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URBAN AFFAIRS
GOVERNMENT OF INDIA



Guidelines for Source Segregation of Municipal Solid Waste

Swachh Bharat Mission Urban - 2.0



Central Public Health and Environmental
Engineering Organization (CPHEEO)

Department of Urban Development

**Ministry of Housing and Urban Affairs
Government of India**

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Preface

Segregation of waste at source of generation, commonly known as source segregation has been a crucial step in scientific waste management. The Solid Waste Management (SWM) Rules, 2016, mandated segregating waste at the point of generation for efficient collection, processing and disposal. Since then, citizens, ULBs and stakeholders have been introduced to segregating waste into different categories under the auspices of Swachh Bharat Mission (Urban).

The four-stream segregation system mandated in Solid Waste Management 2026 builds on the SWM Rules, 2016. It is not a new concept but a structured refinement of existing practice. Effective source segregation remains the cornerstone of sustainable waste management: it reduces the burden on landfills, improves recycling and recovery, and supports a cleaner and healthier waste management system protecting the health of workers and is the base for circular economy.

These Guidelines give waste generators, Urban Local Bodies (ULBs) and other stakeholders practical guidance on implementing the four-stream waste segregation systematically and effectively. They clarify the classification of waste streams, streamlining of source segregation practices, and support efficient collection, transportation, processing and resource recovery. The guidelines also cover the same aspect for other wastes such as horticulture wastes, C&D waste and E-waste.

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Chapter 1: Introduction and Fundamental Principles

1.1 Background

Effective solid waste management protects public health, prevents pollution and recovers resources. The Solid Waste Management Rules, 2026, which supersede the 2016 Rules, build upon progress made under Swachh Bharat Mission (Urban) and circular economy initiatives, laying stronger emphasis on source segregation, separate management of waste streams, stakeholder accountability, and environmentally sound processing and disposal.

The fundamental principle is simple that every generator must segregate waste they generate as per its characteristic nature as prescribed, store each stream separately, and handover to the authorized collection system without cross mixing or contamination. It maintains the nature of waste, and keeps surroundings clean and hygienic, prevents spreading of odor, limits pests and health risks, enables recycling and resource recovery, ensures safe handling of high health risk sanitary and special care waste, and helps sustainable processing and reduces the quantity of waste sent for final disposal in landfills.

The overall approach follows a simple hierarchy: avoid wastages and reduce waste generation, reuse what can be reused, segregate wastes at source, recycle or recover value from it, and send only what cannot be recycled or recovered to final disposal.

1.2 Responsibilities of waste generators

As per the Solid Waste Management Rules, 2026, every waste generator shall:

- Segregate waste at source into four streams - wet, dry, sanitary and special care waste and keep each stream separate.
 - Sanitary and special care waste should be kept separate and handed over separately as and when generated.
- Storage at waste generator premises can be in any type of containers such as bins, boxes, bags etc.
- Hand over segregated waste only to authorized waste collectors/waste pickers or the system notified by the local body, keeping waste streams segregated while handing over.
- Wrap sanitary waste securely in the wrapper provided or paper and store in a designated sanitary waste container before handing over.
- Never throw, burn or bury waste, or dispose of it in drains or water bodies.
- Pay the applicable user fee prescribed under the local body's bye laws.
- Apart from the four streams, also segregate and store separately the following wastes before handing over:-
 - C&D waste
 - Horticulture/Garden waste
 - E-waste: And any other wastes as determined by ULBs

Additional Responsibilities of waste generators

- Ensure that domestic workers, housekeeping staff, security personnel and other persons handling waste on the generator's behalf are informed of, and follow, the same segregation system appropriate for the quantity and securing it from pests, vectors and animals.
- High health-risk wastes such as sanitary waste and special care waste can be dangerous to waste workers. They can cause injuries, cuts, needle-stick pricks, burns, and scalds. Exposure to contaminated waste may also lead to diseases such as hepatitis A, hepatitis B, hepatitis C, HIV/AIDS, tuberculosis, tetanus, gastrointestinal infections, skin infections, and respiratory infections.

1.3 Source segregation and why it matters

Source segregation is the first and most important step in waste management: mixed waste contaminates recyclables, makes wet waste harder to process, and increases the waste sent for disposal. Segregation should stay simple and practical, as the focus is on keeping streams separate, not focus on the number or size of bins.

This guideline explains, in practical terms, what waste to segregate, how to store each stream at any place correctly, and how to hand it over.

1.4 Objective of this guideline

The objective of the guidelines is to provide practical guidance to waste generators on:

- How to identify/classify wastes
- What waste to segregate
- How to store different wastes
- How to manage segregation in different types of premises
- How to hand over segregated waste
- What practices should be avoided
-

1.5 How to use this guideline effectively

- Convert the citizen-facing sections into local language summaries with visuals (colour codes, do's/don'ts).
- Use Ward Representatives, RWAs, SHGs and social media/SMS to disseminate the guideline.
- Train frontline staff as messengers, sanitation workers and D2D collection workers Equip them to reinforce segregation messaging during each pickup.
- Pair dissemination with simple monitoring (spot checks, segregation audits) so the document becomes an operating standard the ULB measures itself against, not just a one-time notice sent out

Chapter 2: Understanding the waste generated

2.1 Types of waste

Waste generators must segregate waste at source into four streams. The table below summarises each stream:

TABLE 1 TYPES OF WASTE

Waste stream	Examples
Wet Waste	Food waste, leftover food, vegetable and fruit peels, tea/coffee waste, flowers and other biodegradable waste (the waste that rots or putrefies by itself, naturally on its own)
Dry Waste	Paper, cardboard, plastic, metal, glass, packaging, textiles and other dry waste
Sanitary Waste	Used sanitary pads, diapers, tampons, incontinence products and such similar waste (containing human discharges and blood)
Special Care Waste	Batteries, discarded/expired medicines, CFLs, tube lights, mercury-containing items, paint/pesticide containers, waste needles, razor blades and other waste requiring special handling (aerosol bottles/cans/sprays)
Other	Horticulture/garden waste

Waste covered under separate regulatory frameworks, such as e-waste, biomedical waste and construction and demolition waste, should be managed through their respective systems.

2.1.1 Fifty common household waste items generated in urban households

A typical urban household generates a wide mix of waste every day. Fifty common examples, grouped by the stream they belong to, are listed below:

Wet waste	Dry waste
1. Vegetable peels and trimmings	1. Newspapers and magazines
2. Fruit peels and cores	2. Cardboard boxes and cartons
3. Leftover cooked food & food preparation waste	3. Plastic bottles of water, cold drinks
4. Raw food scraps and trimmings	4. Plastic carry bags and wrappers
5. Tea leaves and used tea bags	5. Tetra packs of milk, juices
6. Coffee grounds and filters	6. Glass bottles and jars
7. Eggshells*	7. Metal cans (tin, aluminium)
8. Fish, meat, bones*	8. Old clothes, textiles and rags
9. Stale bread, rice and rotis	9. Shoes and footwear
10. Spoiled fruits and vegetables	10. Broken plastic household items and toys
11. Flowers and puja/religious waste	11. Thermocol and packaging foam
12. Coconut shells and husks*	12. Used paper cups and plates (after removing food contents)
13. Curd, milk and other dairy waste	13. Aluminium foil and wrappers
14. Any waste which rots on its own naturally	14. Empty shampoo, soap and detergent bottles
	15. Used cards and stationery
	16. Broken umbrellas and plastic hangers
	17. Many such discarded items

* Although these materials fall under the wet waste category, they do not readily decompose. Therefore, they shall be collected under wet waste during processing but will be treated separately. The ULB shall adopt an appropriate technology for their processing and disposal.

Special care waste

- 1 Used household batteries (AA, AAA, button cells)
- 2 Expired or unused medicines
- 3 CFL bulbs and tube lights
- 4 LED bulbs and small electronic lamps
- 5 Broken thermometers/mercury-containing items
- 6 Empty paint cans
- 7 Empty pesticide/insecticide containers
- 8 Nail polish and nail-polish-remover bottles
- 9 Used razors and blades
- 10 Broken glass, mirrors and crockery shards (dry waste-handle with care-wrapped)
- 11 Old cosmetics and chemical bottles
- 12 Aerosol cans/bottles/sprays

Sanitary waste

- 1 Used sanitary napkins/pads
- 2 Baby diapers
- 3 Adult diapers/incontinence products
- 4 Tampons
- 5 Used cotton and bandages soiled with body fluids
- 6 Condoms

C&D Waste

- 1 Broken bricks
- 2 Concrete debris
- 3 Tiles and ceramics
- 4 Sand and gravel
- 5 Plaster and gypsum waste
- 6 Wood scraps
- 7 Metal scraps
- 8 Glass panels and door and window frames
- 9 PVC pipes and fittings
- 10 Paint and putty residue
- 11 Wires and rods
- 12 All wastes from demolition and repairs of buildings

Horticulture Waste

- 1 Grass clippings
- 2 Pruned branches and twigs
- 3 Hedge trimmings
- 4 Dry leaves
- 5 Weeds and plant cuttings
- 6 Coconut waste

E-Waste

- 1 Mobile phones and chargers
- 2 Cables, earphones and adapters
- 3 Computers, laptops, keyboards, printers, routers, and small electronic appliances
- 4 TVs
- 5 ACs
- 6 Washing Machine
- 7 Refrigerators etc.

2.2 Separate Storage of Waste at the Household Level

The segregated waste must be stored separately until handover so that the streams do not get mixed again inside the place. A household does not need four large bins — it needs the right sized container in the right place for each stream (all household containers need not be at the same place), as given below.

2.2.1 General principles for household storage

- Keep a minimum of two bins/containers, one for wet waste and one for dry waste plus a small dedicated container each for sanitary waste and special care waste.
- **Wet Waste**

- Use a small, lidded bin (roughly 5 - 15 litres) in the kitchen/suitable place.
 - Empty and clean the bin daily - wet waste decomposes quickly and will cause odour and attract pests if bin/container is left dirty.
 - Avoid adding liquid to the wet waste container - drain excess liquid where practicable to reduce weight, leakage and smell (Eg. Drained tea bags of water/liquid)
 - Keep the wet-waste bin away from direct sunlight. In apartments and communities, keep any bins/ containers away from shared corridors to avoid any nuisance.
 - Avoid using plastic liners in wet waste bins, as they convert segregated wet waste into mixed waste and hinder effective processing.
- **Dry Waste**
 - Use a larger container (a lid is useful but not essential, since dry waste does not decompose) kept in a balcony, utility area or under sink cabinet. Bags also work.
 - Where space allows, further separate dry waste into paper/cardboard and plastic/metal/glass this improves recycling value and speeds up handover.
 - Bulky recyclable dry waste, such as newspapers and cardboard, that do not fit into regular bins may be stored separately and handed over to authorised scrap dealers (kabadiwalas). This promotes resource recovery and eases the collection and transportation burden on ULBs.
 - Flatten cartons, boxes and bottles to save storage space.
 - Rinse food or liquid containers (bottles, tins, tetra packs) before storing, so they do not attract pests or develop odour while awaiting collection.
- **Sanitary Waste**
 - Keep a small, lidded bin exclusively for sanitary waste, separate from both the wet and dry bins typically placed in or near the bathroom.
 - Wrap each used item individually in paper or the wrapper provided with the product before placing it in the bin, to contain it hygienically from spreading any diseases/infection.
- **Special Care Waste**
 - Keep a dedicated box or container (not necessarily a bin) in a dry, out of the way place such as a cabinet or drawer, away from children and pets.
 - Store sharp, fragile or potentially hazardous items in a secure, appropriate closed container to prevent breakage, leakage or injury.
 - Never place special care waste in the regular dry-waste bin even temporarily as items such as batteries, mercury containing bulbs and chemical containers require separate handling.
 - Place bins so they are convenient to use, close to where each type of waste is generated rather than tucked away out of reach.
 - Never let one stream spill into another container; if a bin fills up, use a spare bin* rather than mixing streams temporarily.

Chapter 3: Managing Segregation in Different Types of Premises

While waste segregation remains same at any premises, how segregated waste is stored and organized varies with the type of premises.

3.1 Individual Households

- Segregate waste at source into the mandatory four waste streams and store each stream in separate containers.
- Hand over only segregated waste to the authorized waste collector. Avoid mixing of any wastes, as it can result in action by ULBs including fines/penalties.
- Keep heavier recyclable dry waste, such as newspapers and cardboard, separate and channelize them through authorized recyclers or *kabadiwalas* wherever feasible, in return for money.

3.2 Small Group Housing

- Provide a common, clearly designated area for the collection of segregated waste streams.
- Ensure that each household segregates waste at source before depositing it at the common collection point.
- Alternatively, have an appointed waste collector to collect segregated waste from each household and bring it to a common point.
- The property owner, association, or designated representative shall ensure compliance with segregation requirements and also facilitate collection by authorized agencies of ULBs.

3.3 Small shops and commercial establishments

- Shops generating only dry waste (packaging, cartons, wrappers) should keep a dedicated dry-waste bin and flatten cartons to save space.
- Any food waste/wet waste generated has to be segregated and stored in separate bins.
- Eateries, vegetable shops and florists that generate only wet waste must store it separately in a lidded container and arrange frequent handover to prevent odour.
- Wrapper packages, cutlery etc. have to be stored separately as Dry waste
- Special care waste from shops (e.g. batteries from an electronics shop) should be stored separately and handed over through the appropriate take-back or collection arrangement, not mixed with dry waste or any other waste.

3.4 Street vendors and temporary/outdoor setups

- Vendors selling food or produce should keep a suitable wet-waste container and a separate bag or crate for dry waste (packaging, disposable cutlery) at their stall.

- Local bodies should provide or designate nearby collection points for vendors to deposit or get the waste collected by collection vehicles.
- At day's end, waste should not be left in public space overnight.

3.5 Bulk Waste Generators

Any waste generator is categorized as a bulk waste generator (BWG) if it meets at least one of these criteria: (i) builtup/ floor area of 20,000 sq.m. or more, (ii) water consumption of 40,000 litres per day or more, or (iii) solid waste generation of 100 kg per day or more. The categories of BWGs covered and their responsibilities are given below:

TABLE 2 ILLUSTRATIVE CATEGORIES OF BWGs AND SEGREGATION ARRANGEMENTS

Generator Type	Duties
Apartments, Group Housing Societies and RWAs	• Within flats, residents should segregate and store waste into the same four streams as any household, using containers suited to their kitchens and bathrooms. • Apartment complexes and group housing societies should provide clearly marked common collection points for each stream so segregation is maintained from individual flats/dwelling units to the common point. • Resident welfare associations should ensure housekeeping staff keep the streams separate throughout collection and handover, and do not mix them at the common point. • Where on-site composting or biogas processing is used, wet waste should be diverted to it only handover leftover/residual waste.
Offices and institutions	• Provide clearly labelled bins for wet and dry waste at common points such as pantries and workstations; Most office waste is dry (paper, packaging), with only limited wet waste from pantries and cafeterias, lunch rooms. • Sanitary waste bins should be placed in washrooms, separate from other waste bins. • Special care waste such as used batteries, CFLs/tube lights and printer cartridges should be collected in a designated box and handed over periodically, not placed in other waste bins. Preferably their collection should be contracted out. • Store e-waste separately in a designated, secure area and hand it over only to authorised e-waste collection agencies/recyclers, as per applicable provisions.

Educational Institutions	• Schools, colleges and other educational institutions should provide separate wet and dry waste bins near canteens and eating areas, since food waste is usually the main source of wet waste on campus. • Classrooms may have only dry waste bins. • Sanitary waste bins should be provided separately in washrooms, distinct from other waste bins. • Special care waste such as batteries, CFLs and laboratory chemicals should be collected separately and handed over through an appropriate take-back or disposal arrangement, and segregation should be actively taught to students and staff.
Hotels and Hospitality Establishments	• Hotels should provide dedicated wet-waste containers in kitchens, restaurants and food-service areas, and process food waste on-site through composting or biogas where feasible. • Dry waste from guest rooms, administrative areas and back-of-house operations should be collected separately. • Sanitary waste bin arrangements should be provided in guest rooms and washrooms. • Special care waste from housekeeping and maintenance which includes used batteries, CFLs, chemical containers should be stored separately and handed over through an authorised take-back or collection arrangement.
Malls and Large Commercial Complexes	• Malls, multiplexes and similar commercial complexes should place separate wet, dry, sanitary and special care waste containers at food courts, shops, cinema halls, common service areas, restrooms etc. • A central segregated waste storage area should be maintained for the complex, from which waste is handed over to the ULB or an authorized agency, stream-wise. • Wet waste from food courts should be processed on-site, such as through composting/biogas, wherever feasible.
Hospitals and Nursing Homes	• Hospitals and nursing homes should keep general wet and dry municipal waste separate from biomedical waste, which must be managed strictly under the applicable biomedical waste rules and never mixed with the four municipal streams. • All wastes from non-medical areas, staff cafeterias, administrative offices and other common areas, should have secure, designated storage and be handed over as set out in this guideline.

	Dedicated, clearly labelled collection and storage areas should be maintained to prevent any mixing between municipal solid waste and biomedical waste.
Places of Transportation (Airports, Railway Stations, Bus Stations, Metro Stations, etc.)	- Provide clearly labelled bins for each prescribed waste stream at passenger areas, waiting halls, platforms, terminals, and food courts, restrooms, toilet blocks. - Ensure waste generated by vendors, food outlets, and passengers is segregated at source and handed over separately for collection. - Designate a responsible agency or facility manager to monitor segregation, storage, and timely handover of segregated waste.
Pilgrim and Religious Places	- Provide separate collection bins for the prescribed waste streams at key congregation points, entry/exit areas, and along pilgrimage routes, toilet blocks. - Collect flower offerings, prasad residues, and other biodegradable waste separately for appropriate processing and resource recovery. - Ensure regular awareness, monitoring, and collection arrangements to prevent littering and maintain segregation at source during festivals and peak gatherings.
Markets	- Provide clearly labelled bins for each prescribed waste stream at common areas, entrances, vendor stalls, loading/unloading zones, and food courts. - Ensure that waste generated by shopkeepers, vendors, customers, and food establishments is segregated at source and handed over to the separately to the collection system. - Designate a market association, representative, facility manager, or responsible agency to oversee segregation, storage, cleanliness, and timely handover of segregated waste to authorized collectors or ULB.
Events/gatherings	- Provide clearly labelled bins for each prescribed waste stream at entry and exit points, seating areas, food and beverage zones, backstage areas, and other high-footfall locations, toilet blocks. - Ensure that event organizers, vendors, caterers, exhibitors, and participants segregate waste at source and do not mix different waste streams. - Designate an event waste management coordinator or responsible agency to monitor segregation, manage

	temporary storage areas, and ensure timely collection and handover of segregated waste to the collection system.
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3.6 Hilly and Difficult Terrain Locations

- Ensure source segregation of waste into prescribed waste streams at households, commercial establishments, institutions, and public places, with suitable arrangements adapted to local geographical conditions such as smaller bins and containers for non- motorized vehicles and manual collection systems.
- Adopt appropriate collection and transportation methods, including manual collection, small vehicles, animal-drawn carts, ropeways, or other locally suitable systems, where conventional collection vehicles cannot access waste generation areas.
- Establish designated collection points or transfer locations to facilitate efficient aggregation of segregated waste and transportation of segregated waste from remote and difficult-to-access areas.
- Ensure that segregated waste streams remain separate during collection and transportation and are transported to authorized processing, recycling, treatment, or disposal facilities in a timely manner.

Chapter 4: Handing Over Segregated Waste

4.1 General principles

- Hand over each waste stream separately, in its own container or bag, only to authorised waste collectors, waste pickers or the collection system notified by the ULB.
- Pay the applicable user fee prescribed under the ULBs byelaws; it supports collection, transportation and processing of segregated waste.
- Bulk generators should retain any receipt, log or record of waste handed over, as required by the ULB, to demonstrate BWG compliance.
- Report any instance of a collector refusing segregated waste or insisting on mixing streams to the ULB, since this is contrary to the Rules.
- If waste is accidentally mixed, separate it again immediately and return it to the correct stream.
- If collection is missed, segregated waste continue to be stored safely at the premises until the next collection or compliant redressal takes place. It should not be dumped, mixed or left unattended in the open.

Chapter 5: Dos and Don'ts for Waste Generators

The following practices undermine source segregation and shall be avoided in accordance to the Solid Waste Management Rules, 2026 and directions/bye-laws of the ULB.

- Mixing wet, dry, sanitary and special care waste together in a single bin or bag at any stage, storage or handover.
- Throwing, burning or burying waste in streets, open plots, parks or any other locations.
- Disposing of waste, or its wastewater/leachate, into drains, water bodies or other environmentally sensitive areas.
- Handing over waste to unauthorised collectors, informal handlers or vehicles instead of the system notified by the ULB.
- Placing sanitary waste (pads, diapers, tampons) unwrapped or loose in any bin, or mixing it with any other waste.
- Discarding special care waste like batteries, expired medicines, CFLs, mercury-containing items, paint or pesticide containers in the dry waste stream.
- Mixing e-waste, biomedical waste, horticultural waste or construction and demolition waste with the four municipal streams as these have their own regulated systems.
- Burning garden waste, leaves or any other waste, including for disposal or for warmth.
- Leaving waste out for collection outside notified timings, or leaving it unattended in common areas, corridors or public spaces.
- Refusing to pay the applicable user fee for solid waste management services.
- Using a single bin/container or one-bag for convenience, which defeats the purpose of segregation at source.
- Delaying handover of wet waste for more than one day, causing odour, pests and nuisance.
- Disposal of sanitary waste by flushing it in toilet is an unscientific practice and should be avoided.

Chapter 6: Generator Compliance and Citizen responsibility Checklist

Waste generators may use the following checklist to confirm that source segregation is being carried out correctly:

S. No.	Checklist Item	Yes	No
1	I segregate waste at the time & place when it is generated.	☐	☐
2	Wet waste is stored separately and handed over without delay.	☐	☐
3	Dry waste is kept clean, dry and separate.	☐	☐
4	Sanitary waste is wrapped and stored in a designated container and handed over without delay.	☐	☐
5	Special care waste is stored separately and not mixed with other waste.	☐	☐
6	I do not mix segregated streams before handing over.	☐	☐
7	I hand over waste only to authorised collectors, waste pickers, or the system notified by the local body.	☐	☐
8	I pay the applicable user fee for solid waste management.	☐	☐
9	I do not litter, burn, bury or dump waste.	☐	☐

Chapter 7: Role of Urban Local Bodies: Collection, Transportation and Enabling Segregation

Source segregation by generators can succeed only if the Urban Local Body (ULB) and its authorised agencies maintain it through collection, transportation, IEC, incentives and enforcement. This chapter sets out ULB responsibilities in support of the segregation described earlier.

7.1 Collection and Transportation of Segregated Waste

- ULBs shall organise door-to-door collection of each waste stream on a fixed, publicly notified schedule and shall communicate collection timings and points clearly to all generators.

TABLE 3 INDICATIVE WASTE COLLECTION FREQUENCY

Waste stream	Indicative collection frequency
Wet waste	Daily; more frequently in high-generation areas such as food zones and vegetable/meat markets
Dry waste	Daily based on storage capacity and generation
Sanitary waste	Daily, integrated with regular collection of wet waste
Special-care waste	Scheduled collection, based on quantity and type of waste; it may be along with dry waste collection.

- Actual frequency shall be determined by the ULB based on waste generation, climate, storage capacity, route conditions and local requirements
- Collection vehicles and crews shall accept only segregated waste. If a generator presents mixed waste, the crew should decline it, explain the requirement and, if non-compliance persists, report it to the ULB rather than accepting and segregating it themselves.
- Segregated streams shall be kept apart at every stage of handling, including at collection points, transfer stations and material recovery facilities, and shall not be mixed for convenience of transport or storage.
- Wet waste shall be collected more frequently than dry waste and at least once a day, since it decomposes quickly and can cause odour and pest problems; collection frequency shall be more frequent and suitably adjusted for bulk generators, markets and other high-volume sources.
- Sanitary waste also to be collected on daily basis in separate storages.
- Special care waste shall be collected through arrangements that keep it apart from other, wastes including separate collection days, containers or drop-off/take-back systems as appropriate.
- ULBs shall put in place an app-based grievance redressal mechanism through which generators can report missed collection, forced mixing by collection staff, or other service failures.

7.2 Standardisation of Collection and Transportation Vehicles

- Vehicles used for collection and transportation shall be fitted with separate, clearly marked or removable compartments/secured bags for wet, dry, sanitary and special care wastes, so that waste streams do not mix in transit.
- Vehicles shall follow a uniform colour-coding and labelling convention across the ULB area, consistent with the colour coding used for community bins, so that generators and waste workers can readily identify which compartment is for which waste stream.
- Vehicles shall be covered or otherwise designed to prevent spillage, leachate leakage and littering along the transportation route, and shall be sized appropriately for the width of roads and lanes they serve.
- Vehicles and containers shall be cleaned and disinfected once emptied to prevent odour, pest infestation and cross-contamination between trips.

TABLE 4 TYPES OF VEHICLES USED FOR WASTE COLLECTION

Vehicle	Typical use	Segregated collection arrangement
Wheelbarrow/handcart	Narrow lanes, short-distance collection	Separate Removable, stream-wise containers
Manual/electric tricycle	Narrow lanes, door-to-door collection	Separate removable containers/compartments
E-rickshaw	Door-to-door collection, narrow/medium roads	Physically separated compartments or separate containers
Auto-tipper – 3 Wheel/4 Wheel	Residential/commercial collection	Separate compartments or secured separate containers
LCV Mid size vehicle/LCV	Higher-generation areas/BWGs	Multi-compartment body or dedicated stream vehicle
Larger vehicle	Secondary transportation	Dedicated or physically separated compartments
Backpacks	Transportation in hilly areas	separate backpacks/ baskets or with partitions

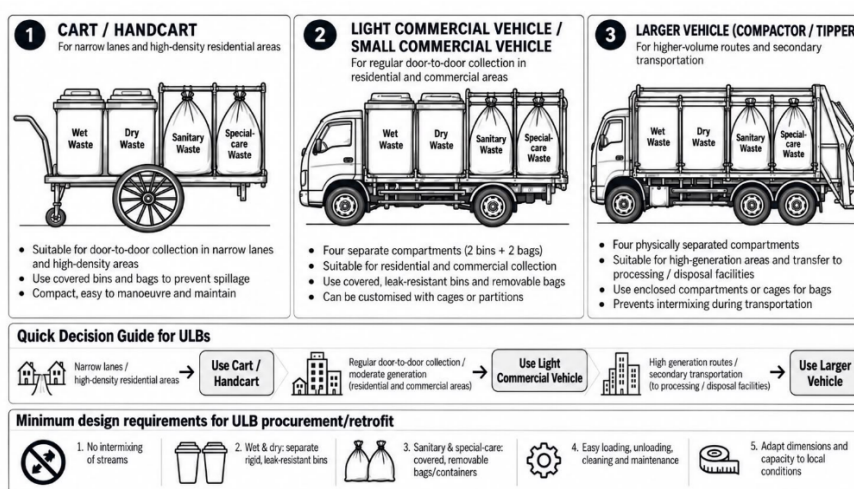


FIGURE 1 INDICATIVE GUIDANCE ON RETROFITTING OF CURRENT VEHICLES

7.3 Information, Education and Communication (IEC)

- ULBs shall conduct sustained & periodic IEC campaigns, rather than one-time drives, to build and maintain awareness of segregation requirements, collection schedules and the consequences of non-segregation.
- IEC material shall be prepared in local languages with simple, pictorial graphics so it is easily understood by all generators, including children and people with limited literacy. It shall be disseminated through print, local cable and social media, community meetings, RWA and market association workshops, and school and college programmes.
- IEC content shall be tailored to different categories of generators, such as households, bulk generators, shops, offices, hotels, hospitals and event organisers, reflecting the specific segregation practices relevant to each.
- Waste collection staff and waste pickers shall also be trained and sensitised, since they play a direct role in explaining segregation requirements to generators and in identifying non-compliance.
- ULBs shall periodically assess the effectiveness of IEC activities, for example through surveys, monitoring of segregation levels at collection points, or feedback from field staff, and revise their communication strategy accordingly.

7.4 Incentivisation

- ULBs may offer a reduction or rebate in the applicable user fee to generators who consistently and verifiably segregate waste, to encourage continued compliance.
- ULBs may recognise and reward good practice through award schemes at the level of wards, RWAs, schools, markets or bulk generators, and may publicise such recognition to encourage wider participation.
- Bulk generators and institutions that process wet waste on-site, such as composting or biogas generation, may be given support such as subsidised equipment, technical assistance or reduced processing charges for other wastes.
- Incentive schemes should be transparent, based on objectively verifiable criteria, and communicated clearly to generators so that the link between compliance and the benefit is well understood.

7.5 Punitive Measures

- ULBs shall prescribe, under their bye-laws, a graded scheme of spot fines and penalties for non-segregation, littering, burning, illegal dumping and refusal to pay the applicable user fee.
- The penalty structure should ordinarily begin with a warning or notice for a first offence, with fines escalating for repeated or wilful violations, particularly by bulk generators and commercial establishments.
- For persistent non-compliance by bulk generators, ULBs may take further action permitted under the bye-laws, such as withholding trade licences or municipal services, in addition to financial penalties or under Hon'ble Supreme court orders.

- Enforcement shall apply only to generators. Where mixing occurs after proper segregation and handover due to failure of the collection or transportation system, responsibility and corrective action rest with the ULB or its authorised agency, not the generator.
- ULBs may create an inspection team, along with dedicated personnel such as mosquito larva checkers to check on segregation of waste and penalize violators on the spot. Inspection vehicle may have tarpaulin mats and workers to segregate waste on the spot in which case penalty becomes service charge for segregation.

7.6 Monitoring & Evaluation (M&E)

M&E allows ULBs and State/Central authorities to track whether source segregation is happening on the ground and take timely corrective action.

7.6.1 Duties of the Waste Collector

- Collect segregated waste from households, commercial establishments, and institutions as per the prescribed schedule.
- Ensure that wet, dry, sanitary, and special care waste are collected separately and not mixed.
- Check the quality of source segregation and advise waste generators on proper waste sorting practices.
- Handle waste safely using appropriate personal protective equipment (PPE).
- Load and transport waste to designated transfer stations, material recovery facilities, or processing sites.
- Maintain cleanliness of collection vehicles and waste containers.
- Report non-compliance, littering, illegal dumping, or health and safety concerns to supervisors.
- Ensure safe handling of sanitary and hazardous waste to prevent injuries and disease transmission.
- Record collection data and follow designated collection routes.
- Promote awareness among residents on waste segregation and responsible waste management practices.

7.6.2 Key Indicators

- % of wards with door-to-door collection of segregated waste
- % of generators segregating into all four streams (via sample checks)
- % of collection vehicles with compartments for all four streams
- Quantity of each stream collected separately; contamination levels at processing facilities
- Penalties/challans issued for non-segregation, and the trend over time
- Generator satisfaction, via periodic surveys

7.6.3 Data Collection & Reporting

ULBs shall track this through field checks at handover, spot audits at processing facilities, grievance portal feedback, and periodic ward-level audits and report the data upward to the State/UT and relevant national portal.

7.6.4 Roles

- ULBs: day-to-day monitoring, audits, onward reporting
- State/UT: consolidating data, classifying ULBs, directing corrective action
- Centre: setting indicators/benchmarks/formats, tracking national progress

7.6.5 Review

ULBs shall review data at least monthly and act on persistent gaps via IEC, vehicle/route changes, enforcement, or staff retraining.

Chapter 8: Best Practices

Case Study 1: Chandigarh - Moving from two-stream to four-stream segregation

Chandigarh shows how a ULB can progressively strengthen source segregation and adapt its collection system. The city initially focused on wet-dry segregation using compartmentalised vehicles, then moved to a four-stream system in 2026 requiring households to hand over wet, dry, sanitary and special/hazardous waste separately. The Municipal Corporation runs a large fleet of mini collection vehicles, including 3 wheelers and 4 wheelers, and collects wet, dry, sanitary, special care waste separately for onward processing.

TABLE 5 Waste Generation in Chandigarh (MT)

Waste Category	Quantity Collected (MT)	% of Total Waste Generated
Segregated Wet Waste	87,305	Approximately 72%
Segregated Dry Waste	33,190	Approximately 27%
Segregated Sanitary Waste	20	Approximately 0.02%
Segregated Special Care Waste	0.27	Approximately 0.0002
Mixed/Unsegregated Waste (if any)	0	0
Total Waste Generated	1,20,516	--

Chandigarh demonstrates that vehicle design should evolve alongside segregation requirements. Existing fleets can be easily retrofitted with additional compartments, covered bags or removable containers for low-volume streams, while source-segregation awareness and downstream handling need to be strengthened simultaneously.

Case Study 2: Ujjain - Integrating source segregation with four-stream collection

Ujjain runs a more integrated four-stream model. Door-to-door collection uses four-compartment vehicles, with larger compartments for wet and dry waste and smaller rear sections for sanitary and hazardous waste. Collection workers actively check and guide households on segregation, and awareness campaigns supported the transition from the earlier two-bin system. GPS tracking is also used on collection vehicles.

TABLE 6 Waste Generation In Ujjain (MT)

Waste Category	Quantity Collected (MT)	% of Total Waste Generated
Segregated Wet Waste	4,94,34	Approximately 65%
Segregated Dry Waste	2,65,90	Approximately 35%

Segregated Sanitary Waste	265	Approximately 0.35%
Segregated Special Care Waste	153	Approximately 0.20%
Mixed/Unsegregated Waste (if any)	0	0
Total Waste Generated	76,441	--

The Ujjain experience highlights that vehicle segregation alone is not sufficient. ULBs need to combine source-level communication, trained collection staff, appropriately sized vehicle compartments and route monitoring so that segregation is maintained from the household through to the processing facility.

Case Study 3: Indore - Sustaining High Segregation through Integrated Collection

Indore demonstrates how a ULB can scale up source segregation through strong citizen participation and an efficient door-to-door collection system. The city collects wet, dry, sanitary, and domestic hazardous waste separately using compartmentalized collection vehicles and a well-managed fleet network. The Municipal Corporation has aligned collection, transportation, and processing systems to maintain segregation throughout the value chain. Regular awareness campaigns, route monitoring, and dedicated handling arrangements for special waste streams have helped sustain high segregation levels.

TABLE 7 Waste Generation In Indore (MT)

Waste Category	Quantity Collected (MT)	% of Total Waste Generated
Segregated Wet Waste	1,39,692	Approximately 54%
Segregated Dry Waste	1,14,157	Approximately 44%
Segregated Sanitary Waste	3,028	Approximately 1.2%
Segregated Special Care Waste	1,608	Approximately 0.6%
Mixed/Unsegregated Waste (if any)	0	0
Total Waste Generated	2,58,485	--

Indore demonstrates that consistent citizen engagement, multi-compartment vehicles, and strong operational oversight are essential for maintaining a city-wide multi-stream waste management system.

8.1 Key takeaways from case studies

- 1 Chandigarh's fleet was retrofitted rather than replaced, showing 2-way→4-way transitions don't need a full vehicle overhaul.

- 2 Wet and dry waste dominate by weight in Chandigarh, Ujjain, and Indore, but sanitary and special-care streams still demand dedicated handling despite their small volume.
- 3 Trained collection staff and sustained citizen engagement, as seen in Ujjain, drive segregation quality as much as vehicle design does.
- 4 GPS and route monitoring, used in both Ujjain and Indore, help sustain compliance after the initial rollout, rather than letting it slip back.
- 5 Chandigarh, Ujjain, and Indore all achieved zero mixed waste, proving high segregation is an achievable operational standard, not just a regulatory target.

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