Environment & Ecology · GS - III

What are the challenges to solid waste management in India? Discuss the governmental policy framework on solid waste management. Discuss the success/failure cases of Delhi and Indore cities highlighting the salient feature of their solid waste management initiatives.

EXAM YEAR	PAPER	SUBJECT
2026	GS - III	Environment & Ecology

MARKS	WORD LIMIT
15	~250 words

Answer Hint

Urbanisation, waste generation, segregation, landfills, legacy waste, SWM Rules 2026, EPR, SBM-U 2.0, Delhi landfills, Indore segregation

Model Answer

India’s solid waste management faces rapid urbanisation, rising waste generation, inadequate source segregation, limited processing capacity, legacy waste, weak municipal finances and insufficient scientific disposal. Mixed waste also reduces the efficiency of recycling and composting.

Policy framework:

1. Solid Waste Management Rules, 2016 mandated source segregation, door-to-door collection, processing and scientific disposal.
2. Swachh Bharat Mission-Urban 2.0 emphasised 100% source segregation, Material Recovery Facilities and scientific processing.
3. Solid Waste Management Rules, 2026, effective from 1 April 2026, superseded the 2016 Rules and strengthened four-stream segregation, environmental compensation, online tracking, circular economy and EPR principles.

Delhi illustrates persistent implementation challenges. It continues to depend significantly on major landfill sites such as Bhalswa, Ghazipur and Okhla, while source segregation remains inadequate; recent municipal assessments noted that about half the waste generated daily was not segregated at source.

Indore demonstrates a contrasting model. It developed near-universal door-to-door segregated collection, multiple waste streams, GPS-based vehicle monitoring, composting, biomethanation and material-recovery facilities.

The contrast shows that legislation alone is insufficient. Effective SWM requires municipal leadership, citizen participation, segregation at source, predictable user charges, technological monitoring and viable waste markets.

Thus, India needs to shift from a “collect-and-dump” model to a circular, decentralised and resource-recovery-based waste economy.

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