



TRANSFORMATION

The Bio Centre Story

Transformation

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An aerial photograph of a city, likely Nairobi, showing a dense grid of buildings and streets. A prominent red line, possibly a road or a boundary, runs diagonally across the upper right portion of the image. The overall tone is light and slightly faded.

Acknowledgement

The compilation of this publication would not have been possible without the support and guidance of many people. Umande Trust wishes to express gratitude to **Dr. Musyimi Mbathi** who conceptualized the idea and put together a dedicated team of students from the University of Nairobi. Over the years, Dr. Mbathi has offered invaluable support and guidance to programme development at Umande Trust.

I take this opportunity to express my gratitude to the people who have been instrumental in the successful completion of this publication. Special thanks especially to **Nasra Omar, Brenda Amondi** and **Ronald Odinga** who tirelessly visited all the facilities and engaged communities managing them. Their experience and the voices of the beneficiary communities have been well presented thanks to the attention to detail and passion for the assignment. Not forgetting to the numerous community members who volunteered information and details used to describe the facilities. We at Umande Trust believe that the narratives and stories presented here will inspire others and transform the service delivery in water and sanitation within people's settlements. So, perhaps this publication and its pages will be seen as "thanks" to the tens of thousands of community members who have helped make the Bio-Centres story truly a story worth telling. The dedicated staff of Umande Trust has shared their knowledge, ideas and tips, all of which culminated in the completion of this book. Thank you for the sacrifice and dedication over the years.

No one walks alone on the journey of life. Over the years, numerous partners have extended support and shown confidence with the work Umande Trust is carrying out. Special thanks to VE / Sustainable Energy, Denmark who have provided resources to facilitate publishing. To our partner organizations and individuals, Umande Trust values your investment in communities and the associated transformation.

Josiah Omotto
Managing Trustee, Umande Trust

Executive Summary

Expanding Opportunities in People's Settlements through Innovative Solutions in Sanitation Provision

Inadequate sanitation according to recent research¹ is a driver of diseases such as diarrhoea, endemic cholera and respiratory infections seen as the biggest contributor of child mortality for the under five, where an estimated 2.4 million children fall victim. It is without doubt that sanitation is the single most cost-effective major public health intervention to reduce child mortality. The United Nations² observed that in developing countries and indeed informal settlements, there is no single development intervention that brings greater public health returns. Additionally, for every \$1 invested in sanitation, it is estimated that at least \$9 is returned to national economies in increased productivity and a reduced burden of healthcare.

The interventions supported by Umande Trust to provide better sanitation in people settlements across Kenya are aimed at bridging sanitation gaps in addition to providing sustainable livelihoods and living environments. This publication provides a detailed description and photographic evidence of the current situation of the Bio-Centres constructed across the country in people's settlement through assistance of partners and beneficiary communities. The publication further highlights the unique and salient features of each facility and how beneficiary communities have transformed as a result.

Information and detailed about the facilities was collected through the help of groups of men and women including the youth who managed the facilities. Observations and photography were carried for each facility and details collaborated by user communities and management committees. Without the local knowledge and lived experience, this publication and contents would not have been possible. The voices and personal experiences presented in the publication are testimony that the Bio-Centre facilities had indeed led to transformation of the communities and users.

The findings led to a transformed socio-economic and environmental landscape in the settlements. Many of the beneficiary groups continued to earn dividends and monetary gains as a result of offering the service. Youth led groups realized significant results for example where members were previously unemployed. Instances were recorded where some youth members were able to support children in the settlements with education and other basic necessities such as food and clothing. A beacon of light where there was none before. Many households lack access to education materials and space for reading especially for school going children owing to small cramped living spaces. Some Bio-centres offer the space and material necessary to mold the future generation. Access to adequate and clean sanitation is dignifying.

Before the Bio-centres were constructed, many households in the settlements opted for open defecation and other expensive modes of waste disposal. The Bio-centres offer clean and adequate facilities which are a pride of the user communities. Surrounding environments have changed as a result of better disposal methods available to the residents in the settlements. The most innovative outcome has been the generation of gas which is a by-product of the waste breakdown process. This renewable energy source has been used to power many commercial and household activities ranging from hotels to warming water for the shower facilities located within the facilities.

The findings point to a bright future and the need to explore other potential beneficiaries such as schools and settlements in Kenya and the region. Umande Trust believes this innovative yet accessible approach to sanitation provision is a right to all who deserve access to basic facilities and services. However, challenges are abound in aspects of resource availability, cultural barriers and limited knowledge dissemination which in essence this publication aims to provide. There is unmet potential and a needy household somewhere across many of the settlements. Our efforts as partners and communities will be important to leverage and achieve the desired results in the long run.

1 World Bank (2006) Disease control priorities in developing countries (Second edition)

2 UNDP (2006) Economic and health effects of increasing coverage of low cost sanitation interventions, Human Development Report Office occasional paper

Partner Testimonial

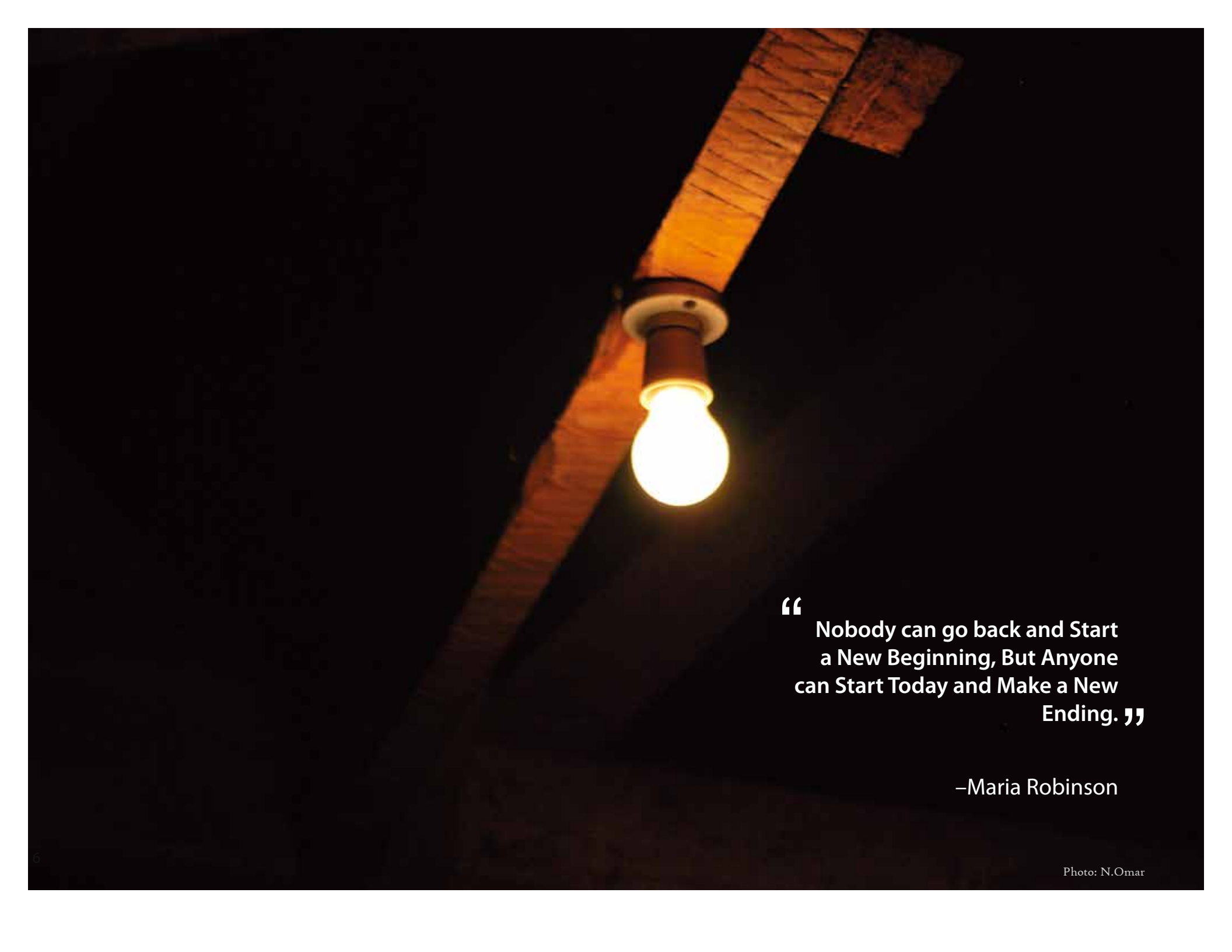
In a joint partnership with Umande Trust, SustainableEnergy Denmark implemented the project 'Under the Same Sky' in Kibera. The project financed two of the Bio centers constructed by Umande Trust. One at Mashimoni Primary & Secondary School and the other at Sct. Christines Primary School in Raila Village.

Not only do these Bio centers provides basic services such as water, toilets, cold and hot showers and income generating possibilities as seen in most of all other Bio centers but they do also offer access to the internet and through community courses provides various empowerment services like training in environmental issues, micro-credit, social audits and others.

But most important is the use of the Bio centers as centers for Dialogue in the communities. With the ongoing challenges the communities in the slums are facing it is important to have places where people can meet and discuss current issues. The Dialogue centers are being used as community halls and thereby play a significant role in development of the communities and the ongoing and most needed dialogue between the different inhabitants. It was last seen up to the General Election in 2013 with the Peace and Reconciliation meetings held here.

Vedvarende Energi/Organisation for Sustainable Energy



A photograph of a single, glowing incandescent light bulb hanging from a weathered wooden beam. The beam runs diagonally from the top right towards the bottom left. The background is a deep, dark, textured surface, possibly a wall or ceiling. The light from the bulb creates a warm, yellowish glow that illuminates the beam and casts a soft light on the surrounding dark area.

**“ Nobody can go back and Start
a New Beginning, But Anyone
can Start Today and Make a New
Ending. ”**

–Maria Robinson

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About Umande Trust

UMANDE TRUST is a right based agency with a mission to promote innovations that position bio-sanitation and other related basic services as key drivers of sustainable urban development.

UMANDE TRUST believes that modest resources can significantly improve access to water and sanitation services if financial resources are strategically invested in support of community-led plans and actions.

Prof. Saad Yahya and the founding trustees settled on the name and brand 'Umande', a Kiswahili term for dew- connoting a new, unbiased, nascent beginning; not recycling the ideas, over-powering the growing disillusionment with business-as-usual approaches to development. UMANDE TRUST was to experiment, dream, and adapt innovative processes and methods; learning from, sharing and transforming urban communities.

The organization registered as a trust in August 2004 and has since then managed to grow rapidly due to its credibility with community groups and the immense spirit of voluntarism and energy exhibited by its core team of staff members. An extensive network with groups and associations within informal settlements in Nairobi, Nakuru and Kisumu has been established.

UMANDE TRUST places emphasis on a multi-level approach that focuses on a product (access to urban water, bio-sanitation and solid waste management services) and a raft of community-led processes (partnerships for change, integrated urban environmental planning, sanitation governance, human rights and urban services financing).

UMANDE TRUST brings together teams of resource persons who share a passion and commitment to learn from, share and achieve lasting change with people. The team comprises of community organizers, geo-informatics specialists, urban planners, human right activists, civil engineers, social scientists, environmental, gender, youth and enterprise development resource personnel. All of who have several years of experience .

Since 2004, UMANDE TRUST has facilitated the community organizing for independent action but also to demand fairness, accountability and competent services.

VISION

A society in which communities have, as a basic human right, access to safe, adequate and affordable urban services.

MISSION

To promote innovations that position bio-sanitation and other related basic services as key drivers of sustainable urban development.

CORE VALUES

Dignity and justice Transparency and accountability, Participation and inclusion, and Mutual respect for partners

OBJECTIVES

- i. To support in the capacity building of community organizations and/or federations in order to enable them to effectively manage and sustain water and sanitation resources and services;
- ii. To facilitate the planning, building, and maintenance of community-based water and environmental sanitation services;
- iii. To promote the introduction, adaptation, development and application of best practices for improved delivery of water and sanitation services;
- iv. To conduct action-based research and policy advocacy programmes on key issues related to water, sanitation and the environment;
- iv. To promote the adoption of information and communication resources and technologies in order to support local communities in pursuit of the above objectives.

About Bio Centres

Many informal settlements in Kenyan cities have been neglected by national government and successive city government authorities who have failed to provide basic services including tenure security. Many residents have no access to adequate sanitation and clean water. The limited access to sanitation forces residents to use other methods for waste disposal such as buckets or plastic bags. Flying toilets and open defecation are the order of the day, a hygiene disaster that has led to numerous disease outbreaks such as cholera, dysentery and diarrhoea in the past.

Numerous measures have been taken up to help solve the issues related to water and sanitation; such as communal pit latrines, portable toilets, plastic bags laced with treating chemicals etc. The bio centre initiative (BCI) by Umande Trust entails an ablution block that produces green energy from the waste and a multifunctional area serving numerous purposes; creating a place from a space.

Bio Centres are sanitary blocks that use a bio digester system to treat waste and produce bio gas to be used by the community. Self help groups, vetted by Umande Trust, are supported and facilitated, to construct and manage these centres. The bio centres are more than just ablution blocks, sections of it and the top floors are partitioned to serve various functions such as office space, schools, residential units and halls for hire. The centres have an impact on their immediate surroundings, for example where they have helped to eradicate flying toilets and reduce cases of open defecation. Disease

outbreaks have reduced and individuals now have access to clean water. Some groups have facilitated activities that further help conserve the environment such as tree planting and community clean-ups.

The project promotes renewable energy helping the shift from the usual wood, charcoal, kerosene and gas to biogas for cooking. This helps in improving energy efficiency, reducing carbon dioxide emissions and alleviating pressure on forests. It is also cheaper and relatively affordable. Bio centres have helped facilitate community education and sensitization on conservation and hygiene. Practices such as hand washing after visiting the washrooms helps to reduce disease outbreaks within the community.

Women and the youth have an opportunity to contribute toward community development through the bio centre projects by being involved, or initiating their own projects through the self help groups within the settlements. The jobs created and the skills transferred ensure that some members of local communities have a means of earning a living. Employment is created throughout the entire process, from construction to management of the bio centres. From the project's capacity development strategy, over 200 members have developed skills in accountability sessions, promoting hygiene, leadership, procurement and tendering procedures, record keeping, financial management and reporting.

The bio centres now act as security for those seeking loans. Umande Trust and the communities have also formed a Sanitation

Development Fund (SANDEF), a self-sustaining fund which loans out, rather than give grants, the funds needed to undertake a sanitation project. Government and Nongovernmental Organizations (NGOs) can make a donation to SANDEF. It is after a project is completed that the loan will be repaid to SANDEF. The revolving fund will enable other facilities to be set up across the settlements in order to meet the growing demand for better services.

An interesting aspect about the bio centres is the ability of residents to use **BebaPay** (a cashless based system) to access services and products. The bio-centre premises and facilities provide other services to the community – including venues to screen movies and football matches for a fee as well as cooking for families – all of which are paid for via the cashless system.

The 5 Ps of Bio-Centres

1. Partnerships with (academic institutions, community, government, NGOs, CBOs, donor agencies)
2. Pricing models (flexibility, affordable, universal use)
3. Profitability (livelihoods, wealth generation)
4. Payment innovations (cashless systems, mobile payments, smart phones, resource governance)
5. Practices (Hygiene, behavior change, dignity)



Photo: N.Omar

Technology is highly utilized at the bio-centres as there are sensors at the entrance and counter systems in each toilet that provide a headcount of everyone who accesses the facility. Other digital platforms used by the bio-centre users include M-Pesa and Kopo Kopo. The use of these platforms continues to be a success till now.

The BebaPay system is supported by Equity Bank and Google and uses the Near Field Communication (NFC) technology. Community members and bio-centre managers no longer have to deal with money courtesy of BebaPay.

Users simply tap the card to the phone and the service charges are deducted and the money transferred directly to the groups account.

Adoption of the digital systems has enhanced control and security of financial assets in addition to enhancing governance and trust among community members.

Communities that have benefited from bio-centers contribute 10% of the net income into the kitty. Bio centres are not only initiated in informal settlements but also in community facilities such as schools and churches with a

need for sustainable sanitation systems. School administrations, church communities and County leaders are providing sanitation facilities in their respective areas of interest; making it easy and quick to reach a large number of people in the communities.

More bio centres are yet to be built so as to ensure that all areas with inadequate water and sanitation are well serviced. Some of the centres are more successful than others, therefore there is still room for improvement and with that there is hope that the country will be one step closer to improving the standards of living in the country.

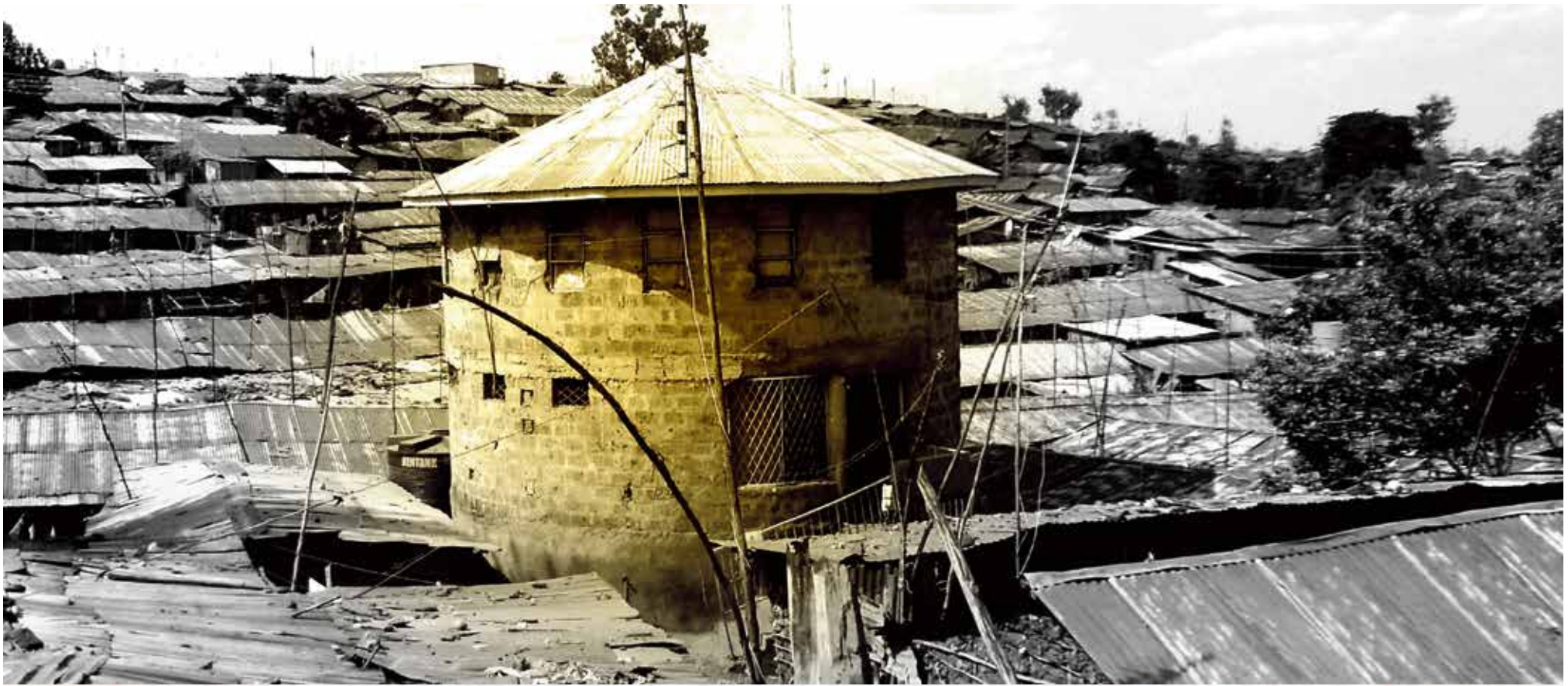


Photo: Odinga R. O

Brown to Green Agenda

With climate change and global warming, the world is struggling to move from brown agendas to green ones. The bio centres are part of this great march.

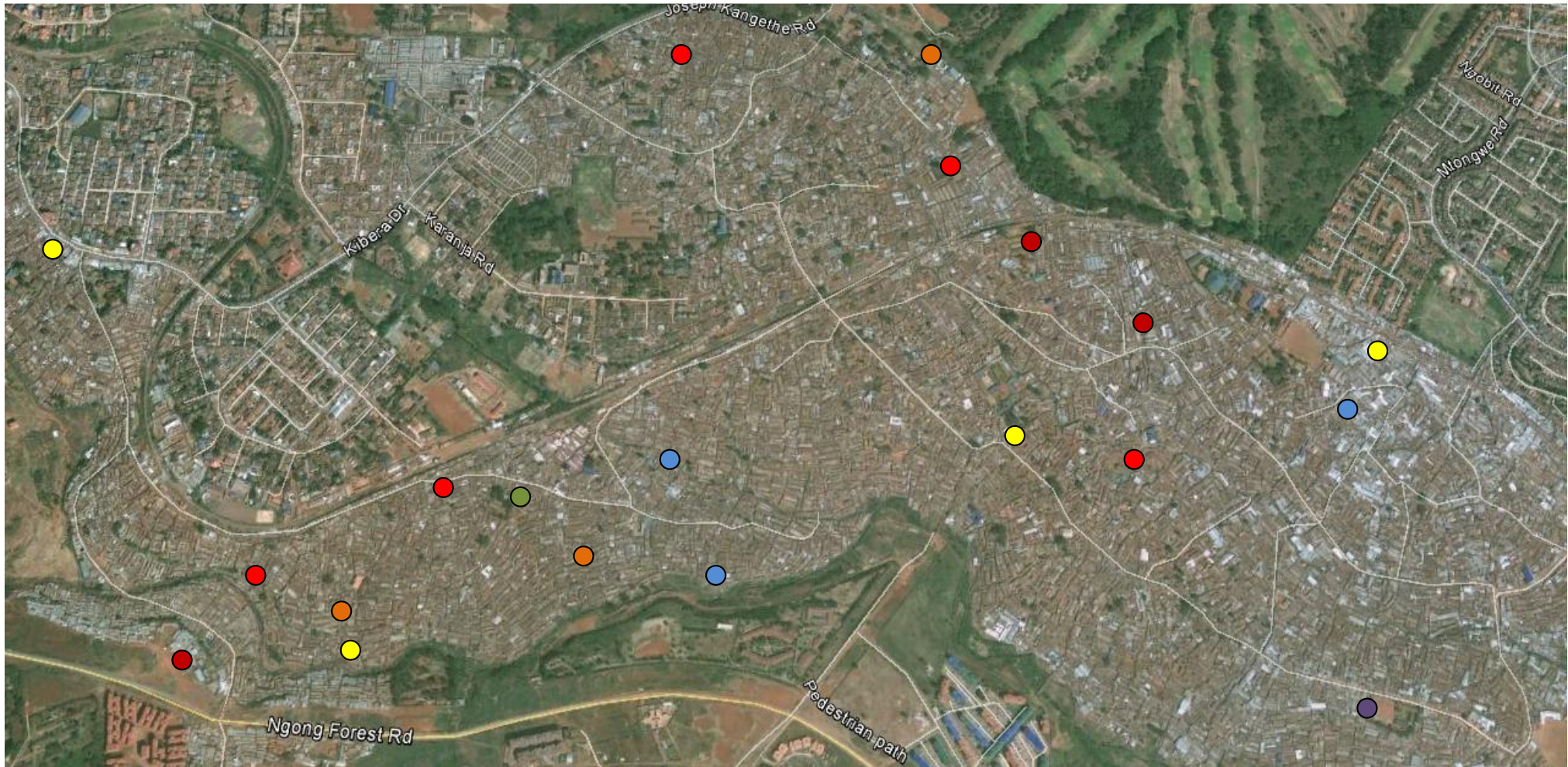
What we know as human waste is what bio centres see as resourceful material. Each of the three states of matter are rendered useful: gas for the production of energy, liquid i.e. the treated water can be recycled and the treated solid waste used as fertilizer.

There are very few green pockets in Kibera and Nairobi in general thus most of the groups are committed to conserving the environment. They have plans of creating a new culture of planting trees in the community through educating school children and groups on the importance of tree planting.

In Mashimoni, the group has a seedlings bed. Their main objective is to plant the trees in the area. The bio centre within Mashimoni Primary School has also helped to enlighten the school children through the agriculture club on ways of improving farming and planting trees.

Kibera

MAP OF BIO-CENTRES LOCATED IN KIBERA





Tosha I **16**



Muvi Gorofani **19**



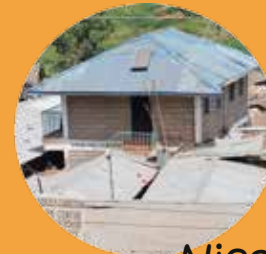
KIDYOT **22**



Nyaharwa **17**



Jasho Letu **20**



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Tosha 1 Biodigester 27



Mwanzo Mpya 30



St Christine 33

Tosha I

The First One



Photo: Odinga R. O

This was the first in many things, the first Bio centre in Kibera and in the country. The first bio centre to apply a digital card system for its users in order to counteract insecurity and reduce the hustle of counting money at the end of each day.



Group: Jasho Letu, Mapambano, Bidii Yetu, Mama Okinda, Multi Vision
 Year: 2007
 Location: Katwekera Sarang'ombe
 Monthly earnings: 95,000
 Partner Agencies: Halcrow Foundation, Athi Water Services Board, Nairobi Water and Sewerage Company and SIDA
 Land Acquisition: Community Land
 No. of Floors: II
 Activities: Toilets, Bathrooms, Hall for hire, Library, Office space, Cyber Cafe, Kitchen (Biogas is used to cook for a nearby primary school) and Water vending
 Daily Users: 600-1,000
 Operating hours: 6am-10pm

Nyaharwa

A stitch in time



Group: Nyaharwa Self-help Group
Year: 2007
Location: Soweto West
Partner Agencies: French Development Agency,
Nairobi Water and Sewerage Company and Athi
Water Services Board
Land Acquisition: Purchased
No of floors: 1
Activities: Toilets, Bathrooms, Hall for hire,
Housing for the caretaker and a Kitchen
Daily Users: 50
Monthly Earnings: Ksh 14,800-18,400
Operating hours: 6am-9pm



Photo: N.Omar

Owino 42, has his little one man factory within Nyaharwa's hall. Earning his living by making leather shoes from scratch

Tosha II

Power of a Woman

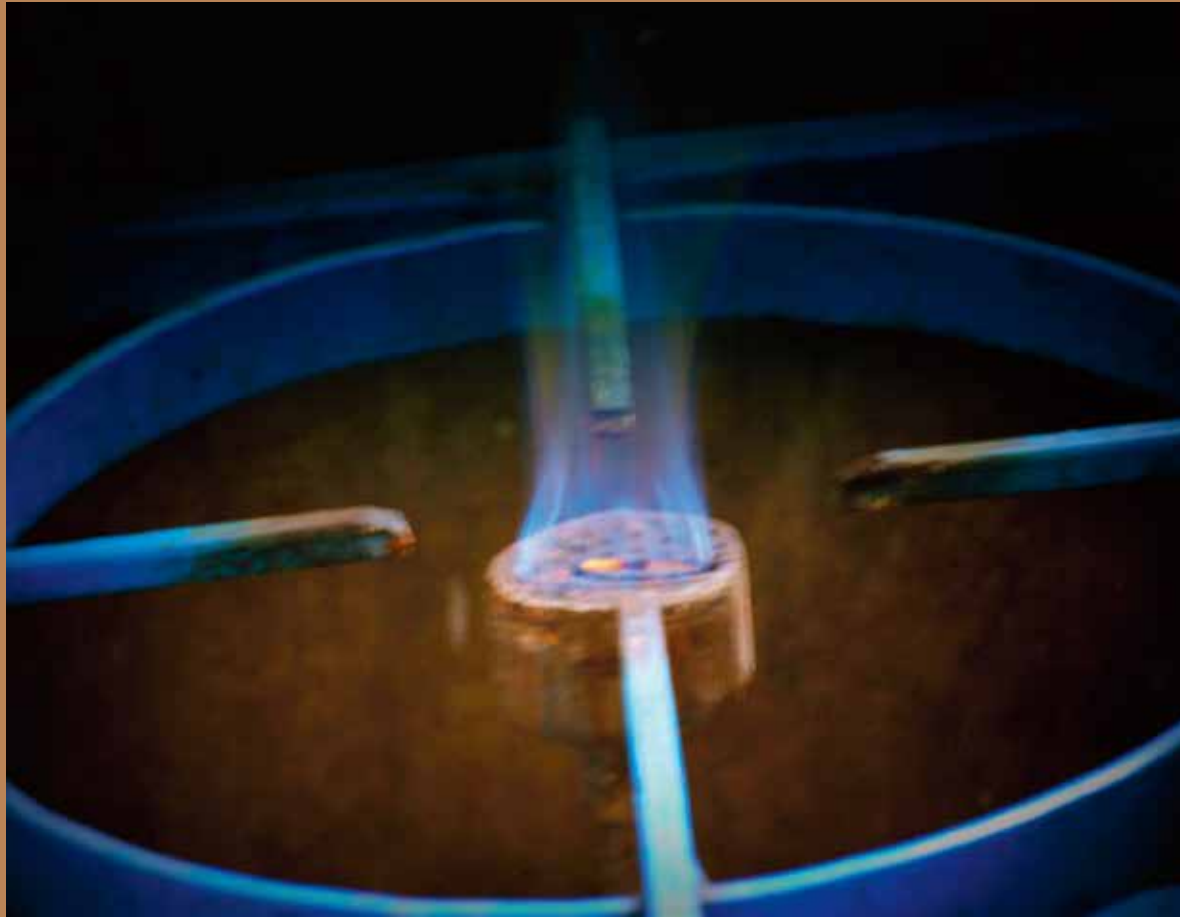


Photo: N.Omar



Year: 2009
Location: Katwekera East
Partners Agencies: Swedish Embassy
Activities: Toilet, Bathroom, Housing rental units
Land Acquisition: Purchased
No of floors: 1
Daily Users: 30
Monthly Earnings: Ksh 9,600
Operating hours: 6am-9pm

Tosha II is solely owned by women. The first floor provides housing for five households with the added advantage of cooking using biogas at the low cost of 10 shillings per meal. The biogas is also used to warm bathing water.

Muvi Gorofani

Tosha I's First Daughter



Group: Multi Vision Self Help Group

Year: 2009

Location: Katwekera Sarang'ombe

Partner Agencies: Nairobi Water and Sewerage Company, Water and Sanitation for the Urban Poor

No of Floors: 1

Activities: Toilets, Bathrooms, Football match screening, Hall for hire, Kitchen

Daily Users: 150-300

Monthly Earnings: 45,600

Operating hours: 6am-10pm



Photo: Odinga R. O

Tosha I's first daughter situated relatively close to the Mother Centre.

Jasho Letu

Fishing for Opportunity



Photo: Odinga R. O



Group: Jasho Yetu
Monthly Earnings: 28,600
Year: 2009
Location: Katwekera Sarang'ombe
Partner Agencies: Bill and Melinda Gates, Foundation, Water and Sanitation for the Urban Poor, Nairobi Water and Sewerage Company, Athi Water Services Board
Land Acquisition: Purchased
No of floors: 1
Activities: Toilets, Bathrooms, Hall for hire, Outside kitchen
Daily Users: 300-400
Operating hours: 6am-8.30pm

The centre plans to be the first to recycle waste water for fish farming. The pond is to be located at the rear section of the bio centre

Jasho Letu has a huge clientele base as it also serves a nearby health centre. The group also created an area plan showing the need for a housing project, which was later implemented

Bunkers

Passport to the Future



Group: Bunkers Self Help Group
Year: 2009
Location: Kibera DC, Makina Ward
Partner Agencies: French Development Agency,
Nairobi Water and Sewerage Company, Athi Water
Services Board
Land acquisition: Community land
No of Floors: Ground Floor Only
Activities: Toilets, Bathrooms, Water Vending
Daily users: 25-50
Monthly Earnings: Ksh. 3,800



Photo: N.Omar

The centre is located in an area where there are numerous toilets and hence the few number of clients. Earlier, NEMA demolished some of the neighbouring toilets as they were a health hazard to the people and the environment, consequently increasing the number of clients for the bio centre. The Youth managing the centre are supporting their peers to attend universities outside the country

KIDYOT

Fine Tuning



Photo: N.Omar

The centre is managed by a youth group involved in performing arts. They use the hall on a daily basis to hold their practice sessions.



Group : Kibera Kids Youth Organisation

Year: 2010

Location: Katwekera

Partner Agencies: Water and Sanitation for the Urban Poor, Nairobi Water and Sewerage Company

Land Acquisition: Purchased

No. of floors: 1

Activities: Toilets, Bathrooms, Rehearsal hall/Hall for hire, Kitchen Daily Users: 300

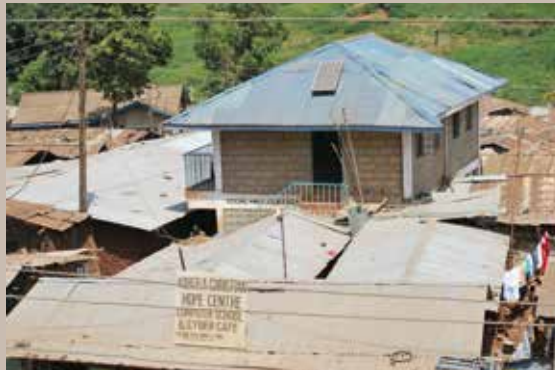
Monthly Earnings: Ksh 50,000

Operating hours: 6.30am-9.30pm



Nicofeli

House of Knowledge



Group: Nicofeli Youth Club
 Location: Kianda
 Year: 2011
 Partner Agencies: Japanese Government,
 America Friends of Kenya
 Land Acquisition: Purchased
 No of Floors: 1
 Activities: Toilets, Bathrooms, Library, Hall for
 hire, Kitchen
 Daily Users: 100-150
 Monthly Earnings: Ksh. 38,500



Photo: N.Omar

The Nicofeli Club has now registered more than 500 children and teenagers/youth with its community based programs including the affiliated Hope Library. The Hope Library sponsors short/long term reading programs, book lending and adult to child mentoring

Stara

Feeding Tomorrow



Photo: Odinga R. O

Established in 1997 by more than 30 members, the group has experienced challenges including governance and lack of and lack of faith in the management. 1997 However, the members have been able to improve on the management and add new business lines such as the grain milling machine. The proceeds from this business venture is used to support the school feeding programme which caters for children attending the school. Additionally, the group manages a vegetable growing scheme within the bio centre's compound.



Group: Stara Peace Women Organization
Year: 2010
Location: Kichinjio
Partner Agencies: French Development Agency,
Nairobi Water and Sewerage Company, Athi Water
Services Board
No of Floors: II
Activities: Toilets, Bathrooms Offices, Hall for hire,
Posho mill Farm, Kitchen
Monthly Earnings: Ksh. 43,000



Mashimoni

Nurture for the Future



Groups: Rise and Shine, Kaganyo, Navuguza, Tusikilizane and Kimungu
Year: 2010

Location: Laina Saba

Partner Agencies: VE International

Land Acquisition: Community Land

Number of Floors: II

Activities: Toilets, Bathrooms, Daycare, Hall for hire, Offices

Daily users: 100-200

Monthly Earnings: Ksh. 8,200

*Within a School compound



Photo: N.Omar

The Bio centre came about from five different groups coming together to set it up. It is located within Mashimoni Primary School, serving it and the community at the same time. The centre's main objectives are conserving the environment; storm water management and sanitation.

The Bio Centre also hosts a day care center, owned by one of the group members, which nurtures and takes care of little children

Lindi Usafi

Humble Beginnings



Group : Lindi Usafi Group

Year: 2011

Location: Lindi Ward

Partner Agencies: French Development Agency,
Nairobi Water and Sewerage Company, Athi
Water Services Board

Land Acquisition: Community land

No. of floors: 1

Activities: Toilets, Bathrooms, Nursery School
during weekdays and
hall for hire during the weekends

Daily users: 30

Monthly Earnings: Ksh. 11,200

If **Education** is the key to
success; then can we call Lindi
Usafi Bio Centre a **key holder**?

-Food for thought..



Kilyo

Young Spirit



Group: Kibera Lindi Youth Organization

Year: 2011

Location: Lindi Ward

Partner Agencies: Japanese Government,
Athi Water Services Board, Office of the Prime
Minister, Nairobi Water and Sewerage Company
Land Acquisition: Community land

No of floors: 1

Activities: Toilets, Bathrooms, Salon,
Rooms for hire, Hall for hire

Daily users: 10-20

Monthly Earnings: Ksh. 14,000

Photo: N.Omar



Water is received twice a week from the Nairobi Water and Sewerage Company while electricity is supplied by Kenya Power.

Tosha I Bio Digester

A Little Goes a Long Way



Photo: N.Omar



Groups: Mama Okinda & Mapambano

Year: 2012

Location: Gatwekera

Partner Agency: Umande Trust

Land Acquisition: Purchased

No of Floors: Grounf Floor Only

Activities: Toilets, Bathrooms

Daily users: 50-70

Monthly Earnings: Ksh. 4,700

Operating hours: 6am-9pm

The little centre has been able to overlook the water shortage menace in order to help eliminate 'flying toilets' in its area of influence.

The group members not only help the community but also help themselves by giving each other loans during the time of need.

Soweto Highrise

Saying No to Stigma



Group: Soweto Highrise Savings Scheme

Year: 2012

Location: Laini Saba

Partner Agencies: Japanese Government,
Government of Kenya, Office of the Prime
Minister, Athi Water Services Board

Land Acquisition: Purchased

No of floors: 1

Activities: Toilets, Bathrooms, Hall for hire,
Offices

Daily Users: 100

Monthly Earnings: Ksh. 42,000

Operating hours: 6am-8/10pm



Photo: N.Omar

They have a strong daily savings culture which is supported and linked to Muugano Wa Wanavijiji . Daily savings by the group promotes governance and participation. Little children, HIV patients and disabled persons can use the facility for free. Funds are thereby used as part of savings, giving out loans as well as for dividend

Mwanzo Mpya

New Beginnings



Photo: N.Omar



Location: Laini Saba
Year: 2013
Group Mwanzo Mpya Savings
Activities: Toilets, Bathrooms
No. Of floors: 1
Monthly Users: 120
Monthly Earnings: Ksh. 6250

"Perhaps no two issues are more important to human health, economic development, peace and security than basic sanitation and access to sustainable supplies of water"

-Hillary Rodham Clinton

PCEA

Going the Extra Mile



Group: PCEA Silanga Church
Year: 2013
Location: Silanga
Partner Agencies: Barrhead Churches, Scotland
Land Acquisition: Church land
No. of floors: 1
Activities: Toilets, Bathrooms, Hall for Hire
Number of Users: 60
Monthly Earnings: Ksh. 9,600



Photo: N.Omar

The bio centre has two faces; one for the Silanga PCEA Church and the other for the community. It is yet to open its doors for business

TOP III

Change for the Better



Photo: N.Omar



Group Change Mtaani & Youth Arise

Year: 2013

Location: Kichinjio

Partner Agencies: Oxfam GB

Land Acquisition: Community land

No. of floors: II

Activities: Toilets, Bathrooms, Kitchen, Rental rooms, Offices, Hall for hire

Monthly Earnings: Ksh. 45,000

The centre serves more than 500 people, including the neighbouring police camp and area District Commissioner offices. The police camp has access to a kitchen which uses gas produced from the bio-centre. Top III houses two youth groups who initially were foes. The centre is therefore regarded as a haven of peace and a champion for community cohesion and justice.

St Christine

Cementing Our Future



Groups: 5 Community groups
Year 2013
Mugumoini
Partner Agencies: VE International, Under the same sky, UN
Land Acquisition: Community land
No. of Floor: II
Activities: Toilets, Bathrooms, Kitchen, Rooms and Offices for hire, Hall for hire
Monthly Earnings: Ksh. 3,200



Photo: N.Omar

“...Most parents cannot afford to take their children to the toilets in the community, here they will get an opportunity to use them for free...”



Changing Lives

The bio centres are a force of transformation. It does not only benefit those involved in the project but also impacting positively to its surrounding.

Cases of flying toilets and open defecation within the informal settlements are becoming a thing of the past in areas fortunate to have a bio centre.

Among the groups that have benefited the most from bio centres in Mukuru are the youth groups. These bio centres have helped them by providing jobs and coming up with other projects that generate income. It has also facilitated

behaviour modification from previous illegal activities. Since the bio centres have changed these youths' lives, they have gone ahead to be a helping hand to other youth.

In Lunga Lunga, the youth groups have used their savings to buy car wash equipment and employed other youth in the area to wash vehicles. They also help the youth to access loans for business.



Photo: N.Omar

Mukuru

MAP SHOWING MUKURU BIO-CENTRES





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Photo: Odinga R. O, N,Omar



Lunga Lunga

Jack of All Trades

The bio-centre has helped the group members in many ways. One benefit is members are able to secure loans by helping each other sign for loans. They have projects such as: solid waste management; production of biogas (which is distributed to a neighbouring kiosk), rental rooms, carwash and urban farming.

Motto: Water and Sanitation our priority

Group: Lunga Lunga Youth Group

Year: 2008

Location: Lunga Lunga,

Partner Agencies: French Development Agency, Nairobi Water and Sewerage Company, Athi Water Services Board

Land Acquisition: Community Land

No. of Floors: II

Activities: Toilets, Bathrooms, Kitchen (rented out as a hotel), rental rooms, offices and a hall for hire.

Daily Users: 200-300

Monthly Earnings: Ksh. 50,000

Operating hours: 5am-10pm



Mukuru Railway Hawkers

Re-writing Our Future



Group: Mukuru Railway Hawkers Organisations

Year: 2009

Location: Mukuru kwa Reuben

Partner Agencies: French Development Agency,
Nairobi Water and Sewerage Company and Athi
Water Services Board

Land Acquisition: Purchased

No. of Floors: 1

Activities: Toilets, Bathrooms and Hall for hire

Daily Users: 60-70

Monthly Earnings: Ksh. 6,500

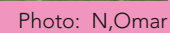
Operating hours: 6am-6pm



Photo: N,Omar

A group member hires the bio centre for a month at an agreed fee. He/She then manages the centre and uses it to make a profit.

Supporting Each Other



Operating hours: 6am- 7.30pm

ComCleen

Coming Clean



Group: Community Clean Environmental Self-help group
Year: 2010
Location: Mukuru kwa Njenga
Partner Agencies: French Development Agency, Nairobi Water and Sewerage Company, Athi Water Services Board
Land Acquisition: Community Land
No. of Floors: Ground floor Only
Activities: Toilets and Bathrooms
Daily Users: 15-25
Monthly Earnings: Ksh. 3,000
Operating hours: 6am-9.30pm



Photo: N. Omar

"We put some of the money into our bank account and the rest is used for repair and maintenance"
- Community Clean Environmental Self-help group member

Amusha

Conservation and Preservation



Photo: N. Omar



Group: Amusha Youth Organisation

Year: 2010

Location: Mukuru kwa Njenga

Partner Agencies: Oxfam GB, Nairobi

City Council, Nairobi Water and Sewerage Company and JOAC (Jersey Overseas Aid Commission)

Land Acquisition: Community Land

No. of Floors: 1

Activities: Toilets, Bathrooms, shop, hall, office, Eco shower and Chicken rearing

Daily Users: 160

Monthly Earnings: Ksh. 40,000

Operating hours: 6am-9.30pm

MIT (Massachusetts Institute of Technology) students came up with a project called Eco-Shower to help save water in the slums. There was a problem with the availability of materials to be used in making the eco shower in Mukuru. The group members therefore substituted the materials for ones that were available locally. They now have a good source of income, and they charge 10/= for one to use the shower. Another advantage of the eco-shower is that it is potable and anyone can use it from wherever they are.

Vietnam

Skills Haven



Group: Mukuru Savings Network

Year: 2010

Location: Mukuru kwa Njenga

Partner Agencies: French Development Agency,
Nairobi Water and Sewerage Company and Athi
Water Services Board

Land Acquisition: Community Land

No. of Floors: Ground floor only

Activities: Toilets and Bathrooms

Daily Users: 60-70

Monthly Earnings: Kshs 7500-10,500

Operating hours: 6am-7pm

Monthly Earnings: Ksh. 2,000



Photo: N. Omar

The group normally brings experts to train members on skills such as; tailoring and mechanics.

Simba Cool

Together We Are



Photo: Odinga R. O

Simba Cool is part of a network of four bio entres owned by one group. The other three include, Sisal, Rurii and Vietnam



Group: Mukuru Savings Network

Year: 2011

Location: Mukuru kwa Reuben

Partner Agencies: French Development Agency,
Nairobi Water and Sewerage Company, Athi
Water Service Board

Land Acquisition: Community Land

No. of Floors: Ground floor only

Activities: Toilets and Bathrooms

Daily Users: 12

Monthly Earnings: Ksh. 2,000

Operating hours: 6am-8pm

Sisal

Stand up and stand out



Group: Mukuru Savings Network

Year: 2010

Location: Mukuru kwa Njenga

Partner Agencies: French Development Agency,
Nairobi Water and Sewerage Company, Athi
Water Services Board

No. of Floors: Ground Floor only

Activities: Toilets and Bathrooms

Operating hours: 5am- 9.30pm

Number of Users: 60

Monthly Earnings: Ksh. 3,000



Photo: N. Omar

A clean and healthy environment is mostly beneficial to children who can acquire diseases more easily than adults. The bio-centre therefore caters for children free of charge. It mostly serves students from the neighbouring Rofez Community School.



Photo: N. Omar

The caretaker, Wilson Barongo, also a group member, works there daily. He earns his living from managing the centre as he runs a small business on the side- selling sweets at the bio centre's entrance. Kennedy Nyandika, also a group member, has hired the group's water kiosk and turned it into an electronic repair shop

Rurii

The sweetness of multitasking



Group: Mukuru Savings Network
 Year: 2011
 Location: Mukuru kwa Reuben
 Partner Agencies: French Development Agency,
 Nairobi Water and Sewerage Company, Athi
 Water Services Board
 Land Acquisition: Community land
 No. of Floors: 1
 Activities: Toilets, Bathrooms, hall for hire
 Daily Users: 45-50
 Monthly Earnings: Ksh. 3,500
 Operating hours: 6am-8pm

Mukuru Environmental Project

Far to Near



Group: Mukuru Environmental Project Self-help Group
Year: 2011
Location: Mukuru kwa Reuben
Partner Agencies: Oxfam GB and Nairobi Water and Sewerage Company
Land Acquisition: Purchased
No. of Floors: 1
Activities: Toilets, Bathrooms, store, Kitchen and 4 rental rooms
Daily Users: 80
Monthly Earnings: Ksh. 25,000
Operating hours: 5am-10pm



Photo: Odinga R. O

The bio-centre assists the disabled in the community by taking water to their houses via pipes as they are not able to carry the jerrycans by themselves. They also distribute water to construction sites thus making work easier for them.

Reuben Vision Self Help Group

Understanding care



Photo: N. Omar



Group: Reuben Vision Self-Help Group

Year: 2012

Location: Mukuru kwa Reuben

Partner Agencies: Oxfam GB, Nairobi Water and Sewerage Company

Land Acquisition: Purchased

No. of Floors: 1

Activities: Toilets, Bathrooms, Kitchen, Rental rooms, offices and a dormitory (room)

Daily Users: 100 and 200 students who don't pay

Monthly Earnings: Ksh. 40,000

"Top II pays for my school fees and gives me a place to sleep at night" - says Judy Mueni, a student at Reuben Vision School. She comes from a single parent household and her mother cannot afford her upkeep. The group members have therefore taken it upon themselves to help her out. There are also other students whose parents work during the night and so the group hosts them in one of the rooms in the bio-centre which they have turned into a dormitory.

K.U.U.M B

New ideas



Group: Kayaba Ushirika kwa Usafi na Maendeleo
Year: 2013
Location: Mukuru Kayaba
Partner Agencies: Wimma Likkutta
Land Acquisition: Purchased
No. of Floors: 1
Activities: Toilets, Bathrooms & Offices
Monthly Earnings: Ksh. 50,000
Monthly Users: 250



Photo: N. Omar

KUUM B is the second bio centre that the group is constructing as they already have KUUM A within the same settlement. Umande Trust helped the group begin the second project of KUUM B owing to their success of KUUM A.





Photo: N.Omar

Korogocho

MAP SHOWING KOROGOCHO BIO-CENTRES





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work 68

Kisumu Ndogo

Think Tank



Photo: N.Omar



Group: Biogas Centre Self-help group/ Kisumu Ndogo Development C.B.O
Year: 2007
Location: Kisumu Ndogo
Partner Agencies: Nairobi Water and Sewerage Company, French Development Agency, Athi Water Services Board
Land Acquisition: Community Land
No. of Floors: 1
Activities: Toilets, Bathrooms and Hall for Hire
Daily Users: 60
Monthly Earnings: Kshs 9,000-15,000
Operating hours: 6am-10pm

The hall on the first floor is hired out to groups and organisations. Banks also hire out the hall so as to advertise the new programs that their bank is carrying out that would benefit the people.

Uwezo Mpya

Putting things together



Group: Uwezo Mpya Self-help group

Year: 2009

Location: Grogon

Partner Agencies: French Development Agency,
Nairobi Water and Sewerage Company, Athi
Water Services Board

Land Acquisition: Purchased

No. of Floors: 1

Activities: Toilets, Bathrooms, Hall for hire

Daily Users: 25

Monthly Earnings: Ksh. 55,000

Operating hours: 7am-7.30pm

Most of the group members have been saved from taking part in illegal activities such as stealing because now they are fully occupied by activities in the bio centre and trying to make extra money for savings. The centre's caretaker is also a member of the group who, other than taking care of the centre, makes jewellery using beads in order to make a little more money.

Ngunyumu

The Right Direction



Photo: N.Omar



Group: Ngunyumu Welfare Association

Year: 2010

Location: Gitadhuru

Partner Agencies: French Development Agency,
Nairobi Water and Sewerage Company, Athi Water
Services Board No. of Floors: Ground floor Only

Activities: Toilets and Bathrooms

Monthly Earnings: Ksh. 3,000

The welfare association comprises of landlords/ladies who have come together from Gitadhuru area. In order for one to be a member he/she should own property in the area i.e. be a landlord or landlady, reside in Korogocho Gitadhuru area, be over 18 years of age and must pay the required fees.

Tegemeo

Fruitful work



Photo: N.Omar

The bio centre is located in the heart of a market, solely serving it. Other than providing water and sanitation services, the group members also carry out garbage collection on a weekly basis so as to ensure that the environment is clean.



Group: Tegemeo Self-help group
Year: 2010
Location: Nyayo Village
Partner Agencies: Nairobi Water and Sewerage Company, French Development Agency and Athi Water Services Board
Land Acquisition: Purchased
No. of Floors: 1
Activities: Toilets, Bathrooms, office, hall for hire
Daily Users: 200
Monthly Earnings: Ksh. 60,000
Operating hours: 6.30am-6.30pm

KHDO/IDVIK

Envisioning a Better Tomorrow



Photo: Odinga R. O



Group: Integrated Development for the Visually Impaired Kenya

Year: 2011

Location: Githaduru Central Village

Partner Agencies: French Development Agency,
Nairobi Water and Sewerage Company, Athi

Water Services Board

Land Acquisition: Purchased

No. of Floors: 1

Activities: Toilets, Bathrooms, an office and two
rental rooms

Daily Users: 10

Monthly Earnings: Kshs 3,000-11,400

Operating hours: 7am-7pm

The group consists of members who are visually impaired as the name suggests. They came together in hopes of making a difference in their community as much as the non visually impaired community members can.

KOCHOTO

Balancing the ecosystem



Photo: Odinga R. O



Group: Kochoto Self-Help Group

Year: 2011

Partner Agencies: Oxfam GB, Nairobi City Council, Nairobi Water and Sewerage Company, Jersey Overseas Aid Commission (JOAC)

Land: Polytechnic Land (CDF)

Land Acquisition: Community Land

No. of Floors: 1

Activities: Toilets, Bathrooms, Store (mpesa), Barber shop and hall

Daily Users: 200

Monthly Earnings: Ksh. 50,000

Operating hours: 6am-7pm

The centre has a fully functioning post-treatment centre, whose water they use in agricultural practices.

The bio centre also serves the nearby market by providing both water and sanitation needs as well as financial services (mpesa shop).

Inspiration

Light at the end of the tunnel



Photo: Odinga R. O

"Kulikuwa na machoo hazishughulikiwi, flying toilets zilikuwa mingi, lakini saa hizi kumboreka"

Translated as:

"Toilets had been neglected and there were numerous cases of flying toilets but all that has changed now for the better"



Group: Inspiration Self- help group

Year: 2012

Location: Kitasuru-Korokoni B

Partner Agencies: French Development Agency,
Nairobi Water and Sewerage Company, Athi
Water Services Board

Land Acquisition: Purchased

No. of Floors: 1

Activities: Toilets, Bathrooms, Hall and Office (for
group)

Daily Users: 7

Monthly Earnings: Kshs 100-150

Operating hours: 8am-6.30pm

Highridge

Aiming high



Photo: N.Omar



Group: Highridge Development Group

Year: 2012

Location: Highridge

Partner Agencies: Youth Initiatives Kenya, Umande Trust, Oxfam GB and Emmaus, Nairobi Water and Sewerage Company and Athi Water Services Board

Land Acquisition: Purchased

No. of Floors: 1

Activities: Toilets, Bathrooms, Kitchen, 5 rental rooms and hall for hire

Daily Users: 60-65

Monthly Earnings: Ksh. 13,000

Operating hours: 24hrs

The group does not charge for toilets' usage, aiming to attract a large number of people so as to produce large amounts of bio gas.

Korogocho Youth Unity

Tapping into potential



Photo: N.Omar



Group: Korogocho Youth Unity
Location: Korogocho Market
Partner Agencies: French Development Agency,
Nairobi Water and Sewerage Company, Athi
Water Services Board
Activities: Toilets, Bathrooms
Monthly Earnings: Ksh. 3,000
Operating hours: 6am- 6pm

"A small body of determined spirits fired by an unquenchable faith in their mission can alter the course of history"

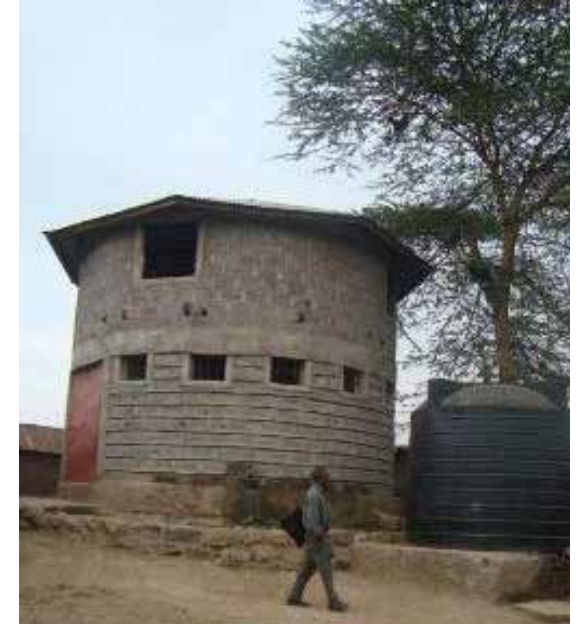
~ Mahatma Gandhi

Together We Can Work

Reaching for the Skies



Photo: Nasra Omar



Group: Together we can youth group
Location: Gitadhuru village
Partner Agencies: French Development Agency,
Nairobi Water and Sewerage Company, Athi
Water Services Board
No. of Floors: 1
Activities: Toilets, Bathrooms, Hall for Hire
Monthly Earnings: Ksh. 3,000



Photo: Odinga

Mathare



St Helena **71**



Twaweza **72**

St Helena

In peace and Harmony



Photo: N.Omar



St Helena Legion Maria Church

Year: 2011

Location: Mathare No. 10

Land Acquisition: Church Land

No. of Floors: 1

Activities: Toilets, Bathrooms, offices

Operating hours: 6.30am-9.30pm

Daily Users: 100

Monthly Earnings: Ksh. 30,000

The bio centre is owned and managed by the church that is affiliated to the Legio Maria, a spirit initiated church. The bio centre serves the church members and the children that school in the church's academy, St Hellena Academy.

Twaweza Community Group

Together we can



Photo: Odinga R. O

Twaweza community project's initial aim was to promote sporting activities among the youth, especially football, to avoid idleness. The bio centre has a garden in its front yard where the group members hold meetings and allow community members to relax in. They also have a TV in their hall which they allow community members to use at no cost.



Group: Twaweza Community Project

Year: 2011

Location: Mabatini

Partner Agencies: Civil Society Urban Development Program, Embassy of Sweden

Land Acquisition: Community land

No. of Floors: 1

Activities: Toilets, Bathrooms, Kitchen and hall

Daily Users: 150

Monthly Earnings: Ksh. 60,000

Operating hours: 6am-10pm



Photo: N.Omar

Kibagare

Kibagare

The connection

Group: Kibagare Haki Zetu Saving and Settlement
 Year: 2011
 Location: Kibagare
 Partner Agencies: Haki Jamii, per Josepson and Jopson, Swedish International (CSUDP)- Civil Society Urban Development Program
 Land Acquisition: Donated by Kibagare Community Based Organisation (K.C.B.O)
 No. of Floors: 1
 Activities: Toilets, Bathrooms, rental rooms, Kitchen, Malaika Baby Care and learning centre and support toilets;-
 •At Kibagare Compassion Nursery School
 •Toilet for youth trust fund group
 •Kibagare Haki zetu project
 Daily Users:150-200
 Monthly Earnings: Ksh. 45,000
 Operating hours: 5.30am-10pm



Photo: Odinga R. O



The bio centre serves support toilets. The toilets have been strategically placed to serve most of Kibagare; the waste is then directed to the bio-centre via a sewer line. Once at the centre, it is used to produce bio gas.



Photo: N.Omar

Mji wa Huruma

Mukayo .V. Mukoyo

Ready and Set to Get Going



Photo: Odinga R. O



Groups: Vision group, Kogeria women's group, Young men Mushroom group, Upendo group, Kangei Nyakinywa,, Mwirerii group, Youth development group
Partner Agenices: Chinese Embassy
Year: 2010
Location: Mji wa huruma
No. of Floors: I
Daily Users:120-140
Activities: Toilets, Bathrooms
Operating hours: 6am to 6pm

The chinese ambassador to Kenya helped ignite the flame of change through team work by encouraging the people of Mji wa Huruma to come together, pull resources and become a movement.



Photo: N.Omar

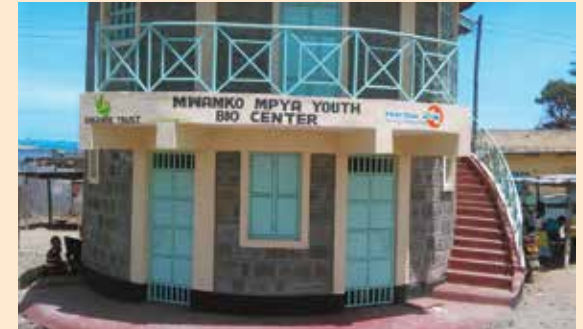
Nakuru

Mwamko Mpya

Coming Up



Photo: Odinga R. O



Group: 9 Groups

Year: 2014

Location: Rhonda

Partner Agencies: Comic Relief UK and Practical Action

Land Acquisition: Community Land

Activities: Toilets and Bathrooms

The Bio centre is a part of a greater project, a strategy employed in the worldwide CLTS (Community Led Total Sanitation) program to improve sanitation within Rhonda and Kaptembwo



Photo: N.Omar

Nyanza & Western



Bandani **80**



Nyalenda **81**



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Bandani

Innovation and conservation



Photo: Odinga R. O



Group: Bandani bio-centre
Location: Kogony sub-location
Year: 2011
Partner Agencies: Sida, Civil Society Urban Development Programme (CSUDP), Kisumu Municipality, SANA, KIWASCO .
Land Acquisition: Municipal land
No of Floors: 1
Activities: Toilets, Bathrooms, Rental rooms, offices and a hall
Daily Users: 80
Monthly Earnings: Kshs 15,000
Operating Hours: 6am- 6pm

One of the youth groups associated with the bio centre has gone beyond the confines of the neighbourhood to put in additional effort to save the Great Lake Victoria from the invasion of hyacinth by collecting it and reusing it to make household items. They sell the items at affordable prices and use the money to improve their lives.

Nyalenda A

A Fresh Start



Photo: N.Omar



Group: Nyalenda Bio-tower project

Location: Nyalenda B

Year: 2010

Partner Agencies: Sida, COOPI and OVE, Umande Trust, KOEE (SECODE), Muungano wa wanavijiji-Nyalenda, Pandipieri Primary School, Pamoja Trust, NACK (Education Department).

Land Acquisition: Community land

No of Floors: Ground floor Only

Activities: Toilets and Bathrooms

Daily Users: 45

Monthly Earnings: Kshs 6,000- 16,500

Operating Hours: 6.30am- 6.30pm

Numerous boda boda operators come to the centre to freshen up before and after a long day's work. The centre has therefore specialised in providing baths, clients are even supplied with cakes of soap at a small fee.

Obunga

At your door step



Photo: N.Omar



Group: Obunga bio-tower CBO (12 groups)
Location: Obunga
Year: 2011
Partner Agencies: Halcrow foundation, SANA, KIWASCO, MCK
Land Acquisition: Donated by former councillor (James O. Oyollo)
No of Floors: II
Activities: Toilets, Bathrooms, Kitchen, Offices and a hall
Daily Users: 80- 100
Monthly Earnings: Kshs 35,000
Operating Hours: 6am- 9pm

Obunga has a delegated water management model; whereby Kisumu Water and Sewerage Company has decentralized the water service provision by issuing licenses to the people to distribute water. WATSAN, a constituent group of the Obunga Bio Tower CBOs, distributes water, with such a license. They use lengthy pipes to pipe the water to homes within the settlement which are not connected to the city's water supply system.

Manyatta

Team Spirit



Photo: N.Omar



Group: Manyatta Resident Association Bio tower management

Location: Manyatta A

Year: 2013

Partner Agencies: Umande Trust, Lake Victoria South Water Services Board, KIWASCO, SANA, CCK, Cordaid (Urban Matters, Quick Wins) and Sustainable Aid in Africa.

Land Acquisition: Manyatta Primary School land

No of Floors: 1

Activities: Toilets, Bathrooms, Offices Hall for hire

Monthly Earnings: Kshs 15,000

Operating Hours: 5am- Midnight

Group members have shares invested in the bio centre estimated at Sh. 5000. Newer members contributed in cash form whereas the older members contribute 'in kind'. 'In Kind' is the equation of labour and non-monetary contributions such as food for the workers to shares.

Legion

Power from above



Photo: N.Omar

"When people come here from different places, they are surprised to see toilets as beautiful as these ones. The first thought that comes to their mind is that this is a house. Toilets are not usually this nice"

- Bishop Mathews



Legion Maria of African Church Mission

Location: Manyatta

Year: 2013

Partner Agencies: Cordaid and the Church

Land Acquisition: Own

No of Floors: II

Activities: Toilets, Bathrooms, Guest rooms, Kitchen and a hall

Daily Users: 45 residents and their children

Operating Hours: 24hrs

Monthly Earnings: Kshs 1,000

Kibuye

Responsibility



Photo: N.Omar

Kibuye Traders Bio Centre converted the top floor into a social meeting area serving both alcoholic and non- alcoholic drinks. It gives the centre a special vibe and unique atmosphere as the centre almost always has people around



Group: Kibuye Traders Bio-centre CBO

Location: Kibuye market

Year: 2012

Partner Agencies: UN-HABITAT, CCK and Urban Matters

Land Acquisition: Community land

No of Floors: 1

Activities: Toilets, Bathrooms, Office, Mpesa shop and a Bar

Daily Users: 170- 250

Monthly Earnings: Kshs 21,000- 24,000

Operating Hours: 6am- 7pm

Homabay

Lucky with the lake



Photo: N.Omar

The bio centre is located at a prime spot, on the shores of the Great Lake Victoria. It is ever breezy and calm hence the reason why the hotel that is located at the bio centre got the name 'Breeze Point'. The bio centre produces biogas which is used as fuel in the preparation of food for the hotel. The bio centre mostly uses the lake water.



Group: Homabay Environmental bio-centre
initiative CBO (6 groups)
Location: Arujo sub-location
Year: 2013
Partner Agencies: South Nyanza Water Company,
Public Health, NEMA, Municipal Council of
Homabay and UN-HABITAT
Land Acquisition: Community land
No of Floors: 1
Activities: Toilets, Bathrooms, Shop, Kitchen,
hotel and hall
Daily Users: 30- 37
Monthly Earnings: Kshs 45,000- 50,000
Operating Hours: 6.30am- 6pm



Photo: N.Omar

Schools



Karima Girls **89**



Machakos **90**



Mbaga **91**



Nyabondo **92**



Silanga **93**

Karima Girls

Gone Green



Photo: Umande



Location: Nyeri
Year: 2014
Partner Agencies: Equity Bank
Land Acquisition: Own
No. of Floors: 1
Activities: Toilets
Daily User: Students
Monthly Earnings: N/A
Operating Hours 24 hrs

Umande trust has been engaged in providing technical expertise in implementation of bio-sanitation project in Karima girls high school in partnership with equity. The school has two bio-digesters have been constructed with capacity of 124m³ and 31m³ respectively. Biogas produced from both bio-digesters has been tapped and piped to one of the school kitchens to be used for cooking with the rest of it being stored for future use.

Machakos Girls



Photo: Umande



Location: Machakos
Year: 2014
Partner Agencies: Equity Bank
Land Acquisition: Own
No. of Floors: 1
Activities: Toilets
Daily Users: 600
Monthly Earnings: N/A
Operating Hours 24 hrs

Climate change and the high demand for energy is the main threat to environmental sustainability to the institution. The school has abandoned the tree cutting way and has embraced the bio digester technology. Machakos Girls no longer needs to use 12 wheelbarrows of firewood a day and electricity bills are no much lower.

Mbaga Girls Primary School

Gone Green



Photo: Odinga R. O



Mbaga Girls Primary Boarding School

Location: Mbaga-Siaya County

Year: 2012

Partner Agencies: Parents/ Teachers Association

Land Acquisition: Own

No of Floors: 1

Activities: Toilets, Bathrooms, offices and conference room

Daily Users: Students

Monthly Earnings: N/A

Operating Hours: 24hrs

Mbaga Girls Primary School has gone green. The bio centre is not the only tool they use to manage the school's waste. There are also Urine Diversion Toilets. The toilet system separates the two types of human waste. The user pours in ash into the toilet after use which mixes with the solid waste and the end product is fertiliser.

The school uses the biogas produced from the bio centre as fuel in the school kitchen.

Nyabondo Girls Primary School

Adding colour to life



Photo: Umande



Nyabondo Girls Boarding Primary School

Location: Nyabondo

Year: 2014

Land Acquisition: School's land

No of Floors: Ground Floor

Activities: 16 Toilets

Daily Users: 43 Staff and 370 girls

Monthly Earnings: N/A

Operating Hours: 24hrs

The project was done solely by the school with the help of Umande Trust. The school has put up toilets strategically all over the school for both students and staff

Shirali Primary School

Unity in Diversity



Photo: N.Omar



Shirali Primary School

Location: Khwisero District

Year: 2010

Partner Agencies: Engineers Without Borders,
Parents/ Teachers Association, Africa Now

Land Acquisition: Own

No of Floors: Ground Floor only

Activities: Toilets

Daily Users: 312

Operating Hours: 24hrs

The structures' design and construction was done and facilitated by engineering students from the University of Montana and who are part of Engineers Without Borders. The joint effort resulted in unique structural designs of the latrines' layout. They have numerous projects within Khwisero, with that in Silanga Primary School being one of them.



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