



Task Force 3
LiFE, Resilience, and
Values for Wellbeing



INDIA 2023



भारत 2023 INDIA

PROMOTING CIRCULAR ECONOMY THROUGH SOUTH-SOUTH COLLABORATION

May 2023

Manjot Kaur Ahluwalia, Regional Lead-Asia, The Global Methane Hub

Carolina Urmeneta, Waste & Circular Economy Program Director, The Global Methane Hub

Nicolas Diaz, Project Manager, Waste & Circular Economy, The Global Methane Hub

Chandra Bhushan, President & CEO, International Forum for Environment, Sustainability & Technology (iFOREST)

Marcelo Mena, CEO, The Global Methane Hub

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Abstract







As the Global South experiences growth in GDP and population, greenhouse gas (GHG) emissions from municipal solid waste are projected to increase by 80 percent by 2050, primarily due to food loss and waste (FLW). In these countries, municipal waste is generated at the post-harvest level, which is disposed of in open dumps and landfills, or else burned, exacerbating global warming. Best practices are emerging from different parts of the globe which could be replicated in the G20 countries to help solve the twin crisis of waste and

climate change. India is leading the way in promoting collaboration on circular economy goals through Mission LiFE, and has made strides under its *Swachh Bharat Mission*, or the “Clean India Mission.” This Policy Brief proposes the creation of a South-South knowledge exchange mechanism for capacity development and financial mobilisation on FLW through dedicated support frameworks or facilities. The aim is to contribute to the achievement of SDG 12.3 and the UN Biodiversity Agreement aimed at reducing FLW per capita by half by 2030.



The Challenge

1






Globally, total waste generation is expected to reach 3.4 billion tonnes by 2050—a 69-percent increase from 2016—as GDP and population grow in low- and middle-income countries across Latin America and the Caribbean, South Asia, Sub-Saharan Africa, and Middle East and North Africa regions.¹ In Sub-Saharan Africa, waste generation is expected to approximately triple, while in South Asia—the largest generating region—it will likely double.

Local governments are the frontliners in the management of waste, with over 50 percent of waste being disposed of in unregulated dumps and uncontrolled landfills, or openly burned; this proportion rises to more than 90 percent in low-income countries. The mismanagement of waste causes water and air pollution—a sanitary threat to communities residing in proximity to sites of waste management operations. It is also one of the most relevant sources of short-lived climate pollutants (SLCPs), threatening climate commitments in the short to medium term of 10 to 20 years.

The largest share of municipal solid waste is Food Loss and Waste (FLW),

especially in low-income countries where the organic waste composition is more than 50 percent of the total. Some 39 percent of total annual food production is lost or wasted globally.² Typically, FLW in low-income countries occurs at the stages of production, post-harvest handling, storage, and processing stages and is caused predominantly by managerial and technical limitations (Kaza et al. 2018). It is therefore important to reduce FLW by addressing these limitations and providing solutions throughout the value chain. According to latest projections, greenhouse gas (GHG) emissions from municipal solid waste are expected to increase by 70 percent by 2050,³ exacerbating climate change. The loss and waste of food is also happening amidst rising food insecurity and hunger, with roughly 670 million people consuming insufficient food.⁴

Urban Local Bodies (ULBs) are responsible for waste management including the collection, segregation, transfer, management, and disposal of waste within their jurisdictions. ULBs, however, are generally lacking in staff, resources, technical capabilities, and infrastructure. These issues hamper a circular economy approach to waste management—i.e., prevention,



segregation, and diversion, before resorting to landfilling and incineration. These limitations are compounded by the historical and persistent impacts on marginalised communities, and the existence of a vast number of legacy dumpsites that, even when they have been closed due to sanitary concerns, continue to pose health hazards linked to pollution of water streams and groundwater.


A climate system under threat

There is increasing concern about GHG emissions from the waste sector. Methane is a powerful greenhouse gas 86X more potent than carbon dioxide in a 20-year timeframe and its emissions are linked to nearly half of the rise of the global temperature observed to date (IPCC 2023). The waste sector contributes roughly 20 percent of methane emissions derived from human activities and these emissions are also a source of local pollution through the formation of ozone and nuisance due to the release of odorous gases.⁵ Methane's lifetime of around 20 years makes its mitigation a fast and cost-effective strategy that will contribute to global efforts to limit the rise of global temperature to 1.5°C, as set out in the Paris Agreement.⁶

At present, there is sub-optimal coordination among nations to improve waste management globally and target GHG emissions. This gap is particularly notable among Global South countries where challenges around waste management are more persistent and concerning. Global initiatives such as the Climate and Clean Air Coalition (CCAC) have contributed to raising awareness and efforts among countries, but these need to be ramped up to reach the 2030 targets set by agendas on waste such as SDG 12.3, Paris Agreement, and the UN Biodiversity Agreement.

A new opportunity

There are multi-dimensional benefits that can be derived from a circular economy approach to FLW regarding environment protection, public health, resource management, and climate mitigation. The climate mitigation benefits are crucial as today, the target finance for the 2.25 billion tonnes of municipal waste generated worldwide is focused mainly on incineration and landfills, which have uncertain impacts on climate change mitigation and the environment.⁷ (Rosane et al. 2022). Addressing waste mismanagement and its derived emissions combines urgent climate action with postponed development



demands, persisting environmental injustice, and an overlooked opportunity to create jobs and value in countries that need them most.

The landscape of waste management is quickly transforming under increasing awareness of the opportunities and threats that waste poses to development and climate action. Among many actors, the Global Methane Hub (GMH) is leading global efforts to transform the waste sector by providing funding for mitigation of waste-related emissions while directly delivering on improved health, livelihoods, and dignity of communities.

The International Forum for Environment, Sustainability and Technology (iFOREST), meanwhile, is leading research and innovation in the waste management sector in the Global South through the development of methodologies for waste inventory, capacity-building of ULBs, and smart policy and regulations on managing wastes including plastic waste.


A collaboration between GMH and iFOREST is suitable to develop and launch a South-South FLW platform at the G20.



The Role of G20

2





During its G20 Presidency, India is showcasing its efforts and achievements as an emerging economy.

In the waste sector, the country is training the spotlight on its flagship *Swachh Bharat* (Clean India) Mission, which aims to provide access to solid and liquid waste management treatment to all villages, cities, and states. The country's 'Waste to Wealth' initiative is also working to identify, develop, and deploy technologies to treat waste to recycle materials, generate energy, and extract resources of value.⁸ India also has long-standing efforts seeking to reduce FLW and facilitate food recovery with one of the strongest food safety policies among G20 members. The country is also championing these ideas through Mission LiFE (Lifestyle for the Environment) which aims to achieve a circular economy in India through behavioural change around climate-friendly lifestyles. Given how addressing the FLW issue also requires behavioural interventions, LiFe's mission to promote sustainable lifestyles and consumption patterns can contribute to reduced FLW at the household and retail level.

In 2017, at the launch of the 'Resource Efficiency Dialogue' at the G20 summit

in Hamburg, the G20 emphasised the need for strong collaboration and cooperation on circular economy for waste management, and to make sustainable use of natural resources a core element of the G20 talks. India's G20 Presidency has emphasised the need for strong collaboration and cooperation on circular economy in the recent G20 Environment and Climate Sustainability Working Group (ECSWG).⁹ This presents an opportunity to build a practical international partnership to provide technical and financial support to the Global South for adopting a waste management pathway using the principles of circular economy.

A South-South collaboration can be effective due to emerging success stories on social behaviour management, institution building and infrastructure creation in certain cities in the Global South. The discussions at the Second ECSWG in March 2023 reinforced India's commitment to make the efficient and sustainable use of natural resources the highlight of the Resource Efficiency Dialogue.

On the financial front, there is a need to shift financing from incineration and landfills to reduction, prevention,



segregation, food redistribution, and nutrient and energy recovery from organic waste. A collaboration platform can help grow the base and mobilise finance from both public and private sectors and provide a more concerted effort from the Global North to accelerate the flow of climate finance. By building and showcasing cost-effective, market-ready abatement solutions, the platform can demonstrate the opportunity to investors and multilateral banks to fund these solutions and for policymakers to create an enabling environment both in the form of giving access to finance and setting higher waste-related targets in sub-national and national climate plans.


The G20 represents an unparalleled opportunity to raise awareness not only about waste-related issues, but also the opportunities that are taking shape in various fronts. Collectively, the grouping generates 60 percent of global waste and includes several members leading the path towards achieving zero-waste economies. Examples of the latter include Australia's 2018 National Waste Policy, China's 2017 Circular Economy Policy Portfolio, India's 2019 National Resource Efficiency Policy, South Africa's 2020 National Waste Management Strategy, and the United States 2015 Sustainable Materials Management Action Plan.¹⁰



Recommendations to the G20



3



This Policy Brief proposes developing a durable multi-stakeholder South-South knowledge and capacity-building platform, as well as a financial platform focused on actions to accelerate the circular economy in the FLW sector for the Global South countries in the G20. This platform can be based on collaboration with G20 Global North countries, considering lessons learned, sharing experiences, and resource mobilisation.

A concerted approach can be enabled by the proposed collaboration platform, through South-South joint efforts on the following:

- **Preventing existing emissions from super emitters in landfills:** Tracking methane leaks with waste management operators can prevent emissions by 90 percent.
- **Preventing food loss and waste:** The circular bioeconomy approach prevents post-harvest food loss and spoilage in value chains, encourages food recovery, and diverts organic waste from disposal.
- **Promoting ambitious national policy and regulation:** Developing policy playbooks, design, and pilot

implementation regulations, action plans, and legislation.

- **Supporting sub-national and local governments:** Supporting capacity in the development of zero-waste strategies and the strengthening of composting and anaerobic digestion.
- **Project preparation facilities** for project design to leverage local waste management funding toward methane mitigation.
- **Partnerships with Multilateral Development Banks and Development Finance Institutions** with a focus on shifting finance from incineration and landfilling, to integrated waste management systems.

Platform for South-South Collaboration on Food Loss and Waste

A South-South collaboration platform to enable action will work on four areas— i.e., improved data to orient action; enhanced policy and transparency; an increasing portfolio of sustainable and fundable initiatives; and the coordination of actors to secure funding and investment to keep momentum and transformation within the sector.

(a). Improved data measurement and tracking


Waste management is characterised by a lack of data on operations encompassing the collection, treatment, and disposal of waste, particularly municipal solid waste. Awareness about landfill emissions—mostly methane—has increased due to a growing availability of satellite imagery that tracks emissions through initiatives such as the Carbon Mapper mission, IMEO Methane Alert and Response System (MARS), Tropospheric Monitoring Instrument (TROPOMI), and the GHGSat-Netherlands Institute for Space Research (SRON) public-private collaboration. GMH is partnering with SRON to provide waste-related emissions data to a subset of municipalities identified as hotspots of urban waste across Asia, Latin America, and Africa.

A South-South collaboration platform can have access to satellite data to identify global coverage and point sources of waste-related emissions and work together as a community to raise awareness around baseline waste-related emissions, enhance existing ground-level data from the waste sector,

help set more ambitious waste-sector targets at the local, state and national level, enable transparent MRV of direct interventions at the municipal level, and showcase achievements that can attract more funding. The latter can take the form of municipal bonds, national funds towards waste management, and other forms of private and public sector investments.

(b). Accelerated implementation, enhanced ambition, target-setting, and transparency

An increasing number of policies, recommendations, and case studies are being developed through the coordinated efforts of organisations and initiatives supported by GMH across Asia, Latin America, and Africa. Diverse actors and governments engaged with this new framework and knowledge base will get the opportunity to understand and discuss interventions and investments available, and thereby create the proverbial positive “Ambition Loop” where governments get the confidence from sub-national governments and private sector that they are indeed taking climate action. In turn, this will create an enabling policy environment in the form of enhanced



ambition and access to finance that nurtures the ambition of other subnational and private sector actors to lead. Together, this encourages accelerated implementation, enhanced ambition, transparency, accountability and credibility of national and subnational climate targets.

(c). A broader and more sustainable set of waste management options

Waste sector transformation can take place through concerted efforts that link local input with the necessary resources and conditions, initiatives will address development needs with a direct impact on environmental quality, public health, dignified livelihoods, environmental justice, and climate mitigation. Achieving such needs will require the advancement of initiatives from conception to operation, thus including all feasibility, detailed engineering, and business modelling steps.

The collaboration platform can draw knowledge and understanding from the feedback it receives as initiatives are implemented by partner organisations and governments. This increased understanding of the challenges, specificities, and best practices

can be then quickly shared among platform participants at different levels as the additional coordination layer encourages communication and peer-to-peer collaboration. The platform can also work as a channel for leveraging financial resources across the public and private sector.

(d). Ensuring sufficient funding and investment for waste challenges

The global community and the financial sector today have a better understanding of the stakes in transforming the waste sector. Increased and renewed comprehension of the impact that landfill emissions are having on the climate, along with additional pressures over climate justice and urgent support for adaptation, are shaping international financing. The paradigm changes as development and climate can no longer be decoupled. Shaping this support to align it with the climate urgency is even clearer as urbanisation and rapid population growth are rapidly changing global waste generation—and a significant part of this comes from the Global South.

The collaboration platform can be pivotal in securing aligned funding to

address issues of waste, development, and climate. Through practice and ongoing efforts, the platform can be a powerful and credible interlocutor in the global stage to shape relationships and support provided by the main financial institutions, especially the multilateral development banks (MDBs) and the national and international development finance institutions (DFIs), with close coordination between the Global South and the Global North.

Action Plan for 2023


A set of convenings will be necessary to launch the collaboration platform to address the issues surrounding waste mismanagement, including but not limited to development, human rights, co-benefits such as prevented pollution and sanitary hazards, and the creation of jobs and value. The platform will also be inclusive of governments at the national and sub-national levels, which will offer the opportunity to reflect ongoing work at various levels, strategies to implement national mandates, and results observed from local and sub-national efforts addressing waste. iFOREST and GMH which will co-host the following activities in 2023 towards the launch of the South-South FLW collaboration platform.

(a). Short-Term: Collaboration Platform launch in India in July/August 2023

Under the “Resource Efficiency Dialogue” of the G20, this invites-only convening will discuss the design of the collaboration platform. Specific tasks for the convening would encompass:

- (i) The platform design; governance including roles and make-up of a steering committee, co-chairs and members;
- (ii) Outlining the objectives, rhythm and protocol and methods for technical solutions sharing, among members; and
- (iii) The project design/type of project preparation facilities needed to mobilise finance for technical solutions for the Global South.

Participants will include a subset of available/interested municipal representatives from Tier 1 and 2 cities across G20 Global South countries including India, Indonesia, Brazil, South Africa, Argentina, China, Mexico and Saudi Arabia; global and domestic think-tanks and civil society organisations working in the waste sector in the Global South; philanthropic community, private sector, UN Climate Champions



team, MDBs, and DFIs interested and working on addressing emissions from the waste sector.

(b). Medium Term: Collaboration Platform scale-up at COP28 - Dubai, United Arab Emirates


The collaboration will hold a public event at COP28 to (i) launch the multistakeholder platform based on principles and considerations discussed in July/August by the nodal government agencies for waste management from the central governments; (ii) hold a panel to exchange technical solutions and challenges for using circular economy principles in waste management, including both legacy and fresh waste; (iii) showcase examples of project preparation facilities that municipalities have undertaken for implementation including municipal bonds, investment from private sector, MDBs and DFIs, with recommendations for adoption.

Participants will include municipal representatives from cities across India, Indonesia, Brazil and South Africa, global and domestic think-tanks and civil society organisations working in the waste sector in the Global South, philanthropic community,

private sector, MDBs interested and working on addressing emissions from the waste sector; nodal central government agencies responsible for waste management in India (MoHUA), Indonesia (Ministry of Environment and Forestry), Brazil (The Ministries of Mines and Energy and of Environment) and South Africa (Ministry of Forestry, Fisheries and the Environment), Argentina (Ministry of Environment and Sustainable Development), China (Ministry of Ecology and Environment), Mexico (Secretariat for Environment and Natural Resources) and Saudi Arabia (Ministry of Environment, Water and Agriculture).

(c). Long-Term: Durable Platform Beyond India's Presidency

In addition to the public event, a closed-door meeting will discuss the outcomes from the COP28 event, the future continuation of the platform, and its uptake by the next G20 Presidency in Brazil through a subset of already engaged Brazilian civil society organisations, including a funding and governance model for this platform. A durable South-South platform that goes beyond India's Presidency has the potential to lift ongoing efforts



around addressing long-standing waste issues, build on the achievements and experience gained historically, support


countries in advancing their sub-national and national climate, biodiversity, and sustainability commitments.



Conclusion

4





With rising GDP and population, the countries of the Global South will be at the centre of the increase in waste-related GHG emissions. The South-South platform on FLW—launched with India’s G20 Presidency—can allow these countries to turn this challenge into

an opportunity. Through sharing of best practices and mobilisation of finance, the envisioned platform will have the potential to deliver direct health, social, and economic benefits to society, while supporting Global South countries to mitigate their GHG emissions and help the global community stay within the 1.5C guardrail.

Attribution: Manjot Kaur Ahluwalia et al., “Promoting Circular Economy Through South-South Collaboration,” *T20 Policy Brief*, May 2023.

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