

Peri-urban setting: where the brown meets the green

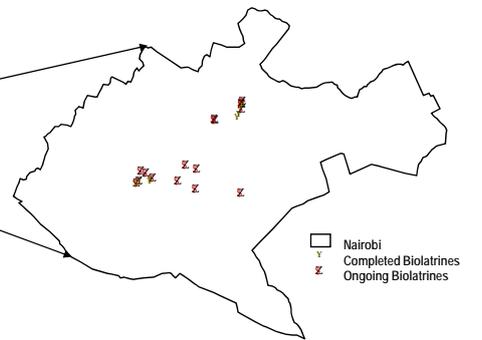


UMANDE TRUST

ENVIRONMENTAL JUSTICE & BIO-CENTRES IN PERI-URBAN SETTLEMENTS



Replication of similar projects to Kisumu

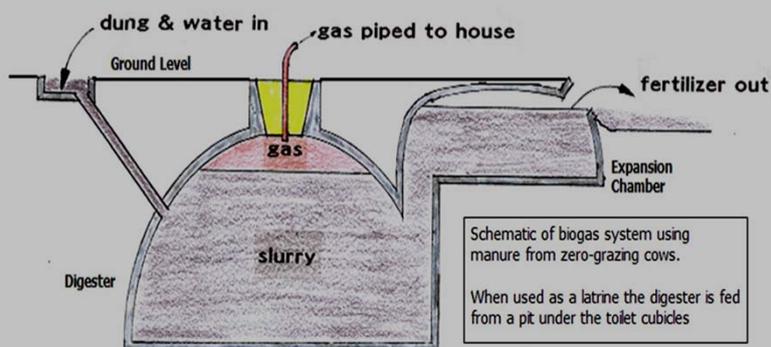


ENSURING ENVIRONMENTAL AND SOCIAL RESILIENCE

- ❑ Promoting productive sanitation: to conserve water and utilize liquid fertilizer for urban agroforestry
- ❑ Using anaerobic technology to convert human 'investments' into bio-gas and reduce carbon emissions.
- ❑ A network of slumdwellers (Muungano wa Wanavijiji) involved in daily savings and local and city-wide advocacy
- ❑ Promoting community-managed basic urban services financing: daily savings, cooperatives, Sanitation Development Fund (SANDEF)
- ❑ Accountability and transparency: Community members holding accountability sessions and displaying finance reports on notice-boards.
- ❑ Demonstrating successful partnerships - community groups, NGOs, water companies, local authorities, professional associations, international agencies, private sector.
- ❑ Bio-centres as entry points for Integrated Urban Environmental Planning: an open invitation to land professionals

A bio-digester

Biogas technology is an elegant waste-treatment process with no moving parts and a highly useful by-product, gas, which can be used for a variety of beneficial and/or income-generating applications.



Sun-dried bricks



Construction of a bio-digester





**DESIGNING,
MODELLING AND
CONSTRUCTION**

- Community Members and artisans who had been trained /participated in planning, designing and modeling, and construction of bio-latrine/Centre.

- The technical drawings were presented to the City Council of Nairobi and were approved.



Excavation Process by the community Members



Dome construction



A complete Dome



Construction of the Superstructure



A complete Bio-Center



Burning of Bio - Gas

The front view of Gatwekera Tosha Bio-Centre



Open Hall: Operating as a cafeteria

CBO's office and Rental offices

Toilets and bathrooms

A biogas burner

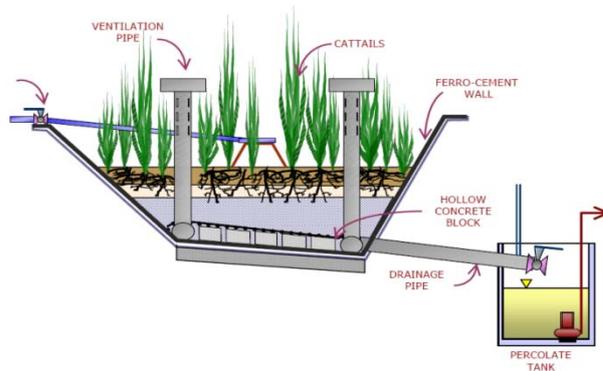


Biogas: as good



Post treatment works

CONSTRUCTED WETLAND in Kibera-Katwekera



Integrated Urban Environmental Planning (IUEP)



MUKURU-REUBEN BIO-CENTERS



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Thankyou