



ENVIRONMENT

The Solid Waste Management Bill, 2025: Establishing A Statutory Framework For Segregation, Recycling And Sustainable Municipal Solid Waste Governance In India

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Introduction

On 5th December, 2025, the Solid Waste Management Bill, 2025 (*the “Bill”*) was introduced in the Rajya Sabha, seeking to provide a comprehensive statutory framework for the segregation, recycling, treatment and disposal of municipal solid waste in India. The Bill proposes to regulate the use of recyclable waste in waste-to-energy plants, mandate the transportation of non-recyclable waste to notified landfills, and address matters connected therewith or incidental thereto.

The Bill expressly provides that it shall operate in addition to, and not in derogation of, the existing statutory regime governing waste management under the Environment (Protection) Act, 1986 and the rules framed thereunder, particularly the Solid Waste Management Rules, 2016. Unlike the current rule-based framework, the Bill seeks to impose direct statutory duties and penal consequences.

This legislative development comes at a time when unmanaged waste has emerged as a critical environmental, public health, urban governance, and climate challenge, both domestically and globally.

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The Growing Waste Crisis in India: The Context Necessitating Legislative Intervention

Scale of Waste Generation

India's waste crisis has expanded in scale and complexity alongside rapid urbanisation, population growth, and changing consumption patterns. Current estimates indicate that India generates approximately 170,000 tonnes of municipal solid waste per day, translating to nearly 62 million tonnes annually. Projections suggest that urban India alone may generate around 165 million tonnes of waste annually by 2030, rising sharply thereafter with a projection of 436 million tonnes by 2050. Alongside this growth, unmanaged waste contributes to over 41 million tonnes of greenhouse gas emissions, largely through methane emissions from landfills.

Globally, assessments by the United Nations Environment Programme (UNEP) have highlighted that waste generation is increasing faster in developing economies, transforming waste management into a governance and climate issue, rather than a mere sanitation concern.

Composition of Municipal Solid Waste

Municipal solid waste in India comprises multiple streams:

- Organic (wet) waste, including food waste and garden waste, constitutes over 50% of waste in many cities.
- Dry recyclable waste like papers, glasses, metals, and textiles accounts for nearly one-third of the total municipal waste.
- Plastic waste estimated as 5.6 million tonnes annually, remains a persistent environmental pollutant.
- E-waste, which rose by 73% in five years, reached 1.751 million metric tonnes in 2023-2024.

- Hazardous industrial waste estimated at 7.9 million annually, requires specialised handling.

The diversity and volume of the waste streams underline the need for segregation at source and differentiated treatment mechanism, an objective central to the proposed Bill.

Existing Regulatory Framework Governing Waste Management

India does not currently operate under a unified waste management statute. Instead, waste governance is regulated through stream-specific delegated legislation, including: Municipal Solid waste by Solid Waste Management Rules, 2016, where there is mandatory segregation and defined role for the ULBs, E- waste (Management) Rules, 2022, where the Extended Producer Responsibility (EPR) targets and digital compliances are given, Plastic Waste Management Rules, 2016 states the single-use plastic restrictions and EPRs and many others. Enforcement responsibilities are shared among the MoEFCC, CPCB, State Pollution Control Boards, and Urban Local Bodies (ULBs).

India has undertaken several policy-driven initiatives and national programmes to respond to the growing challenges of solid waste management (SWM). Among these, the Swachh Bharat Mission (SBM), launched in 2014, remains the Government's principal intervention in this sector. Through SBM (Urban) 2.0, the objective is to achieve garbage-free cities across the country by 2026. Attaining this goal requires urban local bodies to meet specific benchmarks, including the scientific handling of municipal waste, remediation of legacy dumpsites, measures aimed at reducing waste generation, and sustained efforts to ensure visible urban cleanliness (MoHUA, 2022).

Meeting these benchmarks necessitates a careful assessment of city-specific constraints and inefficiencies across the entire waste management chain, from generation to disposal. While recent years have witnessed the development of several innovative solutions and successful practices in both Indian and international contexts, their uncritical replication may not yield long-term results. Effective and sustainable solid waste management requires that such practices be adapted to local socio-economic, infrastructural, and institutional conditions rather than applied uniformly across cities.

While these existing framework introduced progressive mechanisms such as Extended Producer Responsibility (EPR) and digital compliance portals, systematic gaps persists:

- Less than 50% segregation at source in major cities;
- Continued dependence on unscientific landfills and dumpsites;
- Less than 3% of municipal waste treated;
- Financial and technical capacity constraints of ULBs.
- Weak accountability mechanisms for bulk waste generators.

It is against this backdrop too that the Solid Waste Management Bill, 2025 must be understood and come into force.

The Solid Waste Management Bill, 2025: Legislative Architecture

The Bill proposes to enact the Solid Waste Management Act, 2025, which shall come into force on such date as notified by the Central Government in the Official Gazette.

Objective of the Bill:

The primary objective of the **Solid Waste Management Bill, 2025** is to establish a **binding statutory framework** for the segregation, recycling, treatment, energy recovery, and environmentally sound disposal of municipal solid waste across India.

Unlike the existing rule-based regime, which operates through delegated legislation under the Environment (Protection) Act, 1986, the Bill seeks to **raise core waste management obligations to the level of parliamentary statute**, thereby strengthening enforceability and accountability.

Specifically, the Bill aims to:

- Mandate segregation of municipal solid waste at source by all waste generating units.
- Assign clear statutory responsibilities to waste generating units, large manufacturing facilities, and municipal authorities.
- Promote recycling and resource recovery, including the use of recyclable waste in waste-to-energy plants.
- Operationalize the polluters pay principle
- Reduce environmental and climate impacts of unmanaged waste, particularly the methane emissions from the landfills.

- Strengthen compliance and deterrence, by incorporating penal provision directly within the parent statute.
- Support India's transition towards a circular economy, by prioritising waste reduction, reuse, recycle, and energy recovery over disposal.

Key Definitions:

The bill introduces statutory clarity through precise definitions, including:

- "Appropriate Government"- the State Government in respect of matters within a State, and the Central Government in other cases.
- "Large Manufacturing Facility"- any manufacturing facility with an investment exceeding Rs. 20 Crore.
- "Segregate"- separation of municipal solid waste into organic, inorganic, biodegradable, non-biodegradable, recyclable, and hazardous waste.
- "Waste- energy plants"- facilities that treat solid waste to generate energy.
- "Waste generating unit"- any household, entity, or manufacturing facility where waste is generated.

Statutory Duties under the Bill:

1. Duties of Waste Generating Units and Large Manufacturing Facilities (Section 3)

Section- 3 places a statutory obligation on the appropriate Government to ensure that every waste generating unit segregates waste prior to its disposal.

In the case of *large manufacturing facilities*, additional obligations are imposed on owners or persons in charge, including:

1. segregation, reuse, and recycling of waste at source;
2. transportation of recyclable waste to waste-to-energy plants;
3. transportation of non-recyclable and non-biodegradable waste to notified landfills.

The Bill further empowers the appropriate Government to ensure that waste-generating units are liable to pay for waste sent to the landfills, based on the weight of waste, in a manner prescribed by rules, embedding the polluter-pays principle within the statutory framework.

• Duties of Municipal Authorities (Section 4)

Municipal authorities are statutorily mandated to:

1. collect segregated waste from waste generating units;
2. ensure segregated waste is not mixed during the collection or transport, to the extent that mixing would hamper its re-use, re-cycle, further treatment or its use in waste- energy plants;
3. treat organic waste through approved bio-degradation methods such as vermicomposting or mechanical composting by window method or any other suitable method as approved by the Central Pollution Control Board or the State Pollution Control Board;
4. transport non-recyclable and non-biodegradable waste to notified landfills.

These provisions raise the municipal responsibilities from just an administrative obligations under the rules to binding statutory duties.

• Penal Provisions (Section 5)

Any violation of the Act is punishable with:

1. Imprisonment up to three months, and
2. Fine up to Rs 20,000.

The inclusion of penal consequences directly within the parent statute signals a move towards stronger compliance enforcement.

• Funding, Rule-making and Parliamentary Oversight (Section 6)

The Central Government is required to provide requisite funds to State Governments, subject to Parliamentary appropriation, to carry out the purposes of the act.

The rule-making power vested in the Central Government is subject to the Parliamentary scrutiny, ensuring the transparency and legislative oversight.

Consequences and Legal- Administrative Impact upon Enactment

If enacted, the Solid Waste Management Act, 2025 is likely to bring about far-reaching legal, administrative, and operational consequences for stakeholders across the waste management ecosystem.

1. **Statutory Transformation of Waste Segregation:** waste Segregation, which currently suffers weak enforcement under the current rules, would become non-negotiable statutory obligation.
2. **Heightened Accountability of Municipal Authorities:** municipal Authorities would transition from being primarily implementing agencies under the delegated legislation to statutorily accountable entities. Their failure to collect segregated waste, prevent mixing, or ensure scientific treatment could expose officials to legal scrutiny and administrative consequences.

This is expected to:

- Improve operational discipline within Urban Local Bodies (ULBs);
- Strengthen monitoring and reporting mechanisms;
- Drive investments in segregation- compatible collection and transportation infrastructure.
- **Economic Impact and Internalisation of Environmental Costs:** The introduction of weight-based landfills charges would internalise environmental externalities currently borne by municipalities and the public. Over time, this may:
- Discourage landfill dependency;
- Encourage waste reduction at source;
- Improve the financial sustainability of waste management systems.

Implementation Challenges and the Road Ahead

While the Solid Waste Management Bill, 2025 marks a decisive legislative shift from rule-based regulation to statutory accountability, its effectiveness will ultimately depend on implementation at the ground level.

1. One of the most significant challenges lies in achieving **universal segregation at source**, particularly in large urban agglomerations where behavioural compliance has historically remained low.

Despite the Solid Waste Management Rules, 2016 mandating segregation, several metropolitan cities continue to report segregation rates below 50%, leading to contamination of waste streams and rendering recycling and waste-to-energy processes inefficient. Translating statutory duties into everyday practice will therefore require sustained public engagement, capacity building, and behavioural change, beyond mere penal enforcement.

- Another critical challenge concerns the **institutional and financial capacity of municipal authorities**. Urban Local Bodies (ULBs), which bear the primary responsibility for waste collection, processing, and disposal under the Bill, often face acute shortages of manpower, technical expertise, and operational funding.

While Section 6 of the Bill provides for Central Government funding through parliamentary appropriation, the success of this mechanism will depend on timely disbursement, outcome-based use, and long-term financial sustainability.

Without strengthening municipal governance structures, enhancing technical infrastructure, and ensuring predictable revenue streams through user charges and polluter-pay mechanisms, statutory obligations risk remaining aspirational rather than enforceable.

Looking ahead, the Bill presents an opportunity to **institutionalise a circular economy framework** within India's waste governance regime. Effective rule-making under the Act, strong monitoring mechanisms, integration of digital waste tracking systems, and formal inclusion of the informal waste sector will be essential to bridge the gap between legislative intent and operational reality.

If complemented by clear guidelines, stakeholder collaboration, and consistent enforcement, the Act has the potential to fundamentally transform how Indian cities manage waste from disposal-driven systems to resource recovery models aligned with sustainability and climate goals.

Conclusion

The Solid Waste Management Bill, 2025 marks a significant evolution in India's approach to waste governance by transitioning from a predominantly rule-based framework to a dedicated statutory regime. By codifying obligations relating to segregation, recycling, treatment, and disposal of municipal solid waste, the Bill recognises waste management as a core issue of

environmental protection, urban governance, and public health. Its express alignment with the Environment (Protection) Act, 1986 ensures continuity while strengthening enforceability through clearly defined duties and penal consequences.

If enacted and effectively implemented, the Bill has the potential to address systemic weaknesses that have long undermined India's waste management efforts, including poor segregation at source, excessive reliance on landfills, and weak accountability of waste generators. However, the legislation's success will depend on institutional capacity, sustained funding support, effective rule-making, and behavioural compliance by citizens and industries alike. Viewed holistically, the Solid Waste Management Bill, 2025 provides a critical legal foundation for advancing circular economy principles and achieving cleaner, more resilient, and environmentally sustainable urban centres in India.

Author's View

The Solid Waste Management Bill, 2025 represents a timely and necessary shift in India's waste governance framework by moving from fragmented rule-based regulation to a clear statutory regime. By embedding enforceable duties, penalties, and the polluter-pays principle within primary legislation, the Bill strengthens accountability across waste generators and municipal authorities.

However, the success of this framework will depend less on legislative intent and more on effective implementation. Strengthening urban local bodies, ensuring financial sustainability, and encouraging behavioural change at the citizen level will be critical. If supported by transparent rule-making and institutional capacity building, the Bill has the potential to catalyse India's transition towards a circular, sustainable, and climate-responsive waste management system.

Reference:

- <https://sansad.in/getFile/BillsTexts/RSBillTexts/Asintroduced/451211202550527PM.pdf?source=legislation>

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