

**Country's Progress on  
HaNoi 3R Declaration :  
Sustainable 3R Goals  
for Asia and the  
Pacific**



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# India's Municipal Solid Waste Landscape

## Solid Waste Management

**Generation** - 1.70 lakh MT/day

**Total waste collected** - 1.40 lakh MT/day (82.5%)

MSW treated - 0.40 lakh MT/day (23.6%)

Crude Dumping - 0.84 Lakh MT/day (49%)

**Waste littered** - 0.30 lakh MT/day (17.5%)

**With Reduce, Reuse, Recover, Recycle, Remanufacture (5Rs)**

- **Convert over 65% Waste to Wealth**
- **20-25% to promote Recycling industry**
- **Reduce waste-to-landfill to <10%**



Type	Total (MT)	%
Biodegradable	62,510	47%
Paper	10,640	8%
Rubber	11,970	9%
Metal	1,330	1%
Glass	1,330	1%
Rags	6,650	5%
Others	5,320	4%
Inert	33,250	25%

एक कदम स्वच्छता की ओर

# स्वच्छ भारत मिशन (2014 - 2019)



- Scientific disposal of Solid Waste in **4,041** Towns
- Construction of **256,000** public toilets
- Construction of **252,000** community toilet seats
- Household toilets for **1.04 crore** urban households
- Total cost: **~USD 10 Billion**



# Ha Noi 3R Declaration : Goals Achievement

## Goal 1

Significant reduction in the quantity of municipal solid waste generated, by instituting policies, programmes and projects at national and local levels, encouraging both producers and consumers to reduce the waste through greening production, greening lifestyle and sustainable consumption.

## Action 1

- 1. Notified** New Solid Waste Management Rules (SWM), 2016. Waste generators would now have to now segregate waste into three streams- Biodegradables, Dry (Plastic, Paper, metal, Wood, etc.) and Domestic Hazardous waste (diapers, napkins, mosquito repellants, cleaning agents etc.)
2. Also notified the plastic, e-waste, draft biomedical, hazardous and construction and demolition waste management rules in year 2015- 2016
- **3. Revised “Manual on Municipal Solid Waste Management 2016”**. The framework proposed is based on 5Rs principle - Reduce, Reuse, Recycle, Recover and Remove.

# Ha Noi 3R Declaration : Sustainable 3R Goals (3RGs) for Asia and the Pacific for 2013 - 2023

## Goal 2

Full scale utilization of organic component of municipal waste, including food waste, as valuable resource, thereby achieving multiple benefits such as the reduction of waste flows to final disposal site, reduction of GHG emission, improvement in resource efficiency, energy recovery and employment creation.

### Action-2 (1) Waste to Compost

- The current practices of organic waste recycling in India (Urban) are primarily composting and waste to energy
- **M/o Chemicals & Fertilizers** has notified the policy on promotion of **City Compost** thereby providing **Market Development Assistance** of USD 25 per Metric Tonne of compost to scale up production and consumption of compost.
- Ministry of Agriculture ammended Fertiliser Control Order for manufacturing and sale of compost, propagating use of compost on farm land, set up laboratories to test quality of compost produced by local authorities or their authorised agencies

### Action-2(2) Waste to Energy

- City compost standardized with the eco-mark to ensure environment-friendly quality product
- All industrial units using fuel and located within 100 km from a solid waste-based Refuse-Derived Fuel (RDF) plant to replace at least 5 per cent of their fuel requirement by RDF so produced

Notified **Generic tariff for Waste-to-Energy** of USD 0.12 per unit of power for MSW and USD 0.14 per unit of power for RDF. All the States have initiated process for determining the tariff through SERC.

Ministry of Power has revised the **Tariff Policy 2006** under the Indian Electricity Act, 2003, making it mandatory for State DISCOMS to purchase 100% power generated from Waste-to-Energy plants.

# Ha Noi 3R Declaration : Sustainable 3R Goals (3RGs) for Asia and the Pacific for 2013 - 2023

## Goal 3

Achieve significant increase in recycling rate of recyclables (e.g., plastic, paper, metal, etc.), by introducing policies and measures, and by setting up financial mechanisms and institutional frameworks involving relevant stakeholders (e.g., producers, consumers, recycling industry, users of recycled materials, etc.) and development of modern recycling industry.

## Action 3

- **Plastic Waste Management Rules (2016)**- Provisions have been introduced to ensure collection and channelization to authorised recycling facilities
- Mandatory for road developers to use waste plastic along with bituminous mixes for road construction
- Government of India has notified **Solid Waste Management Rules, 2016**
  - Brand owners who sale or market their products in packaging material which are non-biodegradable, should put in place a system to collect back the packaging waste generated due to their production
  - Municipal authorities will levy user fees for collection, disposal and processing from bulk generators. The generator will have to pay “User Fee” to the waste collector and a “Spot Fine” for littering and non-segregation, the quantum of which will be decided by the local bodies
  - Integration of rag pickers, waste pickers and kabadiwalas from the informal sector to the formal sector
  - Urban Local Bodies (ULBs) to setup **Material Recovery Facilities (MRF)** or secondary storage facilities 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.
- The **Bureau of India Standards (BIS)** has amended their specifications allowing usage of Recycles Concrete Aggregate (CA) derived from Construction & Demolition (C&D) waste in construction activities

## Goal 4

Build sustainable cities /green cities by encouraging “zero waste” through sound policies, strategies, institutional mechanism, and multi - stakeholder partnerships (with specific importance to private sector involvement) with primary goal of waste minimization.

## Action 4

- Under **SBM** Financial assistance upto 35% as viability gap funding (VGF) for solid waste management including recycling of construction and demolition waste shall be admissible to the State Governments for implementation of projects
- As per **MSW Rules 2016**, with focus on **ZERO WASTE** to landfills, only inert waste and pre-processing rejects and residues from waste processing facilities to transport to sanitary landfill.
- Government of India has launched **SMART CITIES** Mission (100 cities) to promote cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of ‘Smart’ Solutions with Private sector involvement.

# Other Initiatives of India for 3Rs and GHG Mitigation...

## Hazardous Waste

A. Govt. of India has recently notified Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

- ❑ As per the Rules, for the management of hazardous and other wastes, an occupier shall follow the steps, namely (a) prevention; (b) minimization; (c) reuse, (d) recycling; (e) recovery, utilisation including co-processing; (f) safe disposal.
- ❑ The occupier shall be responsible for safe and environmentally sound management of hazardous and other wastes.

## Extended Producer Responsibility

1. As per “Solid Waste Management Rules 2016”, it is responsibility of producer to manage the hazardous and other wastes, packaging products such as plastic, tin, glass and corrupted boxes, etc. for environmentally sound management, till end-of-life of the packaging products.
2. As per “E-Waste Management Rules, 2016” it is responsibility of producer of electrical and electronic equipment for channelization for e-waste to ensure environmentally sound management of e-waste. EPR may comprise of implementing take back system or setting up of collection centres and having agreed arrangements with authorised dismantle or recycler for sound management of e-waste.

## Enhance Local and National Knowledge

The Ministry is organizing regional level exposure workshops emphasis on 3R to disseminate the knowledge from central level to the local level. **E-Learning Courses**



## Other Initiatives of India for 3Rs and GHG Mitigation...

### Integrate 3Rs in Education

Signed MoU with Amar Chitra Katha on to publish and distribute a special edition of the comic book. The comic book would comprise a series of inspirational stories on cleanliness, cleanliness rankings of cities, the public figures and ambassadors, environmental impact, and also stories of individuals and organizations that can inspire children to the concept of '3Rs'.

### Strengthening Informal sector

- Significant thrust in various national and state level policies to recognise, identify, and integrate informal sector workers into formal waste management processes and initiatives
- Creation of livelihoods, social acceptance, and security for informal sector workers and regularising the recycling sector

### Waste Treatment/ Mitigation of GHGs

- SWM Rules (2016)- The bio-degradable waste should be processed, treated and disposed of through composting or bio-methanation within the premises as far as possible
- The developers of Special Economic Zone, industrial estate, industrial park to earmark at least 5 per cent of the total area of the plot or minimum 5 plots/ sheds for recovery and recycling facility
- Common, or regional sanitary landfills to be set up by all local bodies and census towns with a population under 0.5 million will have to be completed in three years.
- bio-remediation or capping of old and abandoned dump sites

# India is Committed...

**With the successful implementation of Central programmes** namely AMRUT Mission, SBM and SMART City Mission on PPP mode, GHG mitigation shall be:

- **133 million tonnes CO<sub>2</sub> eqv. by 2021 and**
- **270 million tonnes CO<sub>2</sub> eqv. by 2031**



# Thanks!

