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Plastic Pollution and the Informal Waste Sector in South Asia

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Introduction

- Plastic Pollution: A Growing Crisis in South Asia
- Pivotal role of the Informal Waste Sector
- Plastic pollution is not just an environmental issue: it's a social and economic challenge.

Plastic Pollution: A Growing Crisis in South Asia

- South Asia faces one of the highest rates of plastic waste generation globally.
- Bangladesh ~ 0.98 million tonnes / year
- Nepal ~ 0.36 million tonnes / year
- Indian ~ 4.13 million tonnes / year
- Much of this plastic ends up in rivers, breaking into microplastics that enter our food and water.

The Role of the Informal Waste Sector

- Who Are the Informal Waste Workers?
- Their Contribution
- Challenges They Face
- Why Their Inclusion Matters

India's Plastic Waste Landscape

- Scale of the Problem
- Urban Waste Management Crisis
- Plastic Waste Composition (Approximate Share)
- Key Observations

India Policy Framework

- Magic Mitti
- MMRF
- Santulan

Magic Mitti

- Operates across 6 locations in Delhi NCR.
- Engages hundreds of women waste pickers, organised into 6 Self-Help Groups (SHGs).
- Processes more than 7,000 kg of wet waste per month, converting it into compost branded as “Magic Mitti.”
- Complies with Solid Waste Management Rules (2016) and National Compost Standards.

Deposit Used Toys & Books At These Units

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New Delhi: New Delhi Municipal Council has made its four reduce, reuse, recycle (RRR) centres fully operational and also developed a few more micro collection centres. The civic body has urged people to make use of these facilities to deposit reusable items, such as clothes, footwear, books and toys, and recyclables to promote sustainable waste management.

The initiative, aligned with the Solid Waste Management Rules, 2016, seeks to streamline the handling of specific waste streams through collection, segregation, repair, reuse, upcycling and safe disposal. The RRR centres, converted from traditional dhalaos, function as up-graded material recovery facilities (MRFs), encouraging people's participation in circular waste practices.

"An RRR centre serves as a one-stop collection point for citizens to donate or deposit used

items," an NDMC official said. "These centres promote waste reduction and a circular economy by ensuring materials are reused or recycled instead of ending up in landfills."

The four RRR centres are at Chanakyapuri, Bharti Nagar, Aradhana Colony and Babu Dham. Eight micro material recovery facilities (MMRFs) have been set up for e-waste and household hazardous waste collection at Khan Market, Dharam Marg, Lodhi Road, Bengali Market, Kautilya Marg, E Block Connaught Place, HC Mathur Lane and Dhyan Chand Stadium. An MMRF functions as a compact, localised centre that sorts, compresses and processes e-waste, hazardous waste and recyclables. The council also provides doorstep collection services.

The revamped site near the parking area at Khan Market has separate collection boxes for various categories — paper, mixed plastic, batteries, stereos, keyboards, tablets, wires, phones and

chargers. A plastic bottle compressor is also installed.

"Collected items are segregated and transferred to registered processing units," said a representative of Chintan, the NGO managing the unit. For instance, e-waste collected at the centre is sent for recycling once it reaches two tonnes, with an average of 338kg being deposited every month.

Similarly, footwear is cleaned by staff, repaired weekly by cobblers and redistributed under Chintan's Barefoot Warrior campaign at the Todarmal Lane centre. Over 1,472 pairs of shoes have been refurbished since June. At the Dharam Marg centre, 1,378 garments have been collected, sorted by women workers and scheduled for post-Diwali distribution.

Paper, plastic, metal and other recyclables are sent to authorised recyclers while upcycled fabric and plastic waste are transformed into cloth bags, benches and daily-use products under CSR collaborations.

12 RRR CENTRES & MMRFs FUNCTIONAL IN NDMC AREAS

WHAT IS RRR CENTRE?

An RRR centre is a 'reduce, reuse and recycle' centre, which acts as a one-stop collection point for citizens to donate used items like clothes, shoes, books, toys and plastic

Locations: Chanakyapuri, Bharti Nagar, Aradhana Colony and Babu Dham

AVERAGE WASTE COLLECTED DAILY

➤ Each RRR centre or MMRF collects at least 50 kg per day of reusable or recyclable material

➤ During awareness drives, festive seasons and Swachhata campaigns, the collection volume increases significantly

MONITORING AND ACCOUNTABILITY FRAMEWORK

➤ Each centre is geotagged and supervised by designated sanitation circle inspectors/officers

➤ Daily inflow/outflow is recorded in on-site logbooks

➤ Since many staff are waste pickers with limited



WHAT IS MMR FACILITY?

A micro material recovery facility (MMRF) is a small, localised and solar-powered centre that sorts, compresses and processes specific waste streams like e-waste, household hazardous waste and other recyclables

Locations: Khan Market, Dharam Marg, Lodhi Road, Bengali Market, Kautilya Marg, E Block Connaught Place, HC Mathur Lane and Dhyan Chand Stadium

HOW MATERIAL IS COLLECTED?

RRR or MMRF centres receive material through multiple structured channels

- Citizen drop-offs**
Walk-in donation at all RRR centres/MMRFs
- Doorstep collection by Chintan**
Operated every Friday, Saturday and Sunday in designated areas
- Fixed donation timings in Anupam Colonies**
Citizens drop reusable/recyclable items between 9 am and 2 pm at D1-D2 Chanakyapuri, Bharti Nagar, Babu Dham and Aradhana Colonies on all working days
- On-call pickup via NDMC 1533 toll-free number & 311 app**
Citizens can request doorstep collection of items, especially for bulky donations

HOME SERVICE/DOORSTEP COLLECTION FACILITIES

- On-call pickup via NDMC's
- Scheduled donations for RWAs, institutions and bulk waste generators
 - Pilot "donate from home" service for senior citizens and immobile residents
 - Mobile RRR vans deployed during community drives and outreach camps
- 1 5 3 3 toll-free number

SANTULAN

PATH TO EQUALITY FOR WOMEN
WASTEPICKERS IN INDIA



DECEMBER 2022



Lessons from Chintan's Models

- Inclusion Enhances Efficiency
- Women-Centric Models Drive Transformation
- Behavioural Change is Central
- Policy and Market Linkages Matter
- Replicable and Scalable Model
- Easier to manage reuse and smaller plastics

Nepal: Waste Management Structure & Informal Sector Role

- Nepal generate 4,900 tons of waste per day.
- Waste segregation at source below 15%; weak recycling infrastructure.
- Enforcement of local waste laws remains fragmented and weak.
- Informal recyclers (kawadis) recover 10–15% of recyclables in cities.

Case Study: The Prayaash Project, Nepal

- by: *CREASION Nepal* with support from the *Alliance to End Plastic Waste (AEPL)*
- Regions: *Bagmati & Madhesh Provinces*, including Kathmandu Valley & Chitwan.
- Goal: Build a sustainable plastic value chain by integrating informal waste workers into formal recycling systems.
- 4,812 tonnes of plastic collected and diverted; 2,251 tonnes formally recycled to date.

Case Study: The Prayaash Project, Nepal

- Established collection vehicles, MRF equipment, and recovery infrastructure in remote zones.
- Integrated 300+ informal waste workers – provided safety training, insurance, and fair wages.
- Surpassed targets in Phase II (2023) – 2,081 tonnes recycled vs. 1,700-tonne goal.
- Currently in Phase III (2024–25) with a goal of 2,300 tonnes, adding data tracking and market access features.

Bangladesh: Plastic Waste, Recycling, and Informal Sector Role

- Generates ~1 million tonnes of plastic waste annually; Dhaka accounts for ~50%.
- Only 36–40% recycled, largely by informal workers and small-scale recyclers.
- 200,000–250,000 informal workers engaged in collection, sorting, and resale.
- Over 1,200 informal recycling clusters active in and around Dhaka. Single-use and packaging plastics dominate urban waste streams.

Policy Recommendations (Regional Synthesis)

- Formal Recognition & Registration

Create national waste worker registries; issue ID cards and social protection benefits.

- Gender-Responsive Policies

Mainstream women's inclusion through training, health, and wage equity measures

- Integrate Informal Sector in EPR Systems

Mandate producers to partner with wastepicker collectives under EPR compliance.

Policy Recommendations (Regional Synthesis)

- Regional Cooperation & Data Sharing
Establish a South Asia Waste Observatory under SAARC or SACEP for harmonised reporting.
- Invest in Local Circular Models
Support community composting, recycling hubs, and inclusive livelihoods.
- Leverage Global Frameworks
Align national policies with the Global Plastics Treaty for access to finance and technology transfer.

Thank You for Listening!

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