Centre for Environment Justice and Development

CEJAD

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FOOD WASTE, FOOD LOSS, AND METHANE MITIGATION

ASSESSING KENYA'S PROGRESS ON NATIONALLY DETERMINED CONTRIBUTIONS



Progress, Gaps, and Opportunities



Executive Summary

Methane (CH 4) accounts for roughly 30% of cumulative global warming to date, and is considered the second-largest contributor to anthropogenic climate change after carbon dioxide (CO2) (IPCC, 2021; UNEP, 2024b). UNEP estimates that 8% to 10% of total annual greenhouse gas emissions are from global food systems, thus addressing food loss and food waste offers the single most immediate, high-impact mechanism for curbing near-term global temperature rise (IPCC, 2021). Kenya's revised Nationally Determined Contributions (NDCs) includes a commitment to waste management with a target to achieve a 32% reduction in greenhouse gas emissions by 2030. However, implementation has lagged due to inadequate technical, financial, and regulatory capacity, as well as a lack of solid baseline data. This has made it challenging to evaluate the effectiveness of these interventions, especially within regard to the reduction of emissions within the context of NDCs.

The Centre for Environment Justice and Development (CEJAD) and the Global Alliance for Incinerator Alternatives (GAIA), conducted a study to provide an evidence-based assessment of Kenya's progress in implementing its Nationally Determined Contributions (NDCs), particularly on food waste and food loss. The study methodology entailed a qualitative research approach, drawing primarily on a desk review of policy documents, legislation, implementation reports, climate finance frameworks, greenhouse gas inventories, and relevant academic and grey literature. The literature review was complemented with key Informant Interviews targeting actors in key sectors dealing with Waste, and the NDC process. The study identifies the following key issues:

Key Findings

Absence of Food Loss/Waste (FLW) in NDC Architecture: Neither Kenya's updated 2020 NDC nor its 2024 BTR1 includes quantified targets, indicators, or action plans for food loss and waste (FLW) mitigation. This creates a structural gap between national climate reporting, SDG 12.3 targets, and Global Methane Pledge commitments.

Organic Waste Drives Methane Growth: Post-harvest losses cost Kenya KES 72 billion (~USD 555 million) annually, destroying up to 40% of food produced without climate accounting linkages (FAO, 2024; FAO & USAID, 2020). Because 60–70% of municipal waste is organic and only ~10% is recovered, this pathway accounts for a substantial share of waste sector emissions (5,237 GgCO2eq in 2022)Waste sector emissions of 5,237 GgCO2eq (2022) are substantially attributable to this pathway, though disaggregated data for food waste specifically are not publicly available.

Devolution Bottlenecks at County Level: Although waste management is devolved to Kenya's 47 counties under the *Sustainable Waste Management Act (2022)*, enforcement remains weak. Municipalities face acute financing deficits, technical capacity constraints, and minimal national-to-county MRV coordination. Consequently, no disaggregated data on FLW/Organic waste is available from counties

Energy-Led NDC Success Masks Waste Risks: Kenya's total emission reductions are on track for 2030, but this trajectory is driven almost entirely by a **>90% renewable power grid** and LULUCF accounting, not waste or agrifood interventions (Government of Kenya [GoK], 2024). Consequently, waste emissions continue to rise, contributing to Climate Action Tracker's rating of Kenya's 2035 NDC target as "Insufficient" (Climate Action Tracker, 2026b).

Policy Progress vs. International Commitments: While domestic policy frameworks are expanding anchored by the *SWM Act (2022)*, *EPR Regulations (2024)*, and *NCCAP III (2023-2027)* international alignment lags. Despite signing the Global Methane Pledge, Kenya lacks a dedicated waste-methane roadmap and did not sign the COP29 Organic Waste Declaration (Clean Air Task Force [CATF], 2024).





No Disaggregated Food Waste GHG Data: National greenhouse gas inventories, including the First Biennial Transparency Report (BTR1), report aggregate waste-sector figures without disaggregating emissions by waste sub-category or county-level jurisdiction (Government of Kenya [GoK], 2024). Due to limited empirical measurements at disposal sites like Nairobi's Dandora or Mombasa's Mwakirunge, national GHG estimations rely primarily on IPCC Tier 1 default values rather than country-specific (Tier 2 or Tier 3) emission factors (Axmann et al., 2024; IPCC, 2021). This introduces high levels of uncertainty regarding actual methane emissions.

Financing towards FLW reduction lagged. This is attributed to

- **Inter-Sectoral Capital Competition:** Waste-sector NDC initiatives compete poorly against higher-visibility sectors such as renewable energy development and transport infrastructure, which consistently attract the bulk of international public and private capital flows (GoK, 2024; Climate Policy Initiative [CPI], 2023),
- **Absence of Dedicated Financing Windows:** At both national and sub-national levels, Kenya lacks a dedicated climate finance window or targeted investment fund specifically earmarked for food loss and waste (FLW) reduction, organic waste diversion, or landfill methane abatement, and
- **The Bankability and MRV Bottleneck:** A self-reinforcing cycle impedes project development: the shortage of granular waste-characterization data and standardized Measurement, Reporting, and Verification (MRV) protocols prevents county governments and project developers from structuring bankable waste-mitigation projects.

Key Recommendations

Integrate Agriculture and Climate Accounting High Priority | Short-Term
Establish formal operational linkages between MoALD's *Post-Harvest Management Strategy (2024–2028)* and MECCF's NDC tracking framework to ensure food loss reduction co- benefits are credited in national methane inventories.

Fund Decentralized Zero-Waste Infrastructure High Priority | Medium-Term
Redirect public capital and establish dedicated climate finance windows for neighborhood-level composting hubs, Black Soldier Fly (BSF) organic processing, and anaerobic digesters to divert organics away from dumpsites.

Enforce Organic Waste Segregation & Just Transition High Priority
Enforce mandatory source-segregation regulations under the *Sustainable Waste Management Act (2022)* while formally contracting informal waste picker cooperatives into municipal collection and recovery systems with fair pay and PPE.

Deploy Sub-National Tier 2 MRV Protocols- Medium Priority
Equip county governments with standardized waste characterization protocols and update outdated county GHG inventories (e.g., Kisumu County) to build empirical baselines for Article 6 carbon market readiness and Green Climate Fund (GCF) financing.





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