

SymbioCity Kenya Waste Management Study

7th - 9th November 2017

The sunny and clear morning of Tuesday 7th November 2017 herald the arrival of SymbioCity's Kiminini Pilot City programme participants in the Kenyan capital Nairobi, for a 3 days hands on study visit of various waste management projects in Nairobi and the neighboring Kiambu & Kajiado counties. The study visit organized in conjunction with the Council of Governors and various private sector players, aimed at exhibiting the myriad opportunities, benefits and challenges presented by waste management of different types of waste.



King of the Hill: A conveyor operator at Kamongo Waste Paper Mill stands on top of the belt sending paper to the balling machine.

The first site visited directly upon arrival was Kamongo Waste Paper Recycling Mill in the Industrial Area part of Nairobi. Founded in 1990, the mill processes over 21 tonnes of waste paper daily and employs up to 120 people on a permanent basis. Here participants were taken through the collection, sorting, pulping and drying processes. The mill sells the products of the recycling to stationary manufacturers and shoe companies.



Brain Storm: Participants of the study visit from Kiminini take notes during a visit to the Ecocycle Sequence Based Reactor unit for sewerage treatment.

Next, the participants visited three different residential sewage treatment installations, in Karen and Ngong, by Ecocycle. The technique is an aerobic (using oxygen) treatment, through a sequence based reactor unit, that treats and recycles raw sewerage back to clean water for secondary usage in irrigation of garden, cleaning of driveways or to flushing toilets. Easy to install, maintain and with proven zero odor emissions, the Ecocycle system was the subject to many questions from the participants about installation and costing.



Trash Can: The endless possibilities of trash as exhibited at Taka Taka Solution's sorting plant in Banana Hill, Kiambu County.

Day 2 of the study visit started in the neighbouring Kiambu County where Taka Taka Solutions – a solid waste collection and management company – has two sites. One is a composting facility and the other a sorting facility, both near Banana Hill. Taka Taka Solutions collects household, office and mall complex garbage that is sorted into more than 20 different fractions for re-use or reselling. The biodegradable waste is sold as pig food or sent to the composting facility. The composting process results in organic fertilizer that is sold. Taka Taka Solutions collects up to 30 tonnes of waste every day.

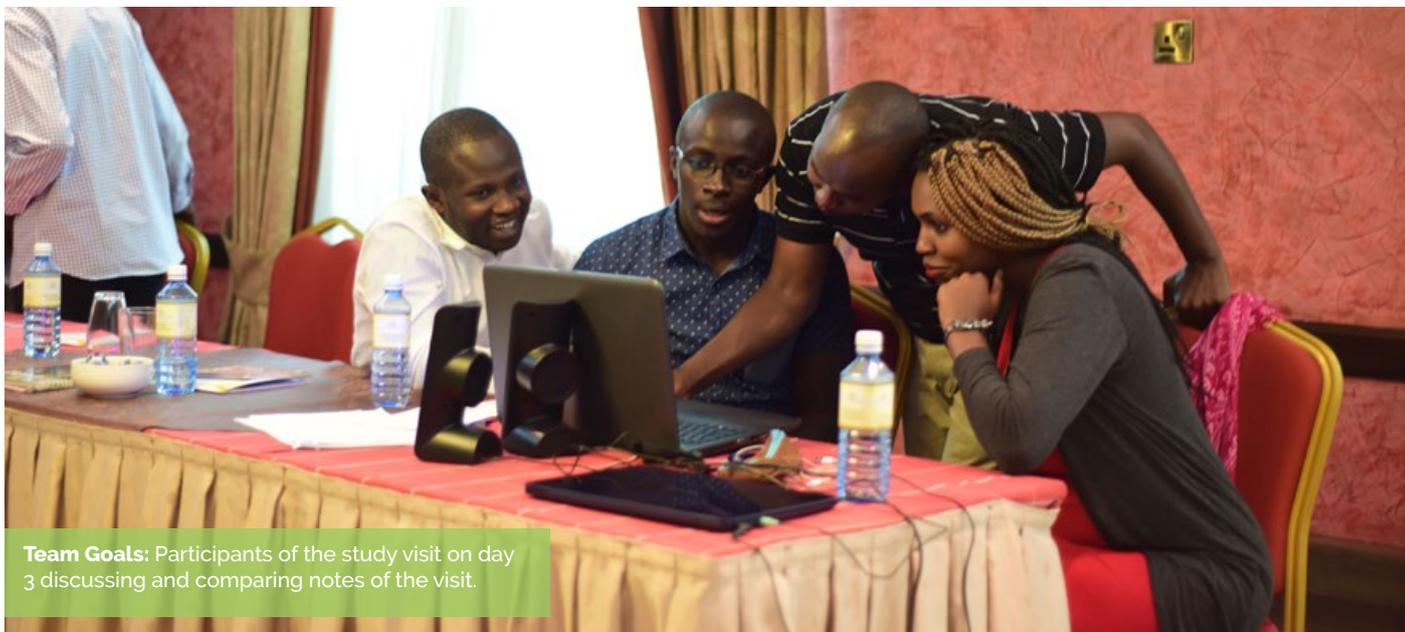
The group also visited Central Glass Industries in Kasarani. The company manufactures

glass from both raw materials and recycled glass that is collected and delivered to them. The recycled glass is called cullets and separated according to color i.e. green, amber and clear. Next, the group visited Mirema School where the Community Cooker (a cooker that is powered entirely by household rubbish) is installed. Developed, engineered and made by Planning House, an architectural firm, the cooker is able to achieve temperatures above 880°C and at Mirema school it cooks 3 meals for staff and over 700 students. Finally, day 2 wrapped up with a visit to Ecopost a plastic and saw dust recycling factory and Chandaria Paper Mill. Both companies in Baba Dogo area. The latter recycles to 60 metric tonnes of waste paper into toilet rolls while the former recycles polythene bags and plastic containers into fencing poles and floor tiles.

Day 3 was dedicated to consolidating the gains and knowledge acquired during the field visits. All attendees unanimously agreed that regardless of the scale of project, financial ramifications took central position. As well for any project to take off on a town, municipality or county level, the necessary policies and laws must be in place to govern the parameters of the project and enforce the same.



Into the Furnace: The Community Cooker at Mirema School that runs on trash reaching temperatures of up to 880°C thus cooking 3 meals a day for over 700 students and 45 staff members.



Team Goals: Participants of the study visit on day 3 discussing and comparing notes of the visit.

Lobbying, civic education and a shift in mind-sets of the people, leaders and society towards waste and the environment is necessary. In the end, it was agreed that simple solutions, working with what was available and cooperation/ partnerships with the private sector would go a long way towards overcoming some of the challenges the pilot cities face in waste management.



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