

Urban Transformation

PIB Analysis

Overview

- **Everyday Transformation** - Swachh Bharat Mission (SBM) has laid a strong foundation for urban growth by shifting focus from simple waste collection/disposal to resource recovery and circularity.

Key Pillars of Sustainable Urban Growth -

- **Value Recovery and Circularity** - Promoting source segregation, recycling, reuse, and recovery as integral local practices.
- **Civic Participation** - Fostering community involvement and responsible habits across urban demographics.
- **Digital Optimization** - Utilizing data-driven systems and real-time digital monitoring for precise municipal service delivery.

Key City Case Studies

Greener Goa - Turning Waste into Energy (Saligao)

- **Infrastructure Transformation** - A former garbage dump spread across 113,000 m² in Saligao Valley was converted by the Goa Waste Management Corporation (GWMC) into an integrated eco-friendly hub.
- **Operational Scale** - Processes **250 metric tons** of wet and dry waste daily (approx. 1/3 of Goa's total waste).
- **Energy and Agricultural Output** -
 - Generates 1.32 kW of electricity from wet waste (powering 35 units, with half supplied to the Goa Electricity Department).
 - Recovers recyclables from 100 metric tons of dry waste daily; remaining dry waste goes to cement plants for co-processing.
 - Produces 7-8 tons of compost daily used by local panchayats for reforestation and gardening.
- **Socio-Economic Impact** - Operates 365 days a year to achieve zero-waste goals, transforming former waste pickers into a trained, full-time

workforce with steady livelihoods.



Gandhinagar - Zero-Waste Journey Driven by Citizens

- **Zero Waste Week (Sept 2-7, 2026)** - Organized by Gandhinagar Municipal Corporation (GMC) across 25 city locations, directly engaging 600+ citizens and reaching 40,000+ via targeted social media campaigns.
- **3R Principles in Action** -
- **"My Theli" Stalls** - Citizens donated used clothes, which local self-help group (SHG) women upcycled into reusable carry bags.
- **"Swachhata Se Shuruvat" Campaign** - Engaged school students through quizzes and interactive games centered on environmental responsibility.
- **Doorstep 3R Van** - Collected old clothes, plastic, and e-waste directly from households, incentivizing participation with rewards and online testimonial sharing.



Electricity Generation of 1.02 MW per day

Kakinada - Smart Approach to Efficient Waste Management

- **Demographic Coverage** - Processes 144 tons of daily waste across 50 wards (382 micro pockets, each covering 250-350 households). Employed 973+ sanitation workers serving 112,993 households across 40,661 designated collection points.
- **Technology Infrastructure** -
- **Online Waste Management System (OWMS)** - Provides real-time tracking of waste collection and transportation.
- **RFID and Facial Recognition** - Gate-installed RFID tags are scanned during doorstep pickups, while a Facial Recognition System (FRS) tracks worker attendance.
- **GPS-Enabled Logistics** - 108 hopper vehicles equipped with GPS report route deviations directly to a Central Command Centre.
- **Impact** - Achieved 100% door-to-door waste collection and 60% source segregation among residents.



RRR Van

Ghaziabad - Turning Waste into Carbon Value

- **Carbon Credit Accreditation** - Ghaziabad Municipal Corporation (GMC) registered for an international United Nations-verified carbon credit project under the Verified Carbon Standard (VCS/UNFCCC).
- **Pioneering Milestone** - Follows Indore (Madhya Pradesh) to become the **1st urban local body in Uttar Pradesh** and **2nd in India** to monetize waste processing on the global carbon market.
- **Core Initiatives and Environmental Impact** -
 - Replaced traditional streetlights citywide with energy-efficient LED lighting.
 - Scaled wet waste composting to divert organic material from landfills and suppress methane emission.
 - Projected to cut carbon emissions by **2.7 lakh tonnes (CO₂e)**, generating **2.7 lakh certified carbon credits** to sell on international markets for municipal revenue.

Conclusion - Building Cities That Value Every Resource

- **Integrated Urban Systems** - Combining citizen action with digital oversight and green technology establishes cleaner, resource-efficient, and circular urban ecosystems.
- **Scalable National Model** - Local innovations show that waste processing can simultaneously protect the environment, boost local economies, and enhance urban living standards.

Reference

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