Addressing organic waste management in Uganda through multi-stakeholder participatory approaches: Inception meeting and Mapping Brief

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Background

Uganda, like many urbanising countries, is facing the challenge of increasing organic waste that is mainly due to the rapid urbanisation and population growth. This has resulted in improper disposal, open dumping, and burning, which have led to air pollution, greenhouse gas emissions, environmental pollution, soil degradation, water contamination, and related public health risks. Many urban areas are continuously overwhelmed by the growing population, subsequent rise in organic waste and severe funding shortages from the government[1]. For example, Kampala – the capital city - collects around 28,000 tonnes of waste per month, which accounts for only 40% of the city's total waste generation[2]. This situation is compounded by the absence of a clear National Waste Management Strategy to provide comprehensive, holistic, and sustainable approaches to managing waste.

In response, the Ministry of Water and Environment and the National Environmental Management Authority (NEMA) sought support from the Climate and Clean Air Coalition (CCAC) and the United Nations Environment Programme (UNEP) to develop a national waste management strategy for organic waste. As a result, this led to the initiation of the **S**trategy for **O**rganic **W**aste Management **U**ganda (SOWU) project, which aims to support Uganda in developing a national strategy for organic waste management.

The SOWU project comprises an interdisciplinary team led by International Institute for Applied Systems Analysis (IIASA), Stellenbosch University (South Africa), and Ugandan policymakers including NEMA, the Ugandan Ministry of Water and Environment and the African Centre for Clean Air (ACCA), a local non-profit organization, to collaboratively work with local stakeholders.

This brief presents the key insights from the Stakeholder Workshop held from the 16 to the 18th of April 2024 in Kampala, Uganda and findings from the stakeholder mapping exercise.



Figure 1 Inception meeting photo

The inception meeting and stakeholder mapping aimed to:

a) Launch the SOWU project funded by CCAC**.**
b) Bring together the relevant stakeholders and policymakers to identify principal players in waste management that could support the successful co-development and implementation of the national strategy for organic waste management.
c) Conduct a comprehensive analysis of the roles of relevant stakeholders within the project and clearly define them in the development of the national Waste Management Strategy.
d) Foster a comprehensive understanding of organic waste management in Uganda, including current policies.
e) Identify preliminary areas of action in the organic waste sector.

The inception meeting comprised 8 interactive sessions by the interdisciplinary team over a three-day workshop, including a field visit on the third day whereas the stakeholder mapping involved an extensive review of documents (academic and grey literature) and consultative discussions to identify and categorise stakeholders across a wide spectrum including government ministries, departments and agencies, sub-national, non-governmental organisations (NGOs), businesses, academia, and international development partners.

[1] Komakech AJ, et al., 2014. Characterization of municipal waste in Kampala, Uganda. J Air Waste Manag Assoc. 2014 Mar;64(3):340-8. doi: 10.1080/10962247.2013.861373. PMID: 24701692.

[2] Mugambe RK, et al. 2022. Drivers of Solid Waste Segregation and Recycling in Kampala Slums, Uganda: A Qualitative Exploration Using the Behavior Centered Design Model. Int J Environ Res Public Health. doi: 10.3390/ijerph191710947. PMID: 36078663; PMCID: PMC9518474.

Key takeaways from the workshop and stakeholder mapping:

Stakeholder workshop and field visit

- Uganda recognizes the relevance of addressing organic waste to mitigate air pollution including short-lived climate pollutants (SLCPs) and climate change, to improve population well-being.
- There is an existing policy framework and current initiatives in the country related to organic waste management, including innovative strategies such as the 12 CDM projects funded by the World Bank[3] and the black soldier fly (BSF) in Uganda. Nevertheless, several obstacles remain, such as establishing a coordination mechanism among the numerous stakeholders and refining the overall strategy.
- There is existing data collection, inventories and Monitoring, Reporting and Verification (MRV) Frameworks in Uganda. However, gaps such as duplication, less accurate data and a lack of a comprehensive integrated waste management framework have been identified.
- Responsibility for waste management is fragmented among various sectors and institutions, lacking a central authority for policymaking, regulation, and quality control. Components of waste management are overseen by multiple Ministries, Departments, and Agencies (MDAs).
- The National Planning Authority, jointly with stakeholders, created a platform (committee) to coordinate the wide and diverse waste management profile and address the grey areas in the waste management governance system.
- Although inventory for waste generation exists, there is need to implement a standardized template for data collection and analysis to streamline inventory processes.
- The Kampala Integrated Waste Management Program seeks to enhance the management of municipal solid waste, aiming to raise the current 50% rate to 85% by 2025.
- Many regions lack proper waste collection infrastructure such as bins, collection points, and transportation vehicles, hindering efficient waste management practices.
- Absence of a clear mandate for local governments regarding waste management regulation poses a significant hurdle. The sector is subject to regulation by district leadership and NEMA.
- Key challenges include limited waste segregation at the source and insufficient awareness among stakeholders regarding their roles in facilitating waste management and the circular economy.
- Despite existing regulations, enforcement mechanisms are weak, allowing illegal dumping and improper waste disposal practices to persist unchecked.
- Several funding opportunities for waste management exist worldwide, including grants, which are accessible online. However, governments must actively pursue these resources, and this requires a strategic approach to ensure these funds are secured effectively.
- There is a challenge in accessing loans from banks and financial institutions.

Recommendations

Waste management in Uganda needs a systematic approach for improvement. Below are some of the recommendations discussed.

- **Urgent need for a Comprehensive Strategy for Organic Waste Management**: The absence of a comprehensive national strategy for organic waste management is a significant gap. Such a strategy would provide a clear roadmap, outlining the roles and responsibilities of various stakeholders, setting targets, and defining the necessary policies and regulations. A well-articulated strategy would also facilitate better resource allocation, monitoring, and evaluation of waste management practices, ensuring that efforts are directed towards achieving national and international environmental goals.
- **Need for collaboration and coordination:** Waste management is a cross-sectional societal challenge that necessitates collaboration and coordination among a diverse range of stakeholders. The successful management of waste requires input and cooperation from government entities, the private sector, civil society organisations, academic institutions, and the public. Each stakeholder group brings unique perspectives, expertise, and resources that are crucial for addressing the multifaceted nature of waste management.
- **Increasing investment in infrastructure:** Such as waste treatment facilities, composting sites, recycling facilities and recycling hubs, is essential for meeting the growing waste management demands.
- **Increasing awareness, building and strengthening capacity:** Promoting public engagement through awareness campaigns and community training programs will foster inclusive participation. Integrating capacity building at all stages of the waste management value chain ensures sustainability and effectiveness in managing organic waste. There is need to educate communities about the importance of waste management, proper disposal practices, and the benefits of waste segregation.
- Establishing a waste management fund in Uganda to bolster private sector involvement.
- Enforce existing waste management regulations effectively and consider revising or implementing new policies to address gaps in waste collection, transportation, and disposal.
- Foster partnerships between local governments, community organizations, businesses, and residents to promote community-led waste

[3] https://cdm.unfccc.int/UserManagement/FileStorage/5EQIUKCMTHDWZ19R764SFJXL2YN3OV

management initiatives, to encourage active participation in waste reduction and recycling programs.

- Implement incentive-based programs to encourage waste segregation at the source. Offer rewards or discounts for households and businesses that participate in recycling and composting initiatives. Penalize non-compliance with waste segregation guidelines.
- Provide training programs and technical assistance to composting facility operators and staff to improve their skills in composting techniques, quality control, and facility management.
- Facilitation of Public-Private Partnerships and innovative financing mechanisms to support infrastructure development.
- Regional cooperation and knowledge sharing of best practices across regions is needed.
- Incorporate organic waste management into broader urban planning and development processes.
- Identify sustainable funding strategies for organic is essential for waste management, as well as clear pathways for accessing green funds, through international or local partnerships.
- There is need to access and use existing data formats to streamline data collection processes and avoid duplication of efforts.

Conclusion:

The waste management situation in Uganda presents both challenges and opportunities, particularly in urban areas where over 80% of waste is organic. The SOWU project aims to unearth and advance evidence to harness the opportunities and address challenges whilst integrating the diverse perspectives, robust policies, and collaborative participation from the existing stakeholders.

The current data on waste collection could provide critical insights for developing baseline waste inventories and associated emission profiles, as well as support in addressing the existing gaps. However, there's need for robust data collection and reporting across the waste management cycle and formation of a comprehensive national-level strategy to improve waste management efficiency and sustainable urbanization.

Organic waste management is a complex issue that requires coordinated efforts from government agencies, civil society organisations, communities, and other stakeholders to address effectively.
Despite considerable efforts, numerous challenges remain. Implementing a National Waste Management Strategy will be instrumental in guiding the development of practical and impactful waste management practices. By enhancing stakeholder engagement and coordination, this strategy can significantly reduce environmental impacts caused by waste and foster a circular economy.

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