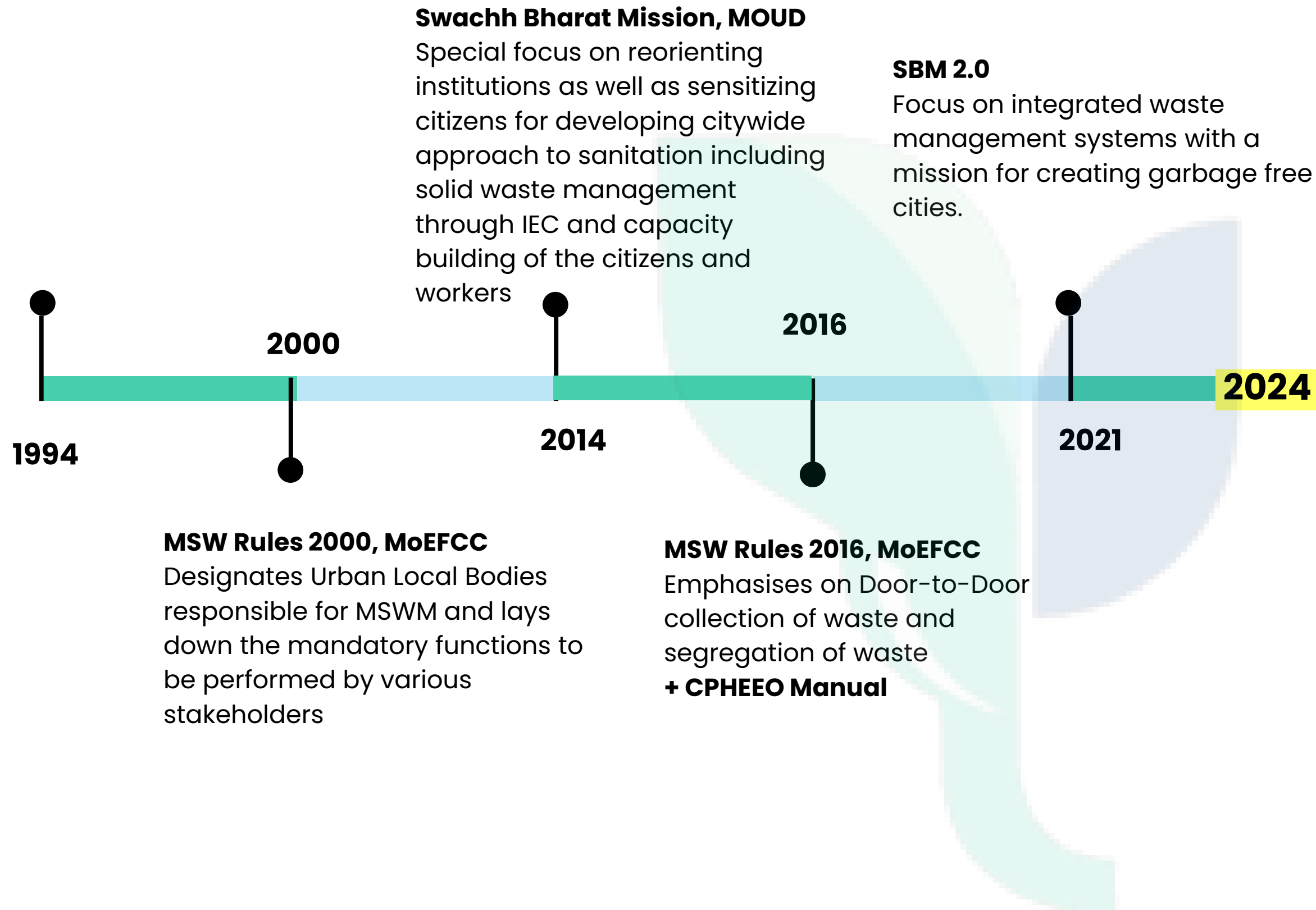
MoHUA – CPHEEO Manual



Government of
Maharashtra

State Government – GR

IMPORTANT RULES AND GUIDELINES REGULATE MSWM:



Complimenting guidelines and Rules

- **Plastic Waste Management Rules**, 2011 and revised in 2016, amendments
 - **Bio-medical Waste** (Management and Handling) Rules, 1998 and amended 2003, 2011 and Bio-Medical Waste Management Rules, 2016
 - **E-Waste Management Rules**, 2011 and revised in 2016
 - **Battery** (Management and Handling Rules) 2001
-
- Inter-ministerial Task Force on Integrated Plant and Nutrient Management using **City Compost**, 2005
 - Fertilizer Control Order (**FCO**), 2009; PROM, 2013 by Ministry of Agriculture,

WASTE MANAGEMENT STREAMS



MSW-SWM Rule & Amendment

PWM- Rule, Amendment & Guidelines

EWM- Rule, Amendment & Guidelines

C& D waste - Rule, Amendment & Guidelines

HMW- Rule, Amendment & Guidelines

KEY POINTS OF MSWM RULES 2016:

Central Govt Authorities

State and Union Territories

Urban Local Bodies

Duties and responsibilities

- Ministry of Urban Development
- Ministry of Chemical and Fertilisers,
- Ministry of Agri,
- Ministry of Power,
- Ministry of New and Renewable Energy sources

Policy and Strategy

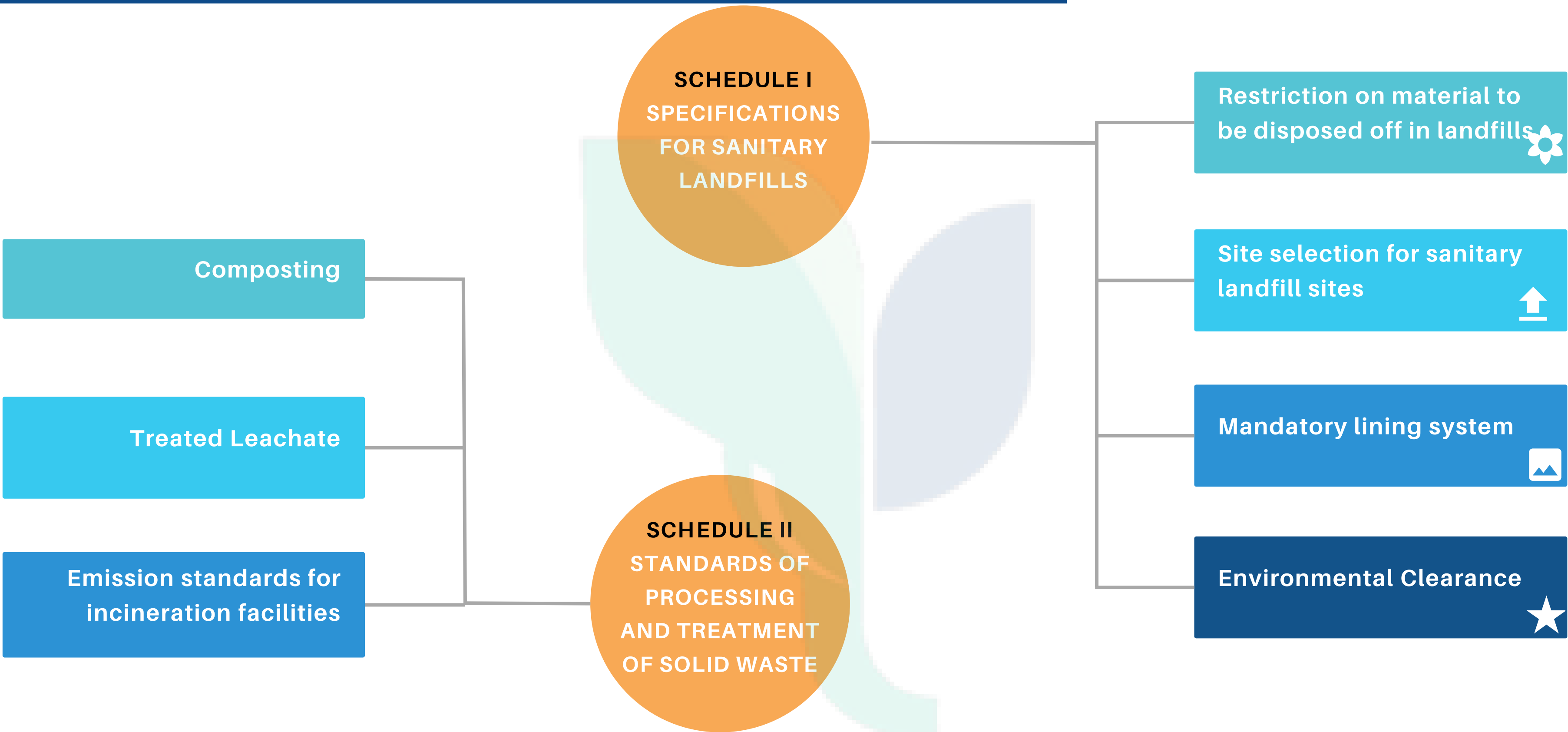
- Stakeholder consultation,
- Emphasis on waste reduction and 3R,
- Informal sector,
- Town planning for sanitary landfill

Planning and operations

- Segregation of waste into wet, dry, Sanitary and HHW
- Levy of service fees for service sustainability
- On-spot fine for littering
- Env clearances for setting up MSW processing.
- Annual Reporting



SPECIFIC ULB RESPONSIBILITIES - MSWM RULES 2016:



KEY POINTS OF MSWM RULES 2016:

Aspect	SWM Rule 2016	SWM Rule 2024
Scope and Applicability	Focused on urban areas, census towns, and notified regions within municipal boundaries.	Expanded to cover urban and rural local bodies, SEZs, food parks, railways, airports, defense areas, etc..
Waste Collection and Segregation	Segregation into three streams: biodegradable, non-biodegradable, and hazardous waste.	Segregation into four streams: wet, dry, sanitary, and special care waste.
Bulk waste generator	Entities generating over 100 kg/day, including institutions, markets, and gated communities.	Refined criteria, including floor area (20,000 sq. m.), water usage (5,000 liters/day), or waste volume.
Decentralized Waste Processing	Encourages decentralized units for biodegradable waste.	Mandates bulk waste generators to process waste locally or obtain EBWGR certificates.
Waste Disposal	Promotes use of sanitary landfills for residual waste.	Emphasizes use of advanced methods like Waste-to-Energy (WtE) and Refuse Derived Fuel (RDF).

KEY POINTS OF MSWM RULES 2016:

Aspect	SWM Rule 2016	SWM Rule 2024
Monitoring and Reporting	Basic reporting to state authorities.	Introduces centralized online portals for quarterly and annual returns.
Enforcement Mechanisms	Penalties and fines for non-compliance.	Stricter measures, including environmental compensation and annual environmental audits.
Infrastructure and Technology	Develop composting and bio-methanation units.	Mandates use of tracking systems for collection vehicles and integration of advanced processing technologies.
Public Awareness and Capacity Building	Focus on basic training for ULB personnel and public awareness.	Comprehensive training, use of digital platforms, and integration of informal waste collectors.

PWM -RULE, AMENDMENT & GUIDELINES

PWM Rule 2016 highlights the responsibilities of the producer, Generator, Manufacturer or importer, and Local body.

Responsibility of local body. –

1. Establish infrastructure for plastic waste management (segregation, collection, storage, transportation, processing, disposal).
2. Coordinate waste management system setup and operation.
3. Local body to create bye-laws aligning with these rules.

Highlights of PWM Amendment 202 & 2022:

1. Define non-woven plastic bag, Single-use plastic commodity, Thermoset plastic, and concept of EPR.
2. Set **targets for producers/brand owners** for collection and recycling of plastic waste
3. **Amendment 2022** introduced the **concept of biodegradable plastic.**
4. condition for a plastic ban based on the **thickness of plastic**

Responsibilities of producers/brand owners for collecting used Plastic:

Responsibilities of producers/brand owners for Plastic recycling

Year	Type of Plastic to be recycled	% recycling
2024-25	rigid plastic (category-1)	50%
	Flexible and Multi-layered plastic (category-2&3)	60%
2026-27	rigid plastic (category-1)	80%
	Flexible and Multi-layered plastic (category-2&3)	

List of recyclers:

<..\..\Staff Modules-20240606T073944Z-001\References\Plastic Registration as on03032020.pdf>

PWM RULES, 2016 & AMENDMENT

Category 1	Rigid plastic for packaging	
Category 2	Flexible plastic packaging of a single layer or multilayer, plastic sheets and covers made of plastic sheets, carry bags, plastic sachet or pouches	
Category 3	Multi-layered plastic packaging (at least one layer of plastic and at least one layer of material other than plastic)	
Category 4	Plastic sheet or like used for packaging as well as carry bags made of compostable plastic	

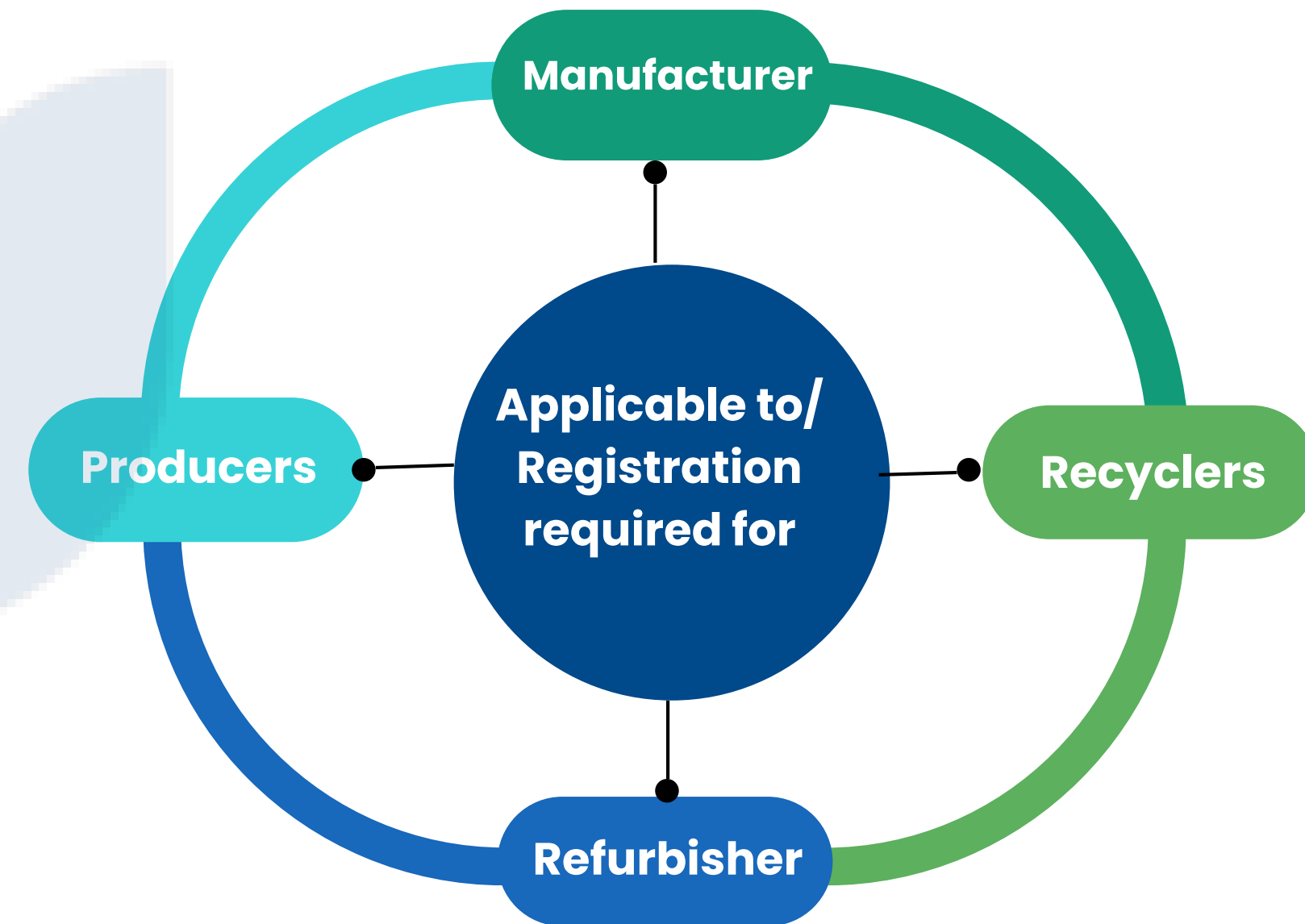


EWM -RULE, AMENDMENT & GUIDELINES



Responsibility of local body. –

- 1.To ensure that e-waste if found to be mixed with Municipal Solid Waste is **properly segregated, collected, and channeled to a registered recycler or refurbisher**
2. Facilitate establishment of e-waste collection, segregation, and disposal systems.
3. Conduct training sessions to enhance capacities of urban local bodies
4. Every manufacturer, producer, refurbisher and recycler may **store the e-waste** for a period not exceeding **one hundred and eighty days** and shall maintain a record of sale, transfer and storage of e-waste.



EWM -RULE, AMENDMENT & GUIDELINES

CATEGORIES OF E-WASTE: E-WASTE IS DIVIDED INTO 6 MAJOR CATEGORIES WHICH COVER ABOUT 91 TYPES OF E-WASTE ITEM

**Information
Technology &
Telecommunicati
on Equipment**



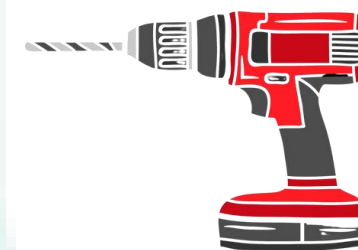
**Consumer
Electrical &
Electronics &
Photovoltaic
Panels**



**Large & Small
Electrical &
Electronic
Equipment**



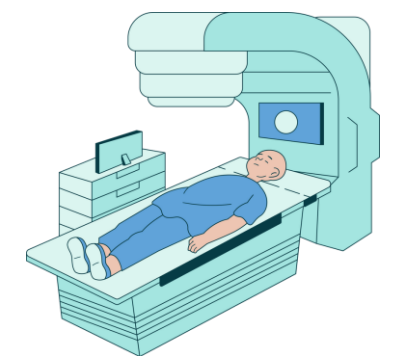
**Electrical &
Electronic Tools
(With the
exception of
Large Scale
Stationary
Industrial Tools)**



**Toys Leisure &
Sports
Equipments**



**Medical devices
(With the
exception of all
planted &
infected
products)**



Link: [..\References\Authorised E-Waste Recyclers & Dismantlers in Maharashtra \(1\).pdf](#)

C&D WASTE- RULE, AMENDMENT & GUIDELINES

Included in SWM Rule-2024

- Construction & Demolition (C&D) waste & unusable combustible: **5 – 15%**.
- **BWGs**–Waste generators who generate **more than 20 tons or more in one day or 300 tons per project in a month**
- The Ministry of Urban Development (MoUD) vide its circular dated 28th June, 2012 stated that all states to **set up C & D waste recycling facilities** in all cities with a population of over 1 million.
- **C& D waste management facility** – In cities above 1 Lakh population, < 1lakh population



HHW - RULE, AMENDMENT & GUIDELINES

Included in SWM Rule-2024

1. **Stored in separate garbage bins.**
2. **Establish collection systems**
3. Waste deposition centers : **one center is set up for the area of twenty square kilometers**
4. Wastes may be collected from facilities **once in 15 days** or as found appropriate by the ULB.
5. **Ensure safe storage and transportation of the domestic hazardous waste to the hazardous waste disposal facility**
6. Hazardous wastes have to be disposed of in **special facilities**—e.g., **treatment, storage, and disposal facilities (TSDF)**—that are designed for the respective types of waste.
7. **Dispose of MSW with limited hazardous material contamination in sanitary landfills with adequate liner systems.**
8. **Rotary kiln incinerators** are typically used for incineration of hazardous waste and biomedical waste



Link: [..\References\HWTransporterListDecember16032021 - Copy \(1\).pdf](#)

KEY PTS: SWM RULES, CPHEEO AND SBM GUIDELINES FOR ULB



Collection & Transportation

Bulk Waste Generators -

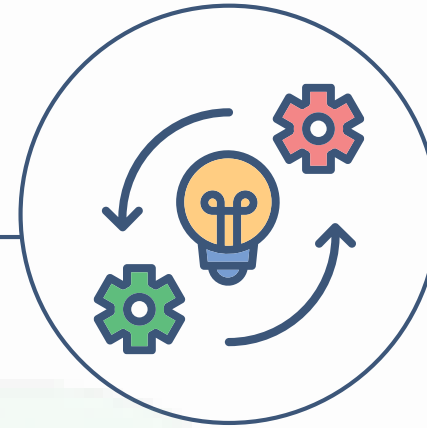
- Gated communities >5000sq.m area
- or >100 kg/day waste generation
- or x exceeding 200 dwelling

Plastic waste -

- Infrastructure for segregation, colln, transport, storage and processing and disposal - Engage agencies or producers.
- SUP Ban

Hazardous waste -

- Set up collection system, for once in 15 days or as required.
- One center per 20 sq km.



Processing

Waste to Energy

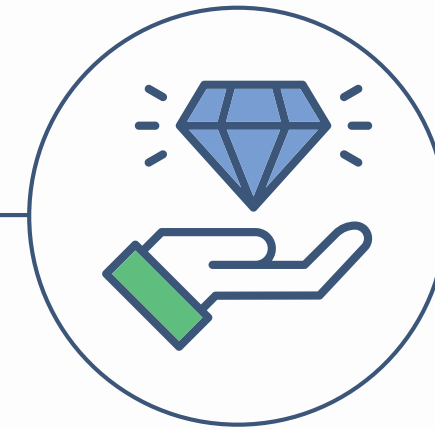
Non-recyclable waste having a calorific value >1500 K/ cal/kg can be used for RDF & shall not be disposed of at a landfill.

C&D waste

- ULB to have 50 sqm facility for storage and sorting of C&D waste.
- Generators with more than 20TPD or 300 tons per project.

Co-marketing of compost

Dept of Fertilised to comarket in the ratio of 3 to 4 bags: 6 to 7 bags by the fertiliser companies



Disposal

Regional Sanitary Landfill

State to form for a group of cities and towns falling within a distance of 50 km (or more) from the regional facility on a cost sharing basis

Hilly area Landfill

Suitable land shall be identified in the plain areas down the hill within 25 kilometers

Permitted Rejects

Inert waste (mostly street sweeping) and process rejects

STATE SWM BYELAWS

Prohibition of littering, and other nuisance and ensuring



- Ban On Littering



- No littering/spilling from vehicles, whether moving or parked, on streets, roads, sidewalks, or public/private places



- Properly designed infrastructure to avoid littering of waste



- No Public nuisance activities

Segregation of Solid Waste

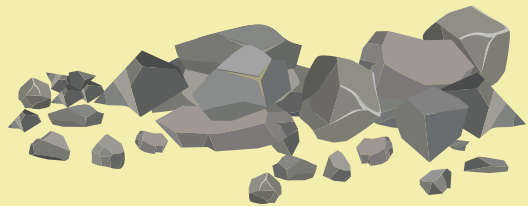
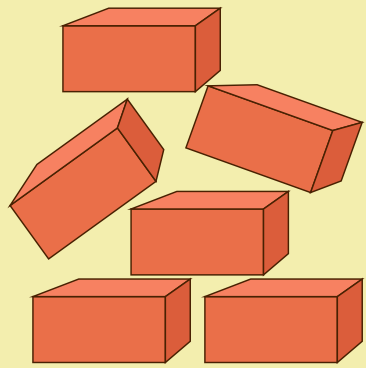


Municipal Solid Waste generators must segregate waste at the source into specified categories.

- Bio-degradable (wet) waste
- Specified domestic hazardous waste
- Fully treated Bio-medical waste (as per applicable rules)
- Construction and demolition waste
- Bulk garden and horticulture waste, including tree and plant trimmings
- All other non-biodegradable (dry) waste, including recyclable and non-recyclable waste.

STATE SWM BYELAWS

C & D Waste



- Separate storage for construction and demolition waste.
- Household generators segregate waste at source.
- Contact local help-line for waste pickup.
- Charges may apply for waste pickup.
- Designated vehicle transports waste for processing.

Obligatory Duties of Municipal Corporations



- Enforce penalties for waste mishandling
- Provide necessary facilities, including litter bins, sorting centers, composting centers, and community toilets.
- Share composting/recycling info online.
- Publish waste data monthly online

USER FEES

Municipal Corporations and council can collect user fees from households/premises for waste management services as per SWM Rules 2016. The State byelaws have defined the rate of User fee as per class of ULB and Type of property use.



Sr.No	Particulars	A & B Class	C & D Class
	For MSW Generation Below 100 kg		
1	Per Property	30	15
	Commercial Establishment		
2	Shops, Hospitals	45	30
3	Showrooms	80	60
4	Storage Centres	80	60
5	Hotels and Snacks Centers	160	120
6	Hotels which have facilities of stay & food	200	160
	Hospitals	80	60
7	Below 70 Beds		
8	More than 50 Beds	120	90
	Institutions		
9	Educational Institutes, Hostels	60	45

ULBs have to get the General Body approval on the adoption of the State Byelaws for its ULB. It can then levy the user fees and fines in the ULB.

STATE BYELAWS - FINES



Fines

In accordance with Maharashtra Municipal Solid Waste Bylaws, fine will be charged for any actions against the rules



Sr.No	Particulars	A & B Class	C & D Class
1	Segregation, storage, delivery and collection violations		
	For delivering waste that is not segregated and not stored in separate bins:	60	50
	a) Households/Commercial establishment		60
	1 st instances	200	100
	Every repeated instances	500	300
	b) bulk generator		
1 st instances	1000	500	
Every repeated instances	3000	1500	
2	For burning of waste	5000	5000

LEGAL COMPLIANCE



National Green Tribunal

Case has to be attended by the Senior officials of Maharashtra Pollution Control Board

Maharashtra Pollution Control Board

Right to Information

Implementation actions have to be at the Local Level. Data is asked from Local Level.

Maharashtra government fined over improper waste management, told to pay Rs 12,000 crore

The NGT said compensation under Section 15 of the NGT Act was necessary to 'remedy' the continuing damage to the environment

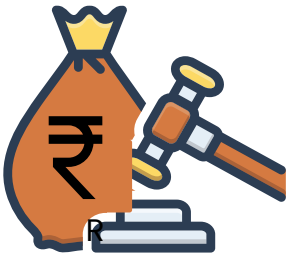
Compensation for un-remediated legacy waste to the extent of 3,94,19,287, works out roughly to about Rs 1,200 crores.

In terms of solid waste management, the NGT said that the action plan involves

- Fine for mixed waste processing-windrow/ pit composting
- Bioremediation not done
- Non-compliance of SWM 2016 Rule
- Unloading Platform: Impervious

Source-

<https://www.deccanherald.com/india/maharashtra-government-fined-over-improper-waste-management-told-to-pay-rs-12000-crore-1143968.html>

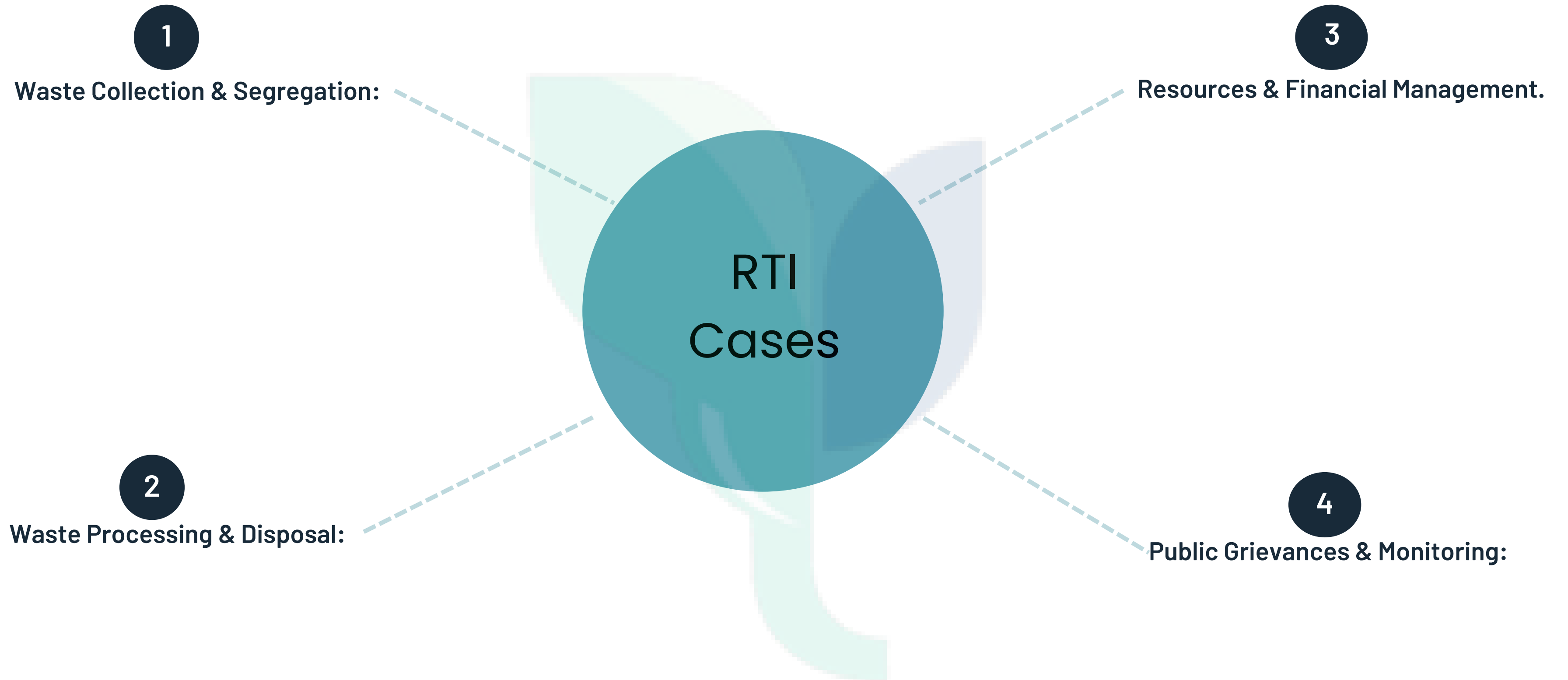


NGT OA 606/2018 - Order dated 02.07.2020

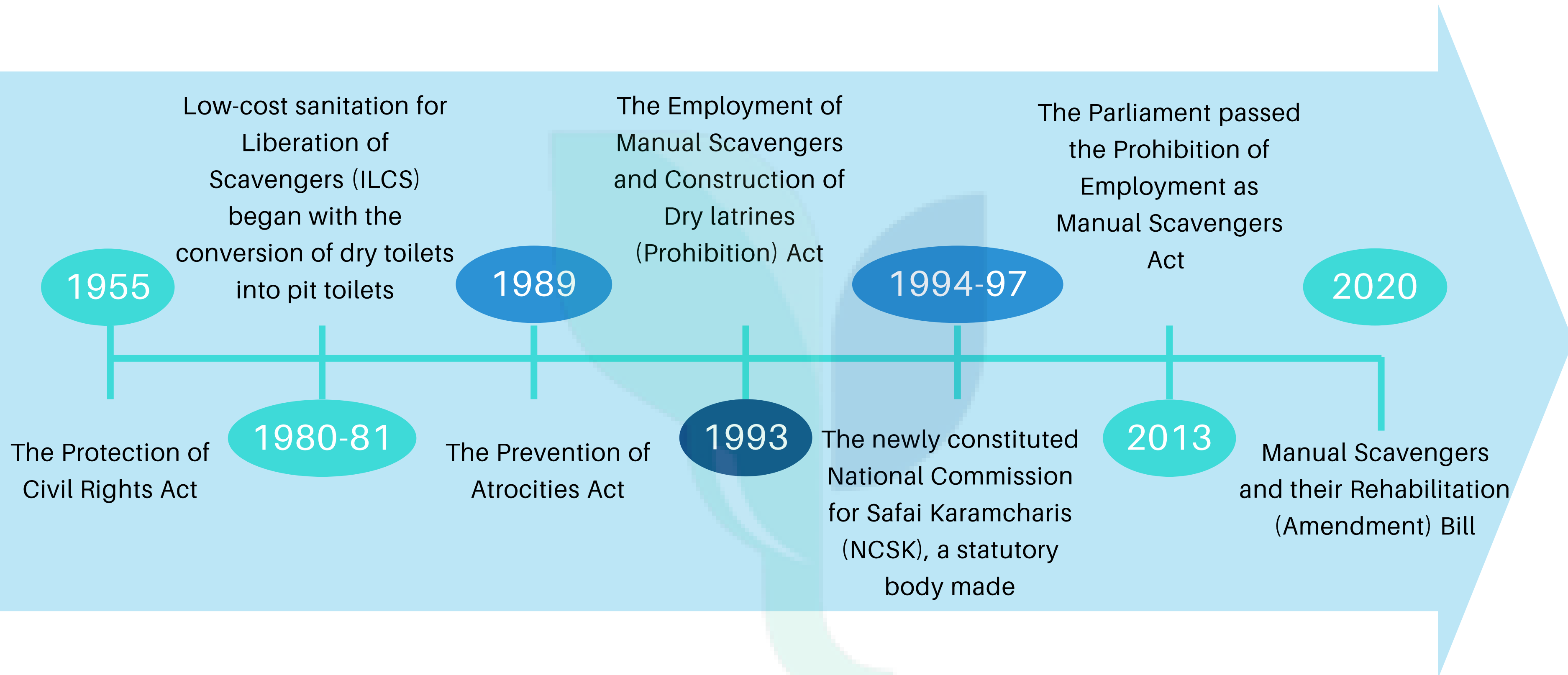
NGT has directed to all the Local Bodies and or the concerned Department of the State Government have to ensure 100% collection, segregation, treatment and disposal of solid waste including legacy waste & liquid waste and **in default to pay compensation which is to be recovered by the State with effect from 01/04/2020.**

Sr.No	Compliance	Compensation Amount	Population
1	If failed to Comply with the timeframe for the Implementation of SWM Rules, 2016 (Unexecuted)	10 Lakh/ Month	Above 10 Lakh
		05 Lakh/ Month	05 Lakh to 10 Lakh
		01 Lakh/ Month	Less than 05 Lakh
2	Compensation for failure in Legacy waste remediation.	10 Lakh/ Month	Above 10 Lakh
		05 Lakh/ Month	05 Lakh to 10 Lakh
		01 Lakh/ Month	Less than 05 Lakh

ULBs receive these types of RTI applications



TIMELINE: BANNING MANUAL SCAVENGING IN INDIA



INTEGRATION OF THE INFORMAL SECTOR IN THE VALUE CHAIN

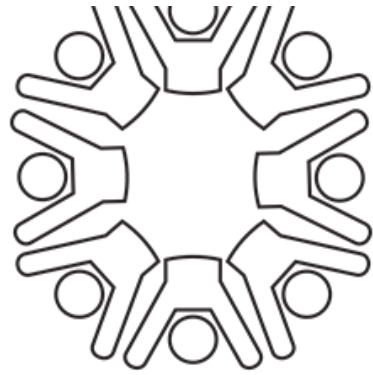
CONTENT

- 1. Policies or Regulations**
- 2. Field-level nuances and challenges while undertaking the integration program**
- 3. Scope for Informal Sector Integration in Municipal Solid Waste Management Activities:**
- 4. Integration of Waste Pickers:**
- 5. Case studies**

VIDEO LINK:

POLICIES OR REGULATIONS:

Certain enabling conditions and supportive actions for promoting the integration of the informal sector include:



Formation of membership-based associations or cooperatives



Recognizing these associations for MSWM service delivery



Creating a policy framework for informal waste sector recognition and an inclusive framework to facilitate their participation in the delivery of service.



Social security and health benefits



National Urban Livelihoods Mission
Ministry of Housing & Urban Poverty Alleviation

Encouraging the informal sector, NGO, and CBO through linkage to the NULM



Providing low-interest loans to WPs org. seeking to bid for tenders and contracts; and Providing exemptions on fees and deposits



Integration of WPs into ISWM systems i.e. waste collection and processing



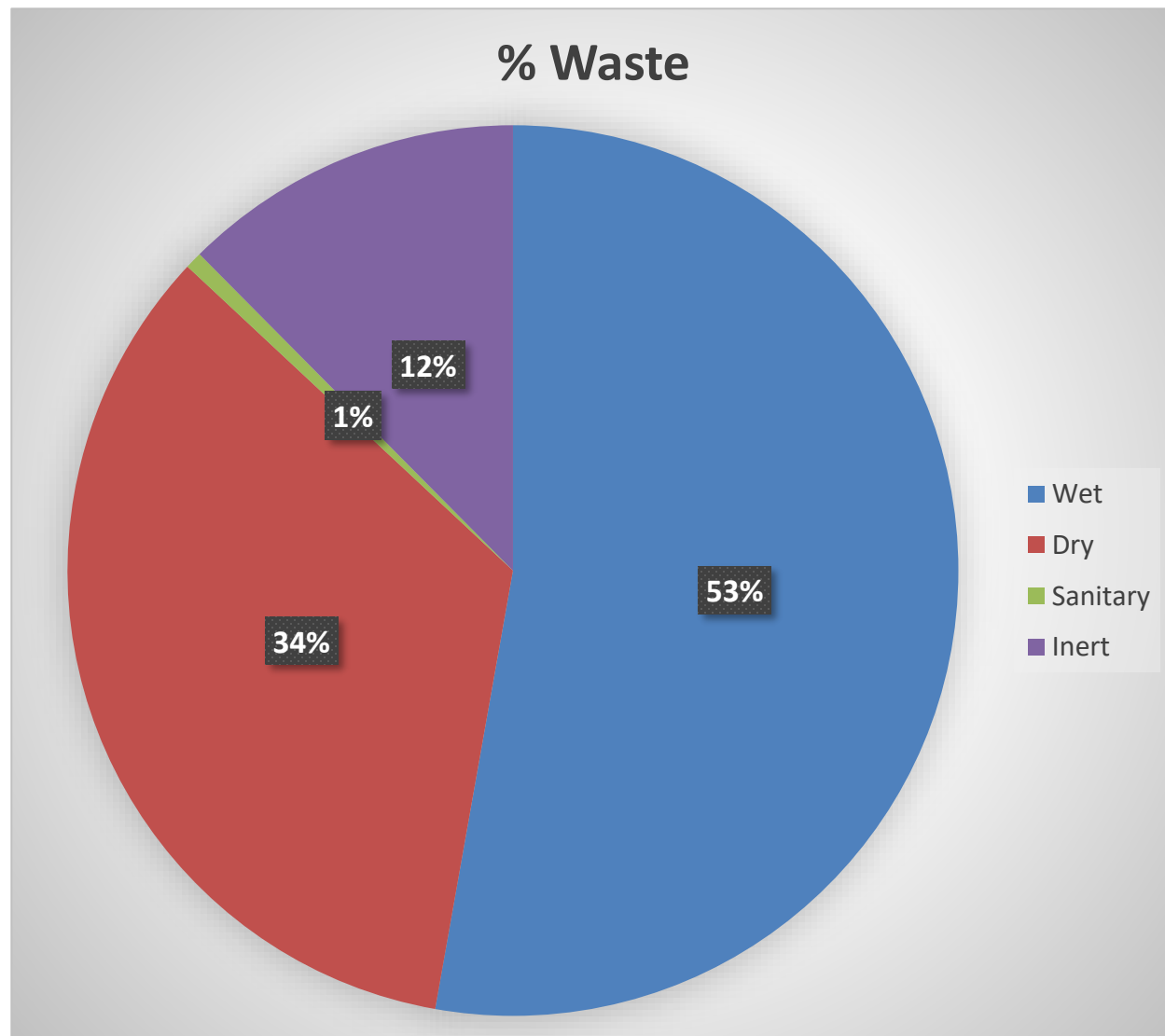
capacity development programs for informal sector associations



CASE STUDIES

CHANDRAPUR- BHADRAWATI MUNICIPAL COUNCIL- OVERVIEW

Current population:	77777
Current Waste Generation (TPD) :	14
Segregation Rate	100%



Name of Division: Nagpur

District: Chandrapur

Name of ULB & class of ULB: Bhadrawati – B Class Council

Basic Information	Bhadrawati
Current waste management system: (ULB Own/Contractual/ labour contract etc)	Contractual
Demography of the city: Agri/Tourist /Industrial/ small scale businesses/	Tourism
Operational since: (operation of operations since practicing)	2008
Capital Investment and provision made through:	15th Finance- Annual tendering
Operational Cost	59 lakh/year-tender
No. of workers engaged	57 Women

WASTE MANAGEMENT CHALLENGES

Challenges

- Open dumping and a lack of public participation in waste segregation.
- Outsourcing waste collection to private contractors proved ineffective

Solution

- The Bhadrawati Municipal Council contracted three Self Help Groups (SHGs) – **Tanvi Mahila Bachat Gat, Samta Mahila Bachat Gat, and Bhadralli Mahila Bachat Gat**
- It empowered local women to take charge of waste management.

KEY ACTIVITIES AND IMPACT

Door-to-Door Collection

1.

- The SHGs implemented segregated waste collection from households, ensuring proper disposal and reducing the volume of mixed waste..

Community Education

2.

- Through on-site demonstrations, IEC activities, and community meetings, residents were educated about the importance of waste segregation.

Waste Processing

3.

- The Bhadralli Mahila Bachat Gat focused on processing the segregated waste, promoting resource recovery and reducing the amount of waste sent to landfills.

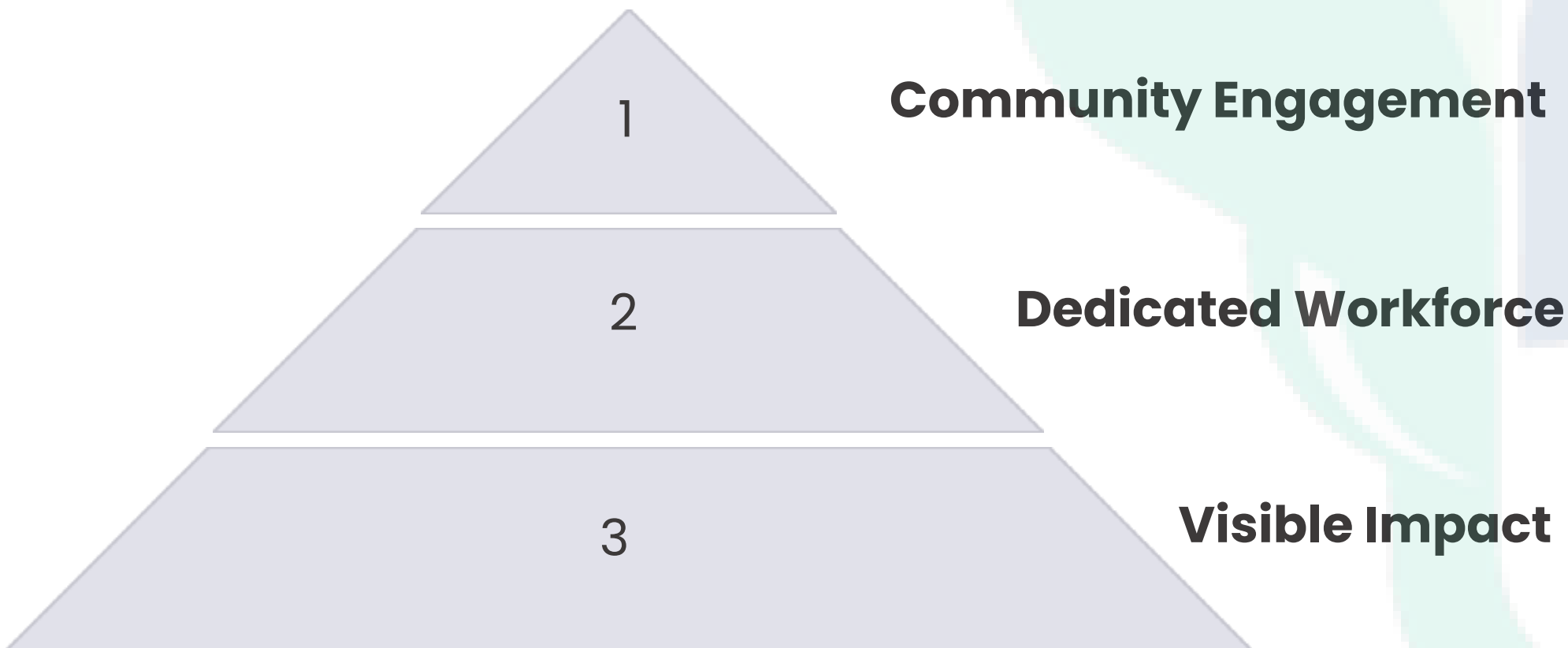
Positive Outcomes

4.

- The initiative eradicated open dumping, significantly increased segregated waste collection, created jobs for 57 women, and improved the overall cleanliness of the city.

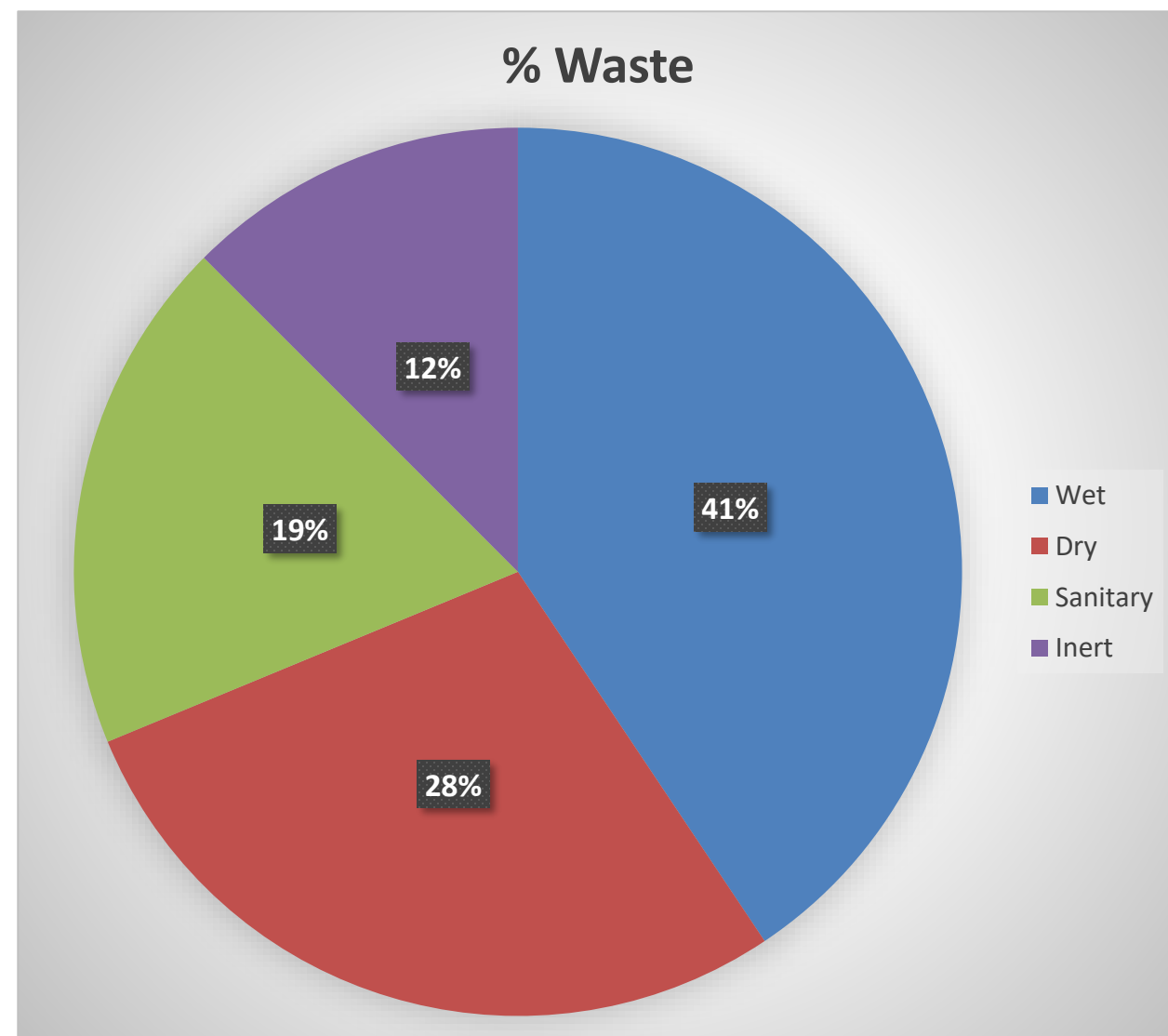
A MODEL FOR COMMUNITY-DRIVEN WASTE MANAGEMENT

- The success of this initiative in Bhadrawati highlights the potential of community-driven waste management solutions.
- The SHGs' dedication, community engagement, and tangible improvements in waste management practices serve as a model for other Urban Local Bodies.



BULDHANA- SHEGAON MUNICIPAL COUNCIL- OVERVIEW

Current population:	1,15,633
Current Waste Generation (TPD) :	32
Segregation Rate	80%



Name of Division: Amravati
District: Buldhana
Name of ULB & class of ULB: Shegaon – A Class Council

Basic Information	Bhadravati
Current waste management system: (ULB Own/Contractual/ labour contract etc)	Contractual (Agency hired by ULB)
Demography of the city: Agri/Tourist /Industrial/ small scale businesses/	Pilgrimage
Operational since: (operation of operations since practicing)	2023
Capital Investment and provision made through:	NA
Operational Cost	3-5Lakh
No. of workers engaged	24

WASTE MANAGEMENT CHALLENGES

Challenges

- Shegaon, with its large floating population, experiences a surge in waste generation, leading to the formation of GVPs, which detract from the town's visual appeal and pose a hygiene risk.

Solution

- The Swachhta Sakhi program, launched in January 2023, deploys women from local Bachat Gats to patrol designated areas, prevent waste dumping, and trace the source of waste.

SWATCHATA SAKHI APPROACH

Dedicated Patrols

1.

- Sakhis patrol designated zones twice a day, preventing dumping and identifying the source of waste.

Source Tracing

2.

- The Sakhis report waste sources to the city coordinator, who takes appropriate action, including fines for offenders.

Community Engagement

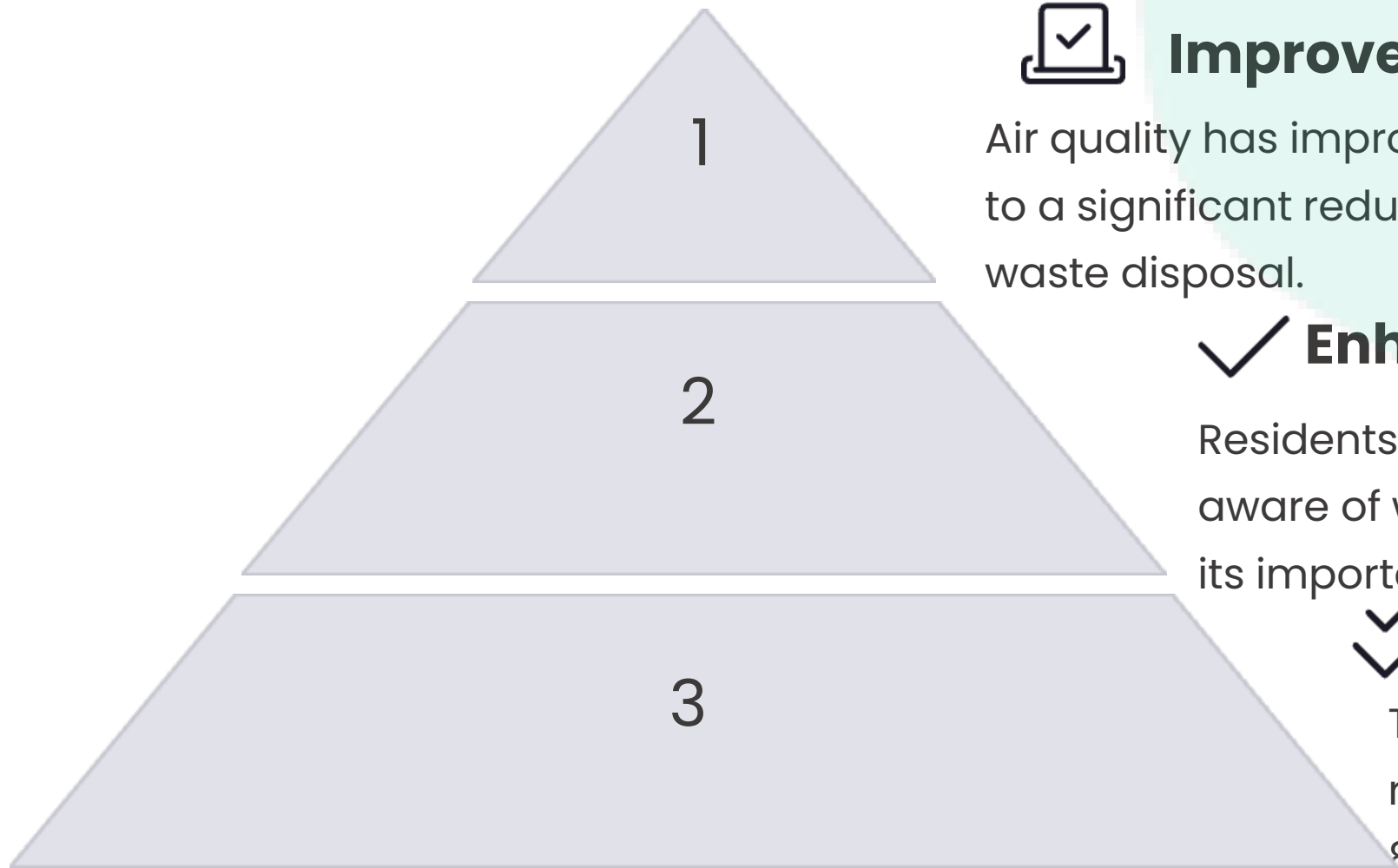
3.

- The program leverages existing community networks and encourages citizen participation in waste management.

A MODEL FOR COMMUNITY-DRIVEN WASTE MANAGEMENT

Shegaon Swachata Sakhi Model

A small-scale model with 12 Sakhis covering 22 wards. The program can be scaled to accommodate larger areas and populations.



Improved Air Quality

Air quality has improved by 30% due to a significant reduction in open waste disposal.



Enhanced Awareness

Residents are becoming more aware of waste segregation and its importance.



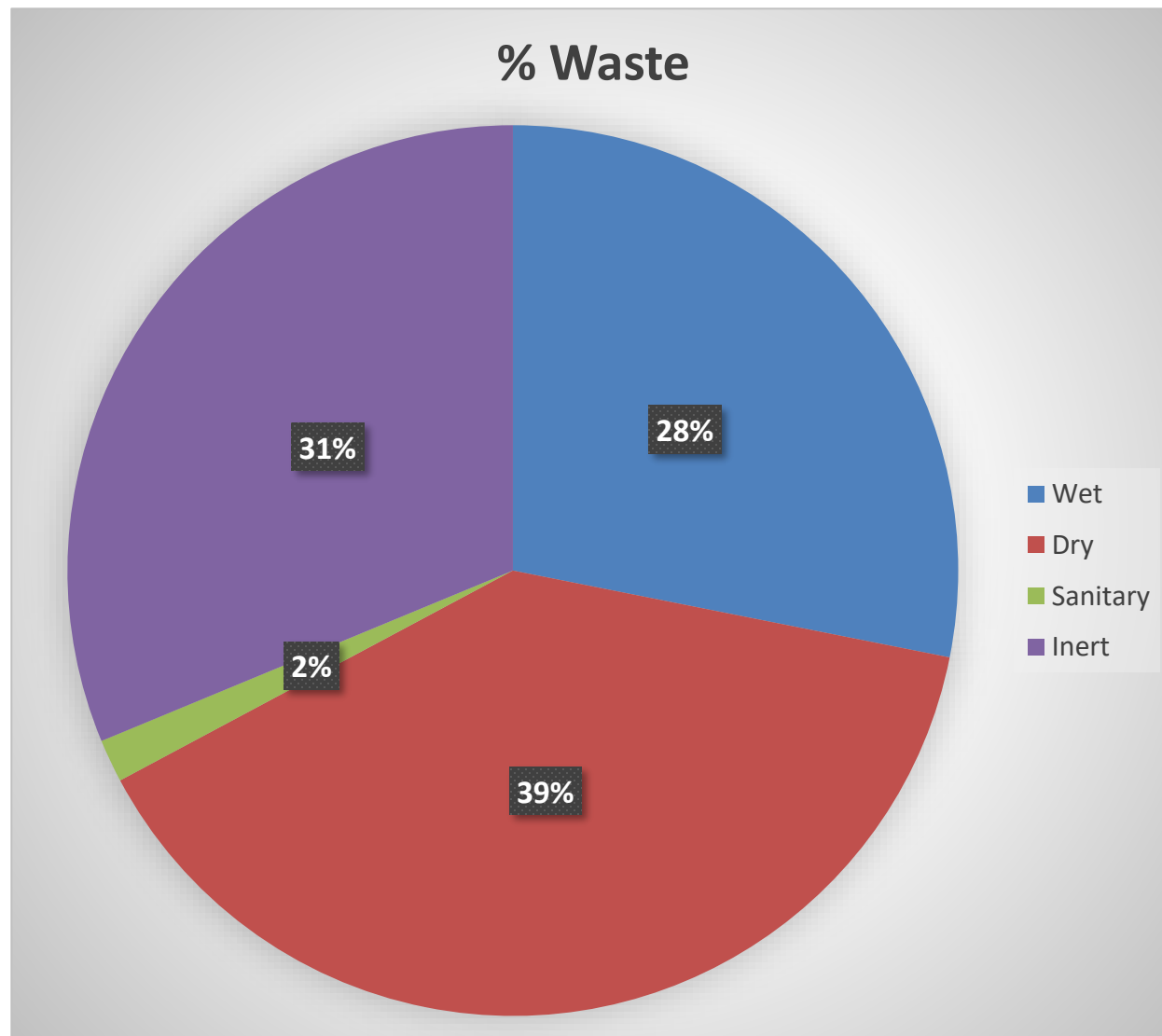
Reduced GVPs

The program has successfully reduced GVPs in Shegaon by 30%.



RAIGAD- SHRIWARDHAN MUNICIPAL COUNCIL- OVERVIEW

Current population:	18602
Current Waste Generation (TPD) :	4.5
Segregation Rate	80%



Name of Division: Konkan

District: Raigad

Name of ULB & class of ULB: Shriwardhan – C Class Council

Basic Information	Bhadravati
Current waste management system: (ULB Own/Contractual/ labour contract etc)	Contractual (Agency hired by ULB)
Demography of the city: Agri/Tourist /Industrial/ small scale businesses/	Tourism
Operational since: (operation of operations since practicing)	2023
Capital Investment and provision made through:	20,000
Operational Cost	10,000 Rs annually
No. of workers engaged	100

WASTE MANAGEMENT CHALLENGES

KEY INITIATIVES

Challenges

- Rising plastic pollution due to daily use.
- Plastic waste harms stray animals and chokes city drain systems.
- Inefficient waste management systems due to workforce and machinery constraints.

Solution

- To overcome all these issues, city initiated 2 best practices in our city; i.e. Reduction of plastic use from citizen's day-to-day life and sustainable plastic waste management.
- IEC: Promoting reduction before reaching at processing plant by upcycling them.

Waste Management/ SHG Model:

1.

- **Launched Cloth Bag Campaign:**
 1. Targeted citizen groups.
 2. Trained SHGs for implementation.
 3. Awareness drives: public rallies, meetings, social media, and audio campaigns.
- **Partnered with *NaturePro* for converting plastic waste into oil.**

IEC Campaign

2.

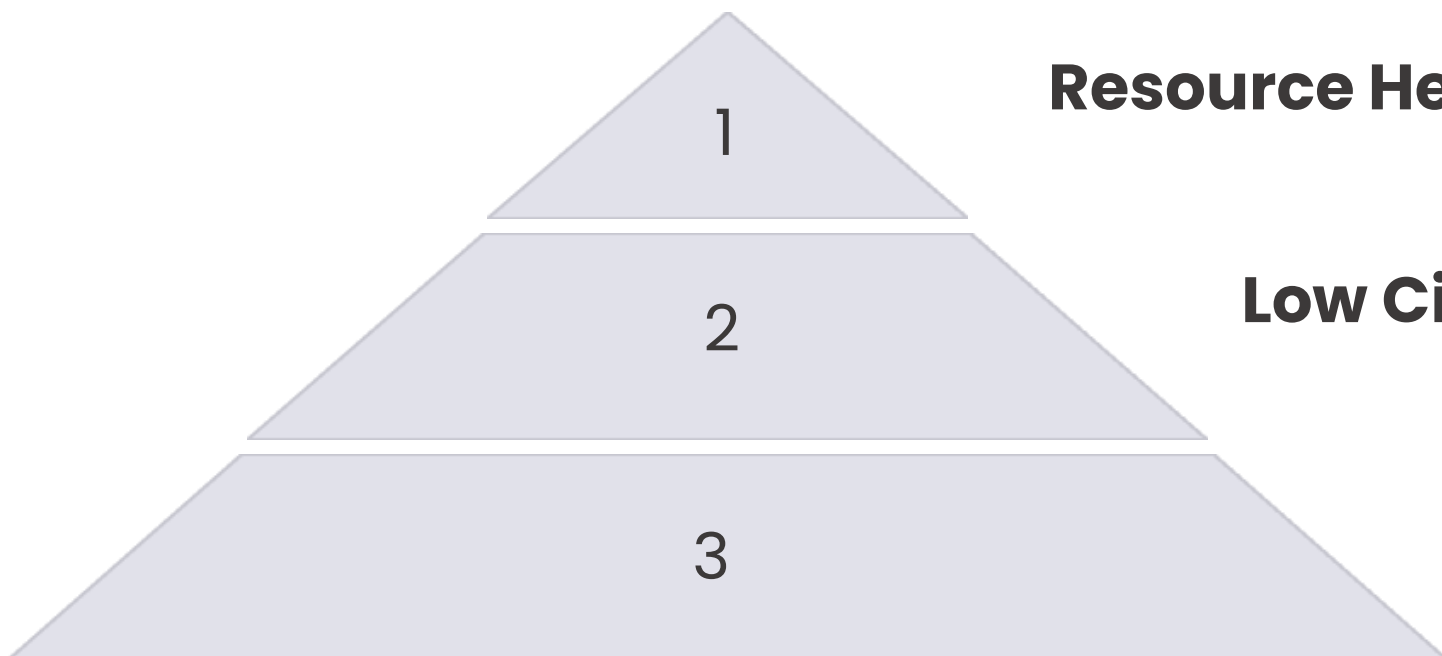
- **Beach Beautification with Waste Upcycling:**
 - Constructed large sculptures (crabs, lobsters) from scrap.
 - Implemented via tender process under *Reduce-Reuse-Recycle (R-R-R)* model.

A MODEL FOR COMMUNITY-DRIVEN WASTE MANAGEMENT

- **Low Citizen Adoption:**
 1. Conducted extensive IEC campaigns to educate citizens on the environmental impact of SUPs.
 2. Distributed free or subsidized cloth bags during awareness drives.
- **Aligning SHGs:**
 1. Organized regular meetings and training sessions to streamline operations.
- **Resource-Heavy Sculptures:**
 1. Partnered with local artists and community volunteers to reduce costs.
 2. Used crowdfunding and sponsorships to fund materials and labor.



Latitude: 18.04314
 Longitude: 73.010889
 Elevation: -0.98m
 Accuracy: 3.8m
 Time: 19-05-2023 11:33
 Note: RRR



Resource Heavy Sculpture

Low Citizen Adoption

Aligning SHGs



Latitude: 18.04318
 Longitude: 73.010849
 Elevation: 4.43±7 m
 Accuracy: 6.7 m
 Time: 05-19-2023 11:00
 Note: RRR centre

MODULE 2

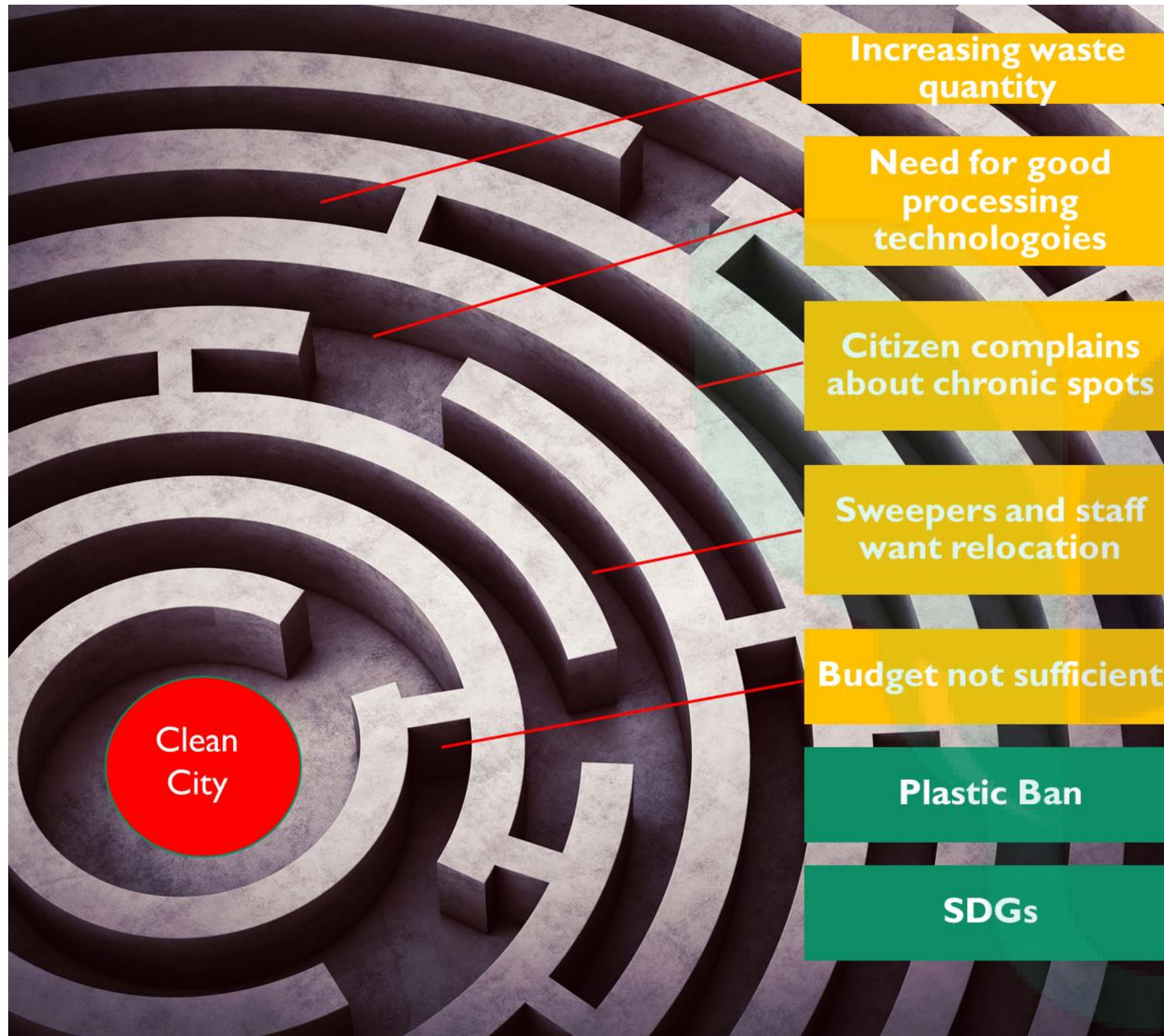
PART 3

PLANNING FOR SOLID WASTE MANAGEMENT

CONTENT

1. Purpose of SWM Long term Planning
2. VISION for the city in SWM
3. Visioning and Target setting
4. Strategy Plan
5. Scope of SWM Strategy
6. Strategy Formulation
7. Action Plan

PURPOSE OF SWM LONG TERM PLANNING



A plan will guide us towards our goal and help us to achieve it.



Defining what we want to achieve is known as the vision.



5 to 10 year future

Targets such as –

- 100% segregation to be achieved in one year, or
- 10% waste reduction in two years,
- zero plastic waste in two years.

These targets are essential to set milestones in the strategy plan.

STRATEGY PLAN

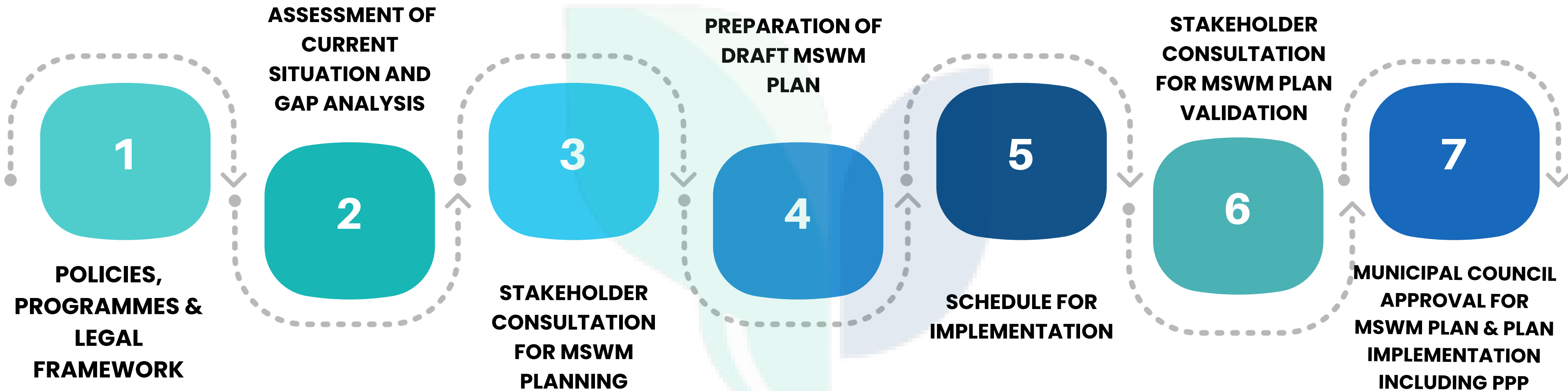
SWM rules 2016 state - the first duty and responsibility of local authorities:

The local authorities and Panchayats shall, - (a) prepare a solid waste management plan as per state policy and strategy on solid waste management



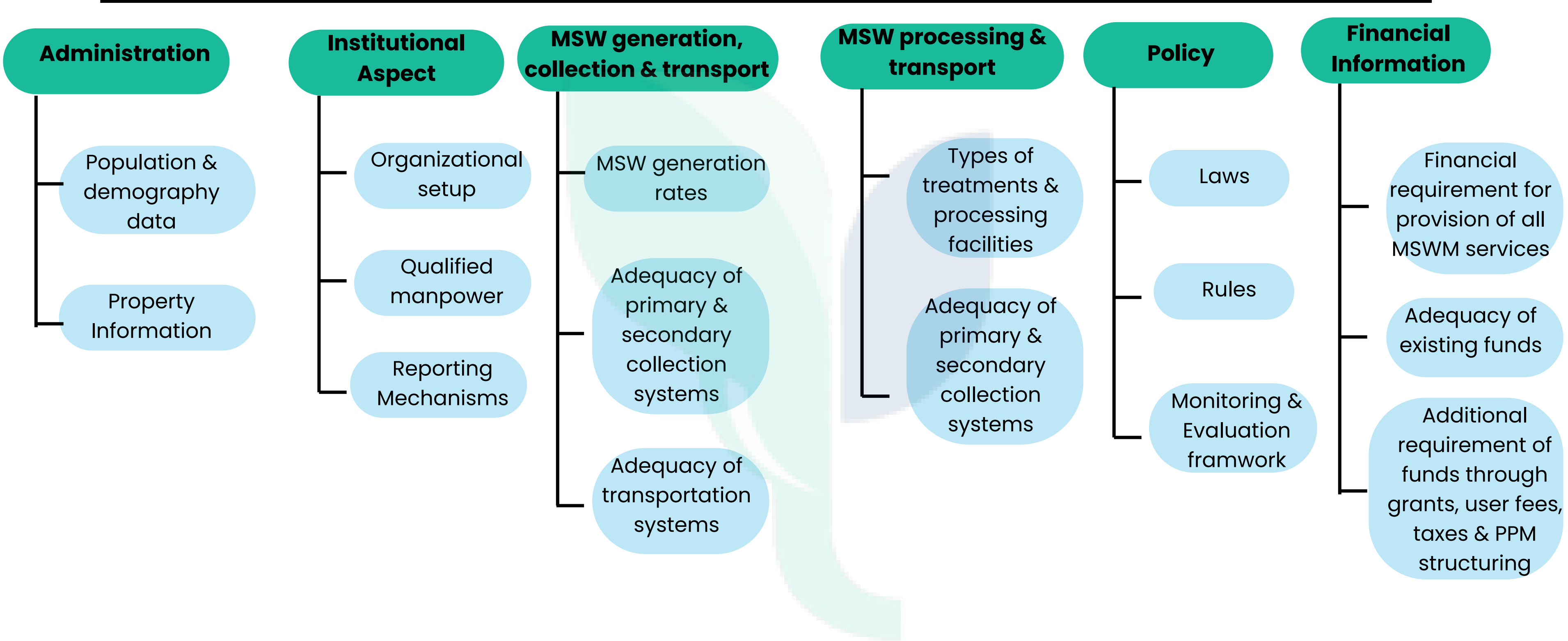
MSW-CPHEEO GUIDELINES

7 STEP APPROACH FOR A SWM PLAN



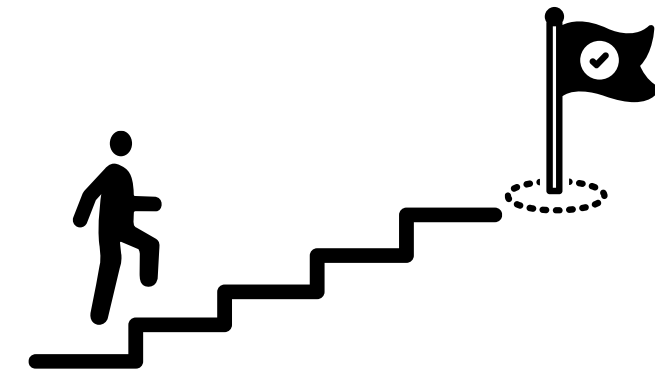
GAP ANALYSIS:

Parameters to Consider for Gap Analysis



ACTION PLAN

S	Specific Clearly State your Goal
M	Measurable Ensure you can Measure Success
A	Attainable Set Goals you know you can Achieve
R	Relevant Set Goals Relevant to your Career or Education
T	Time-Based Set a Deadline for Completion



Strategy must be further converted to actionable steps to meet the targets and milestones decided.

Decision process flow for corrective actions

