



National Institute of Urban Affairs



सत्यमेव जयते

Ministry of Housing and Urban Affairs
Government of India



Swachh Bharat Mission

SWM City Cluster Exposure Workshop, 2018

Conducted by

National Institute of Urban Affairs & ICLEI South Asia, iDeCK, ICAP



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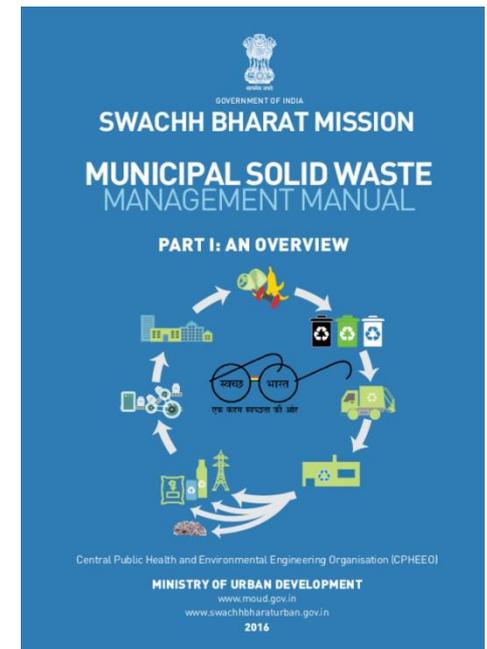
Ministry of Housing and Urban Affairs

Under

Swachh Bharat Mission - Urban

Framework

Ministry of Environment, Forest and Climate Change	Ministry of Housing and Urban Affairs
Municipal Solid Waste Management and Handling Rules, 2000	Manual on Municipal Solid Waste Management, 2000
Revised Solid Waste Management Rules, 2016	Revised Manual on Municipal Solid Waste Management, 2016
Based on learning from 16 years experience	



Salient Features of Solid Waste Management Rules, 2016

- The Rules are now applicable **beyond Municipal areas** and extend to urban agglomerations, census towns, notified industrial townships, areas under the control of Indian Railways, airports, airbase, Port and harbour, defence establishments, special economic zones, State and Central government organizations, places of pilgrims, religious & historical importance.
- Segregation into **3 components** i.e wet; dry and domestic hazardous waste
- **Partnership under Swachh Bharat Mission-** Bulk waste generators made responsible for the waste generated
- Focus on **decentralized waste management**

Salient Features of Solid Waste Management Rules, 2016

- **Integration of informal sector and waste collectors**
- **Extended Producer Responsibility-** Manufacturer/brand owners of disposables as stakeholders
- Special Economic Zone, Industrial Estates, Industrial Parks, Industrial Clusters mandated to **earmark at least 5% of the total area/minimum 5 plots/sheds for recovery & recycling facility**
- Industrial units with 100km from solid waste based – **Refuse Derive Fuel (RDF) to replace using 5% of RDF for fuel**
- **Time Line** for setting up requisite infrastructure for waste management for local bodies

Duties of Waste Generators

Segregate & Store waste in 3 separate streams

Bio-
degradable

Non Bio-
degradable

Domestic Hazardous Waste
like CFL bulbs, tube lights,
expired medicines, used
batteries etc.



Sanitary waste like diapers, sanitary pads etc., should be wrapped securely in the pouches and place it in bin meant for dry waste

Store separately Construction & Demolition Waste and dispose off as per C&D Waste Management Rules, 2016

Store separately horticulture waste and garden waste generated from his premises



- All waste generators shall **pay such user fee** for solid waste management, as specified in the bye-laws of the local bodies.
- **Prior permissions required for conducting events & gathering for more than one hundred persons at any unlicensed place**, at least three working days in advance, to manage the waste generated; ensure segregation of waste at source and handing over of segregated waste to waste collector or agency as specified by the local body.
- Every street vendor to keep suitable containers for storage of waste and shall deposit such waste at waste storage depot or container or vehicle as notified by the local body



All events in public places attended by 100 people or more will need the permission of jurisdictional ULB.



Organisers will have to ensure all solid waste is segregated, collected and transported within 24 hours of completion of the event



A refundable “cleanliness deposit” will have to be remitted with the jurisdictional ULB

Organisers can avail service of ULB for disposal of solid waste generated by paying a fee as fixed by the local body

Draft Karnataka Municipal Corporation Model Solid Waste Management by-laws, 2018.

Read more at: <https://www.deccanherald.com/state/top-karnataka-stories/solid-waste-management-law-690369.html>

- **Concept of partnership in Swachh Bharat has been introduced.**
- All **bulk waste generators like RWAs, market associations, hotels, restaurants and gated communities and institutions with more than 5,000 sqm area** responsible for management of waste in **partnership with local body**. They shall ensure segregation of waste at source, facilitate collection of segregated waste in separate streams, handover recyclable material to either the authorised waste pickers or the authorized recyclers. The **bio-degradable waste shall be processed, treated and disposed off through composting or bio-methanation within the premises** as far as possible. The residual waste shall be given to the waste collectors or agency as directed by the local body.

Bulk Waste Generator: includes establishments (Hostels, Hotels, Commercial Markets etc.) having an average waste generation rate exceeding 100kg per day (of all waste streams put together)

Decentralized
Waste
Management

Duties of Urban Local Body

- Prepare a **solid waste management plan as per state policy** and strategy on solid waste management
- Arrange for **door to door collection of segregated solid waste** from all households including slums and informal settlements, commercial, institutional and other non residential premises
- Establish a system to **recognise organisations of waste pickers or informal waste collectors**; promote and establish a system for integration of these authorised waste-pickers and waste collectors to facilitate their participation in solid waste management including door to door collection of waste; **facilitate formation of Self Help Groups, provide identity cards**
- Prescribe from time to time **user fee as deemed appropriate** and collect the fee from the waste generators on its own or through authorised agency



	HOUSES	Up to 50 sqm built-up area in ULBs with a population between 1 to 10 lakh: Rs 40
		With over 300 sqm built-up area: Rs 160
User fee per month	COMMERCIAL ESTABLISHMENT	With an area less than 200 sqm: Rs 400
	HOTELS	With an area less than 300 sqm: Rs 3,000
	HOSTELS	Rs 1,500
	RESTAURANTS	With seating of up to 50 people: Rs 1,500

Draft Karnataka Municipal Corporation Model Solid Waste Management by-laws, 2018. Read more at:
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Integration of
Informal
sector/waste
collectors

- Setup **material recovery facilities or secondary storage facilities** with sufficient space for sorting of recyclable materials to enable informal or authorised waste pickers and waste collectors to separate recyclables from the waste and provide easy access to waste pickers and recyclers for collection of segregated recyclable waste such as paper, plastic, metal, glass, textile from the source of generation or from material recovery facilities; Bins for storage of **bio-degradable wastes shall be painted green**, those for **storage of recyclable wastes shall be painted white** and those for **storage of other wastes shall be painted black**;
- Establish **waste deposition centres for domestic hazardous waste** for its safe disposal. **One centre is set up for the area of twenty square kilometers** and notify the timings of receiving domestic hazardous waste at such centres;
- Ensure **safe storage and transportation of the domestic hazardous waste to the hazardous waste disposal facility** or as may be directed by the State Pollution Control Board or the Pollution Control Committee



- Collect waste from markets (vegetable, fruit, flower etc.) on day to day basis and promote setting up of **decentralised compost plant or bio-methanation plant** at suitable locations in the markets or in the vicinity of markets
- Involve communities in waste management and promotion home composting, bio-gas generation, decentralised processing of waste at community level
- **Collect horticulture, parks and garden waste separately and process in the parks and gardens, as far as possible;**

Decentralized
Waste
Management

Transport non-bio-degradable waste to the respective processing facility or material recovery facilities or secondary storage facility;



Transport segregated bio-degradable waste to the processing facilities like compost plant, bio-methanation plant or any such facility. Preference shall be given for on site processing of such waste

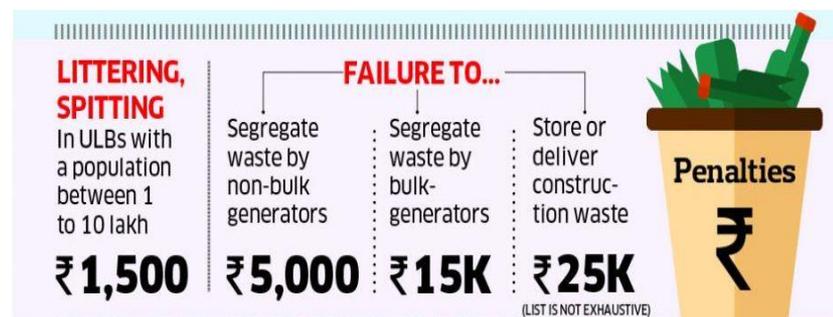
Transport construction and demolition waste as per the provisions of the Construction and Demolition Waste management Rules, 2016;

- Facilitate construction, operation and maintenance of solid waste processing facilities on their own or with private sector for optimum utilisation of various components of solid waste adopting suitable technology and adhering to the guidelines issued by the MoHUA and standards prescribed by the Central Pollution Control Board. **Preference shall be given to decentralised processing to minimize transportation cost and environmental impacts**
- Ensure that **provisions for setting up of centers for collection, segregation and storage of segregated wastes**, are incorporated in building plan while granting approval of building plan of a group housing society or market complex;



Decentralized
Waste
Management

- **Training and Capacity building of workers including contract workers**
- Ensure that the operator of a facility provides **personal protection equipment including uniform, fluorescent jacket, hand gloves, raincoats, appropriate foot wear and masks** to all workers handling solid waste and the same are used by the workforce;
- Frame **bye-laws and prescribe criteria for levying of spot fine** for persons who litters or fails to comply with the provisions of these rules and delegate powers to officers or local bodies ;
- Create **public awareness through information, education and communication campaign and educate the waste generators**



- Allow only the **non-usable, non-recyclable, non-biodegradable, non-combustible and non-reactive inert waste and pre-processing rejects and residues from waste processing facilities** to go to sanitary landfill
- The sanitary landfill sites shall meet the specifications as given in Schedule-I, however, every effort shall be made to recycle or reuse the rejects to achieve the desired objective of zero waste going to landfill;
- Investigate and analyse all **old open dumpsites** and **existing operational dumpsites for their potential of biomining and bio-remediation**
- In **absence of the potential of bio-mining and bio-remediation of dumpsite**, it shall be **scientifically capped** as per landfill capping norms to prevent further damage to the environment

SWM Rules, 2016: Stakeholders and their Responsibilities

Central Government

Ministry of Environment, Forest and Climate Change	Responsible for over all monitoring the implementation of these rules in the country.
Ministry of Urban Development.	Shall frame National Policy and Strategy on SWM including policy on waste to energy and coordinate with States/UTs, provide technical guidelines, financial support, training to local bodies, etc.
Department of Fertilisers, Ministry of Chemicals and Fertilisers	Provide market development assistance on city compost; and ensure promotion of co-marketing of compost with chemical fertilisers in the ratio of 3 to 4 bags: 6 to 7 bags by the fertiliser companies
Ministry of Agriculture	Provide flexibility in Fertiliser Control Order for manufacturing and sale of compost; propagate utilisation of compost; set up laboratories to test quality of compost; issue suitable guidelines for maintaining the quality of compost and ratio of use of compost visa-a-vis chemical fertilizers while applying compost to farmland.

SWM Rules, 2016: Stakeholders and their Responsibilities

Central Government

Ministry of Power	Decide tariff or charges for the power generated from the waste to energy plants based on solid waste; compulsory purchase power generated from such waste to energy plants by distribution company.
Ministry of New and Renewable Energy Sources	Facilitate infrastructure creation for waste to energy plants; provide appropriate subsidy or incentives for such waste to energy plants.
Central Pollution Control Board	Shall coordinate with SPCBs/PCCs for monitoring and Annual Reports, formulation of standards, review new technologies, prepare guidelines for buffer zones restricting from residential, commercial and construction activities areas; and inter-state movement of waste

SWM Rules, 2016:

Stakeholders and their Responsibilities

State Government

Secretary-in-charge, Urban Development in the States and Union territories

Prepare a **state policy and solid waste management strategy**; lay **emphasis on 3Rs**; provide **guidelines regarding integration of waste picker or informal waste collectors** in the waste management system; direct the town planning dept. to ensure that a **separate space for segregation, storage, decentralised processing of solid waste is demarcated in the development plan** for group housing or commercial or any other non-residential complex exceeding 200 dwelling or having a plot area exceeding 5,000 sq. m; direct the **developers of Special Economic Zone, Industrial Estate, Industrial Park to earmark at least five percent of the total area of the plot or minimum five plots or sheds for recovery and recycling facility**. Facilitate establishment of common regional sanitary land fill 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 and ensure professional management of such sanitary landfills; capacity building of local bodies in managing solid waste, notify buffer zone for the solid waste processing and disposal facilities of more than five tons per day in consultation with the State Pollution Control Board; and start a scheme on registration of waste pickers and waste dealers.

SWM Rules, 2016:

Stakeholders and their Responsibilities

Duties of District Magistrate or District Collector or Deputy Commissioner	shall facilitate identification of landfill site, quarterly review the performance of local bodies
State Pollution Control Board or Pollution Control Committee	shall monitor, issue authorization and regulate Inter-State movement of waste
Manufacturers or brand owners of disposable products and sanitary napkins and diapers	shall put in place a system to collect back the packaging waste generated due to their production; explore the possibility of using all recyclable materials in their products; provide a pouch or wrapper for disposal of each napkin or diapers along with the packet of their sanitary products; shall educate the masses for wrapping and disposal of their products.
Industrial units located within 100 km from the RDF and waste to energy plants based on solid waste	Shall make arrangements within six months from the date of notification of these rules to replace at least five percent of their fuel requirement by refused derived fuel so produced.

Criteria for Waste to Energy Process

- Non recyclable waste having **calorific value of 1500 K/cal/kg** or more shall not be disposed of on landfills and **shall only be utilised for generating energy either or through refuse derived fuel or by giving away as feed stock for preparing refuse derived fuel.**
- High calorific wastes shall be used for co-processing in cement or thermal power plants.
- The local body or an operator of facility proposing to set up waste to energy plant of more than five tones per day processing capacity **shall submit an application in Form-I to the State Pollution Control Board or Pollution Control Committee, as the case may be, for authorisation.**
- State Pollution Control Board or Pollution Control Committee, on receiving such application for setting up waste to energy facility, shall examine the same and grant permission within sixty days.

Time Frame for Implementation

Identification of suitable sites for setting up solid waste processing facilities & landfill facilities	1 year
Procurement of suitable sites for setting up solid waste processing facility and sanitary landfill facilities	2 years
Enforcing waste generators to practice segregation	2 years
Ensure door to door collection of segregated waste and its transportation in covered vehicles to processing or disposal facilities.	2 years
Ensure separate storage, collection and transportation of C&D Wastes	2 years
Setting up solid waste processing facilities by all local bodies having 100000 or more population	2 years
Setting up solid waste processing facilities by local bodies and census towns below 100000 population.	3 years
Setting up common or stand alone sanitary landfills by or for all local bodies having 0.5 million or more population	3 years
Setting up common or regional sanitary landfills by all local bodies and census towns under 0.5 million population	3 years
Bio-remediation or capping of old and abandoned dump sites	5 years

Thank You