

## Waste Solutions for a Circular Economy in India

### Country/Region

# India

### NAMA Support Delivery Organisation

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

### Implementing Partners

Ministry of Environment, Forest and Climate Change; Ministry of Housing and Urban Affairs; North Delhi Municipal Corporation; Varanasi Municipal Corporation; Bruhat Bengaluru Mahanagara Palike; Goa Waste Management Corporation; Tiruchirapalli Municipal Corporation

### Project Snapshot

*This NSP aims to catalyse a transition in India's waste management sector, improving source segregation, formalising informal waste management and introducing capacity-building on low-carbon waste management.*

India's urban population continues to grow. A by-product of this growth is an estimated 62 million tons of municipal solid waste (MSW) generated annually, forecast to grow to 165 million tons by 2030. Current municipal solid waste management (MSWM) involves dumping mixed waste streams in unmanaged dumpsites. Thus, in 2016, landfilling of MSW led to around 15.8 million tons of CO<sub>2</sub>e emissions. GHG emissions from MSW disposal alone are expected to increase to 41.1 million tons of CO<sub>2</sub>e by 2030.

To curb this trajectory, the Government of India (GoI)'s Nationally Determined Contribution (NDC) targets reducing the emissions intensity of GDP by 33 to 35 percent compared to 2005 levels by 2030. Although India's NDC does not specify GHG emission targets for the waste sector, it prioritises reducing waste-related emissions.

In the face of these targets lie certain barriers. Among those is the largely informal nature of the sector, and a resulting unwillingness to pay for MSWM services via user fees. Moreover, there are insufficient financial resources to operate low-carbon MSWM facilities, largely due to this absence of user fee collection by urban local bodies (ULBs), which themselves lack capacity and experience managing these activities. While the GoI has a compost subsidy and an SBM grant, these are difficult for operators to access due a lack of technical capacity. The resultant lack of experience leads to hesitance from financial institutions to provide lending. On a regulatory level, SWM rules prohibiting landfilling of organic waste are not enforced, and bio-methanation plants are unable to access the tariffs they would require for distribution to, for example, cement plants.

To overcome these barriers and introduce waste solutions for a circular economy, the NSP considers policy, technical and financial aspects with respect to both the demand and supply sides:

1. Support national ministries in developing quality standards in the MSW sector;
2. Implement source segregation and informal sector integration/formalisation models in five lighthouse locations;
3. Introduce capacity-building programs for Urban Local Bodies (ULBs), households, businesses and the informal sector on low-carbon waste management solutions.

The Financial Cooperation (FC) has two instruments, the Grant Funding Mechanism (GFM) and the Risk Sharing Facility (RSF). The GFM will provide partial grants in five locations for capital expenditures (CAPEX) and operational expenditure (OPEX). The RSF will provide partial credit guarantees to enhance private sector investors and entrepreneurs' confidence in waste processing units.



**Sector**  
Waste



**Beneficiaries**  
11.9 million people



**NAMA Facility Funding**  
EUR 17.3 million  
(FC: EUR 7.3m  
TC: EUR 10m)



**Duration**  
2020-2025



**Status**  
Implementation

### Expected Outcomes

- 10% increase in the share of treated waste nationally.
- About 4 million tons of CO<sub>2</sub>e mitigated over 10 years by projects supported under the NSP.
- Around 12 million people directly benefitting from the NSP over 5 years.
- About EUR 20 million of public finance (domestic and/or international) mobilised for low carbon investment and development in the waste sector.
- About EUR 28 million of private finance mobilised for low carbon investments and development in the waste sector.
- 5 additional projects using RSF outside NSP supported cities.
- 5 additional low-carbon sustainable approaches or instruments including business models, market mechanisms, financing solutions etc. adopted in projects outside NSP cities.