

UN HABITAT

FOR A BETTER URBAN FUTURE

Mr. Daviz Mbepo Simango, Mayor of Beira Mozambique, Visits Multi-functional Clean Energy Centres in Nairobi



UN-HABITAT is assisting the municipality of Beira to improve the living conditions of slum dwellers in Munhava slum through the provision of access to clean energy, better sanitation and safe drinking water. The UN-HABITAT office in Mozambique successfully mobilized funding from BASF Social Foundation in Germany to build a Multifunctional Clean Energy Centre (MCEC) to enable the community to access basic services. The facility will provide livelihood opportunities for vulnerable youth who will be responsible for its daily operation and management. It will be designed to utilize locally available renewable energy resources (human waste, solar energy and wind) for value addition including public toilets connected to biogas digesters and solar panels installed on the centre's roof for lighting and for charging lanterns for domestic lighting in order to replace kerosene lamps. The project will be implemented based on existing best practices and on the experiences of UN-HABITAT in promoting pro-poor urban basis services.

It is against this background that Mr Daviz Simango visited Nairobi from 15th to 16th December 2011 to understand how Bio-Centres (public latrines with biogas plant) operate. He was accompanied by Augusto Paulo from the Beira Municipal Council Technical Unit, Silva Magaia of UN-Habitat (Mozambique) and Vincent Kitio and Fredrick Ochieng both from UN-Habitat's Urban Energy Section. The visit also helped in informing the municipality on the construction technique and the business model adopted to operate the public facilities. All this information and knowledge will be helpful in designing the Munhava's MCEC. Mr Daviz Simango commended the work of the community in designing and implementing the system and pledged to replicate MCEC in Mozambique.

On the first day of the tour, the Mayor visited the Kibagare Haki Yetu Bio-centre in Kangemi and Stara Biogas Toilets, Nicoteli Youth Club and Katwekera Tosha Bio-centre all located in Kibera. The centres are owned by the local slum communities who are organised into welfare groups. They generate revenue by supplying water and offering the public toilet and hot shower facilities at subsidized rates. The daily income for the centres varies from between Kshs. 1,000 (\$ 12) and Kshs. 3,000 (\$ 26) depending upon the number of residents and visitors. The number of people using the centres ranges from 150 to 1,000 per day.

The port of Beira is situated at the mouth of the Pungue River. Beira is the Mozambique's second largest city after Maputo. In 2007, the city had a population of 436,000.

Munhava is a slum in Beira where the youth in particular face the twin ills of lack of livelihood opportunities and social degradation in addition to environmental, health and social insecurity.

The centres also obtain significant incomes from renting rooms in their buildings to an assortment of tenants including lawyers, youth groups and community churches. The projects have all served to replace many of the traditional pit latrines that were previously found in the slums. Innovations seen by the Mayor included a sewerage system connecting the Kibagare biogas digester to 3 satellite toilets. Another innovation is the provision of cooking energy services for households at a fee at Stara Biogas Toilets as a remedy to the high cost of cooking fuels like firewood, charcoal and kerosene. Future plans for Stara Biogas Toilets and all other centres visited by the Mayor are to supply biogas at a fee to neighbouring houses or institutions for cooking and heating applications. The Mayor commended the business models adopted for the day-to-day management of the centres.

The Mayor spent the morning of the 16th of December at the UN-HABITAT offices where he met with officials of the organization and representatives of Swedinco - a Renewable Energy Technologies (RETs) distribution company. The company supplies wind and solar power systems and backup diesel/biodiesel generators which have been used in the telecommunications industry for the past 4-5 years. The RETs offered by Swedinco could be used alongside the planned biogas installation at the Munhava facility. The Mayor and his delegation also paid a courtesy call to Mr. Alioune Badiane, the Director of the UN-HABITAT Projects Office.

The meeting at UN-HABITAT offices proposed that UN-HABITAT leverages funding from the SIDA Innovation Against Poverty Investment program which supports RETs projects that meet minimum requirements including commercial viability, innovation, private sector backing and the delivery of strong developmental benefits. UN-HABITAT and Swedinco will prepare a joint proposal for the Municipality of Beira outlining the concept.

The afternoon was dedicated to the final site visit, a three storey biolatrine system built at Mji Wa Huruma village adjacent to Karura Forest near Runda Estate. The system was designed to mitigate sanitation problems and reduce negative impacts associated with human waste disposal. The plant supplies water and rents residential rooms with revenue collected totalling Kshs. 10,000 a month. This facility's only setback is its under-utilization due to the difficulty associated with convincing people used to defecating in the open to pay to use the toilets. UN-HABITAT, UMANDE Trust and the community leaders will therefore liaise to provide a viable solution.

During the visit to Kibagare on the first day, the Mayor was introduced to briquettes made from charcoal dust used by households as a cheaper alternative to charcoal. The briquettes are used in biomass stoves to start and maintain fires and lead to less demand for charcoal. The Mayor's delegation also paid a visit to a briquettes production site near Kabete Campus of the University of Nairobi.

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Photo Gallery



The Mayor signs the visitors' book upon arrival at Kibagare Bio-centre in Kangemi slum, Nairobi.



Meticulous record and bookkeeping is essential for the success of the Bio-centre as illustrated by the Kibagare MCEC in Nairobi



Urban agriculture using manure from the biogas digester at the MCEC (Stara Biogas Toilets) in Kibera, Nairobi.



The prices of water displayed at the Biogas Toilets, Nairobi



The resource centre at Nicoteli Youth Club MCEC in Kibera



Tosha One, the first bio-centre of its kind in Kibera

Photo Gallery



A customer being served at Tosha One Bio-latrine in Kibera, Nairobi



A meeting with community leaders in Tosha One Bio-latrine in Kibera, Nairobi



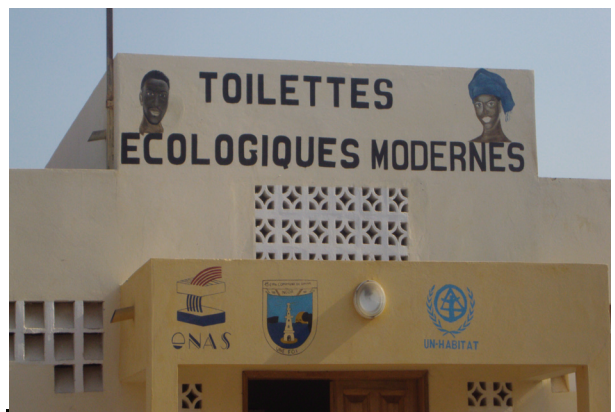
Briquettes on sale outside a house in Kibarage slum



Briquette production near Kabete Campus, Nairobi



The Mayor, community leaders, UMANDE Trust officials and the UN-HABITAT team at Mji Wa Huruma slum, Nairobi



A UN-HABITAT public toilets with biogas in Dakar, Senegal