Mistra Urban Futures
Policy Brief 2019:1

Solid Waste Management

RECOMMENDATIONS FOR KISUMU, KENYA

Kisumu City generates approximately 400 tonnes of solid waste per day, 20%-25% of which is collected to the open dump site. Of the total municipal solid waste that is collected, 65% is organic and another 27% is recyclable (County of Kisumu, 2015). The collection and handling of municipal solid waste poses a significant challenge in Kisumu City. The closure in August 2019 of Kachok dump-site within the city compromises any progress made in the solid waste manage-ment system.

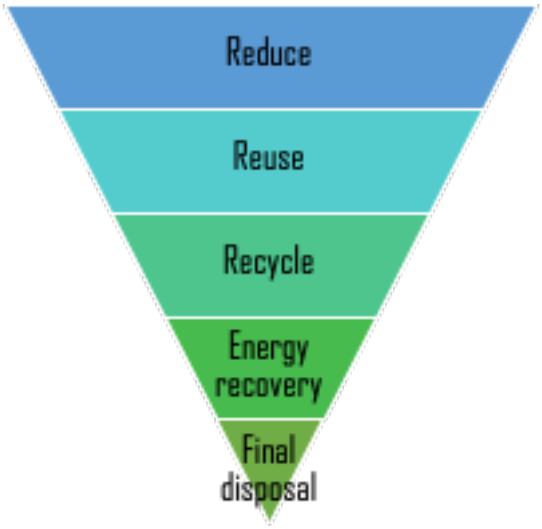
With this closure in view, government officials have worked diligently to foster new options and opportunities for solid waste collection and disposal. While these measures are commendable, they are not adequate to address the urgency and scale of the situation. Additional planning measures in conjunction with concrete actions must be pursued to better ensure a more comprehensive and sustainable system for managing municipal solid waste in Kisumu.

Policy Recommendations

Based on our assessment of the situation we recommend the following governance measures be considered. They should augment current proposed ambitions for a de-centralised waste management model through construction of recovery centres with material sorting, recycling, composting or biodigestion, and community cookers.

1 A sustainable solid waste management strategy must be pursued in short- and long term-perspectives

Solid waste resources in Kisumu must be handled, treated, and disposed of properly to prevent environmental pollution and ensure the protection of ecosystems and human health. Therefore, Kisumu's sustainable solid waste management approach needs be based on a systematic set of priorities. The solid waste management hierarchy lies at the heart of such a strategy. It prioritises, in descending order: reduction; reuse; recycling; energy extraction, and final disposal. An effective promotion of this hierarchy will enhance resource efficiency and minimise the quantities of materials that need final disposal. The approach will promote a circular economy in the region, to achieve not only environmental but also socio-economic benefits. Such a system should be designed to support innovation and sustainable livelihoods through a just and fair system that empowers actors, including waste collectors, recyclers, community organisations, and other relevant entrepreneurs. Moreover, it is essential that decisions made to address immediate waste management challenges do not compromise long-term goals, but should focus on increasing socio-economic and environmental sustainability. For the strategy to be successful, interventions must be done systematically and jointly at all waste management steps, and not isolated from each other.



A solid waste management hierarchy where waste reduction is the greatest priority and final disposal is the approach least prioritised

Collection truck owned by the municipality of Kisumu - even if households sort their waste, the trucks are not well-suited for keeping the fractions separated. Photo: Luciana Capuano Mascarenhas.

Initiatives such as the Kisumu Waste Actors Network (KIWAN) must be encouraged to ensure the engagement and inclusion of waste collectors, recyclers, community organizations and entrepreneurs. Photo: Michael Oloko.

2 A diversity of relevant sectors and actors must formally engage and network in all phases of the process, including planning, design and the execution of solutions

Actor engagement must be central to any solid waste management intervention. In order to be successful, solutions need to be planned, designed and implemented in conjunction with the diversity of relevant actors. Furthermore, government agencies representing multiple societal sectors (e.g. environment, business development, energy, city and county planning) must actively participate in the engagement processes. This is to build an effective, long-term, and formal working relationship among the actors and with relevant government agencies for a collective vision and ultimately benefit of the citizenry of Kisumu. Just, fair and novel ways of interaction and collaboration should be established, fostering social and technological innovation. A formal way of involving relevant actors should be established and be based on transparency, inclusion, accountability and empowerment. Moreover, engagement processes should include the mapping of opportunities and priorities across different sectors, actors, and entail regular meetings and discussions, joint solutions creation and constant feedback for effective public participation. Finally, government agencies and waste actors along with support of other actors must work together in organizing and mobilising citizenry of Kisumu for proper waste management.

3 Policies and regulations should be in place and enforced to encourage a more formalized waste collection system

Currently, the collection of Kisumu city's solid waste is performed by municipal and local private actors. These collection services must be comprehensive and expanded to include all households and businesses. A more formalized waste collection system has the potential to address the current challenges that waste collectors face. The requirement of, for example, formal contracts between waste generators (e.g. households, businesses) and collectors can better ensure that the subscription to waste collection services is not optional, as the current practice allows. Furthermore, a formalized and enforced licensing system (with performance standards) for local, reputable waste collectors can ensure proper waste collection, treatment and disposal in addition to promoting occupational health and safety for those working in the sector. Incentives can be used to support best practices in waste collection, for instance, training, tax waivers, provision of transport trucks, proper waste management facilities, and appreciation awards, among others.

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https://www.mistraurbanfutures.org/en/project/solid-waste-management

4 A system of waste separation at the source should be established and promoted for all households and businesses

For a sustainable solid waste management strategy to achieve its goals, waste separation at source is imperative. This strategy will help reduce waste that reaches final disposal. In addition, it will also reduce labour requirements for separation waste resource entrepreneurs and increase the value of the resources. Its success requires the involvement of the entire citizenry of Kisumu, government actors, local leadership and institutions such as residence associations and Nyumba Kumi (Know Your Neighbour). The waste collection chain must be adapted to be able to receive and ensure that these materials sorted until they reach their destination, avoiding contamination of recyclables. Furthermore, it is essential that a communication strategy and campaign is established to raise awareness. This should involve use of multiple effective means of communication such as radio, print media, TV and social media. More importantly, it should target children and youth in schools and tertiary institutions of learning in the region through demonstration of best management practices. Finally, hands-on public programmes to promote solid waste separation should be revived and/or initiated and followed through in public spaces such as recreation parks and city hall targeting general population.

Public park separation containers that could be revived and used for the information campaign. Photo: Barry Ness.

SUCCESS STORIES

Success stories that can be further implemented in Kisumu:

- Community cookers: waste incineration that fuels stoves which can be used for community cooking, https://communitycooker-foundation.org/
- Hyacinth for Biogas: anaerobic digestion of water hyacinth and organic waste at Dunga beach, generating biogas fuel for cooking, https://biogas.co.ke/
- VicInAqua: research project that combines wastewater treatment, fish farming and biodigestion of organic waste, http://www.vicinaqua.eu/

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