World Sustainable Development Summit 2020

Towards 2030 Goals: Making the Decade Count

India Habitat Centre (IHC), New Delhi, India

Implementation of NAMA: Improving Waste Management in India

Thematic Track for WSDS 2020

January 29th 2020 | 14.30 – 16.30 Hrs | TERI Social Room (5th floor), 6C, Darbari Seth Block, India Habitat Center, Lodhi Road, New Delhi, Delhi 110003

CONCEPT NOTE

Large amounts of Municipal Solid Waste (MSW) generated and disposed in India has become a significant global challenge due to Green House Gas (GHG) emissions caused by unsustainable waste management practices. Approximately 58.875 million metric tonnes (MMT) of MSW is generated in India per year[1][2][3]. More than half the waste generated is organic. With the growth in GDP, population, and urbanization, the amount of urban waste generated in India has been accelerating at 5% per annum. Indian MSW is projected to reach 165 MMTPA by 2031 and 436 MMTPA by 2050[4]. Central Pollution Control Board (CPCB) estimates the MSW collection efficiency is at 86% and further states that only 27% of the waste generated is treated. Remaining is disposed in landfills or in open dumps.

No single technology/method can overcome the MSW management problem in India in a holist manner. An integrated approach that involves all stakeholders in decision making and a range of strategies and technologies that considers the diverse waste streams while working towards minimizing, recycling, treating, and disposing waste is needed. GHG emissions from solid waste disposal (SWD) sites are expected to rise from 13.75 Million tonnes (Mt) CO_2 eq in 2011 to 22.77 $MtCO_2$ eq in 2031 and then to 39.71 $MtCO_2$ eq in 2051[5].

Considering the priority of effective waste management, Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India decided to develop Nationally Appropriate Mitigation Actions (NAMAs) in the waste and forest sector. NAMA is a mechanism under the UN Framework Convention on Climate Change (UNFCCC) in which developing countries could seek technical and financial support for GHG mitigation from an economic sector.

[1] CPCB (Central Pollution Control Board). 2016. *Consolidated Annual Review Report on Implementation of Municipal Solid Wastes (Management and Handling) Rules, 2000—Annual Review Report: 2014-15.* New Delhi: CPCB

[2] CPCB (Central Pollution Control Board). 2017. *Consolidated Annual Review Report on Implementation of Solid Wastes Management Rules, 2016—Annual Review Report: 2015-16.* New Delhi: CPCB.

[3] CPCB (Central Pollution Control Board). 2018b. Consolidated Annual Report on Implementation of Solid Wastes Management Rules, 2016—Annual Review Report: 2016-17

[4] Planning Commission. 2014. Report of the task force on waste to energy (volume 1). Details available at http://planningcommission.nic.in/reports/genrep/rep_wte1205.pdf, last accessed on 12 December 2019

[5] TERI (The Energy and Resources Institute). 2016. Modelling study on greenhouse gas emissions and emission intensity of Indian economy. TERI, New Delhi

To manage the waste generated effectively and reduce the amount of waste landfilled by implementation of low carbon measures that alleviate the levels of GHG emission from the solid waste sector, GIZ and TERI are working together under the Indo-German project titled *'Development and Management of Waste NAMA in India.'*

Phase 1 of the Waste NAMA evaluated the technological options relevant to waste management scenario in India and assessed low carbon technologies that could achieve effective emission reduction in the sector. Now in **Phase 2**, GIZ with TERI as a partner is implementing low carbon measures to reduce GHG emissions from the solid waste sector in Panaji and Varanasi. TERI and GIZ are collaborating with Directorate of Municipal Administration (DMA), the Goa Waste Management Corporation (GWMC) along with the Corporation of the City of Panaji (CCP) in western India, and with the Varanasi Municipal Corporation and the Swachh Bharat Mission (SBM) cell in Northern India for better waste management practices in the two tourist areas.

The project is implementing relevant waste management practices such as; preparing baseline emission estimations to plan GHG emission reduction, preparing information education and capacity building (IEC) plans. The waste NAMA project also involves IEC programs among households, schools, informal sector actors, bulk waste generators, corporation staff as well as corporates (under EPR workshop). With an overall objective to reach out to all the stakeholders of these cities and reduce GHG emissions from waste sector the project is also extending support to pilot source segregation, implementing Material Recovery Facilities, decentralized composting and enhancing capacities of biomethanation plants. Project is also supporting cities to develop effective proposals (RFPs) for waste management facilities, as well as policies. Series of webinars are also run for city officials to support them in decision making with regards to waste management issues.

With this background, TERI and GIZ propose to lead the WSDS 2020 thematic track on '*Implementation of NAMA: Improving Waste Management in India*'. The thematic track is structured in a manner that multiple viewpoints of stakeholders will be presented, representing perspectives from both Varanasi and Panaji. Moving towards our global goal of reduced GHG emissions, the discussions will be focused on best practices to be adopted, including improving collection systems and decentralised waste management technologies. They will also focus on how these solutions can be implemented in Varansi and Panaji to reduce the quantity of waste landfilled.

The thematic track will further aim to deliberate on the various sources of MSW, processes that result in the release and transport of waste, especially plastic waste and potential solutions to address the MSW focussing on policy recommendations, technological interventions, and development of comprehensive institutional regimes. Discussions will also explore the role of stakeholders including NGOs, private organizations, and national & local government bodies. The thematic track discussions will predominantly focus on the project *Implementation of Waste NAMA* in the city of Panaji and Varanasi, solutions and key challenges of the project and thereby contribute to setting up of a framework for a better waste management system in other areas.

Possible questions to be answered / discussed

Panel Discussion: Evaluating the Current Status of waste management practices in Panaji and Varanasi; Solutions and Key Challenges, and Way forward.

Question 1

What are the challenges related to MSW management in Varanasi and Goa? What are the solutions and successes?

Question 2

How useful is the support of projects like the NAMA project being implemented by GIZ and TERI and what do you expect in future from such cooperation?

Question 3

What are the potential local, regional, national, and international level policy recommendations and technological interventions based on NAMA project experience? What are the views on the effectiveness of these options?

Question 4

What role can EPR play in reducing single use plastic and MSW management? With focus on packaging design, recycling technologies, and informal sector.

Question 5

How can state level waste management policy address the role of stakeholders in implementation of EPR?