























THE EXCITING WORLD OF FAECAL SLUDGE RE-USE Exploring turning poop into gold



8TH JULY 2020 - 8.30 TO 13.00

9.30-10.10 Animal Feed 10.15-10.55 Biomass Fuels

11.00-11.40 Compost 11.45-12.30 Electricity/Biogas

Join us on ZOOM

Meeting ID 852 0231 3363



<u>SNV</u>

Block 4:

ELECTRICITY/ BIOGAS















An end to end service model for non-sewered waste treatment

Urban Sanitation project in Ghana

Marleen Nelisse Programme Director

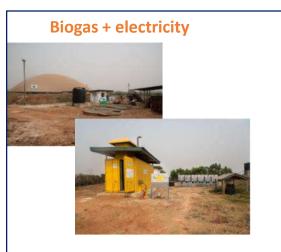
SNV Webinar 8th July 2020

Breaking the vicious cycle

Safi Sana offers an **affordable** business model for **low-cost** circular waste treatment to **local governments and industries**.

Based on the concept of **waste-as-a-resource**, we collect both **faecal and organic waste** from urban slums (from toilets, food markets, industries and slaughterhouses) and use it as a **resource to produce**:







Breaking the vicious cycle



COLLECTION & TREATMENT

92% all waste water in low income countries not treated

EXPOSURE TO UNSAFE SANITATION

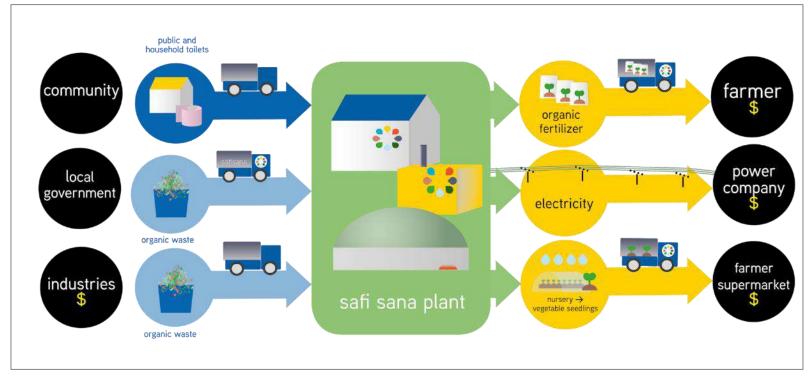
70% of the population in Ghana, lacks access to improved sanitation facilities

FOOD SAFETY RISK

85% of fresh water is used for agriculture but generally polluted by waste water, leading to health risks.



An end to end service model for low-cost waste treatment





Challenges Advantages



Challenges

- Unfamiliarity with the concept
- **HIGH** Capex and Opex
- Lengthy and slow process
- Securing a location land titles
- Establishing local contacts
- Maintenance of machinery
- Human Resources attract and retain quality staff

Advantages

- Financial support from AfDB and Dutch Government has been instrumental in the establishment of a Technical Steering Committee
- CO2 reduction due to proper treatment (estimated 2,500 CO2 tonnes reduction) or 180,000 kg of wood saved for cooking purposes.
- Knowledge transfer and awareness creation
- Employment and private sector support



Key Achievements

safisana

Some Key Achievements

- Opening of the **current Safi Sana plant** in Ashaiman in 2017
- To date Safi Sana treated more than 27,000 tonnes of **faecal waste**
- To date Safi Sana produced more than 12,000 tonnes of **organic waste**
- Power Purchase Agreement with Electricity Company Ghana
- **PPP** with local government
- **MOU** with local municipality
- Daily production of 850 kg of organic fertilizer
- Organic fertilizer certified



Key Innovations Tested



- Use of existing technology combination of treating faecal and organic waste is new
- Innovation is in the **simplicity of the design** integration between processes througout the chain
- Creation of local ownership
- Quality control **tested** and monitored from a **distance**
- Data collection platform established software applications (PowerBI, Commcare)

Safi Sana

Affordable. Sustainable. High impact.









Please visit our website for more information www.safisana.org

Marleen Nelisse

Programme Director marleen@safisana.org



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Q & A

ELECTRICITY/ BIOGAS



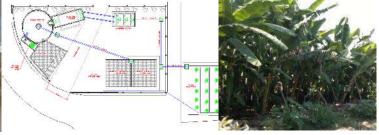


BIOGAS FROM FSTP's TANZANIA

Presented by: Godlove Ngoda BORDA TANZANIA

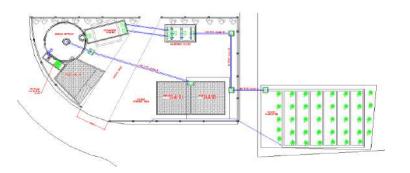
8th July 2020





FS Treatment and Re-use of by products





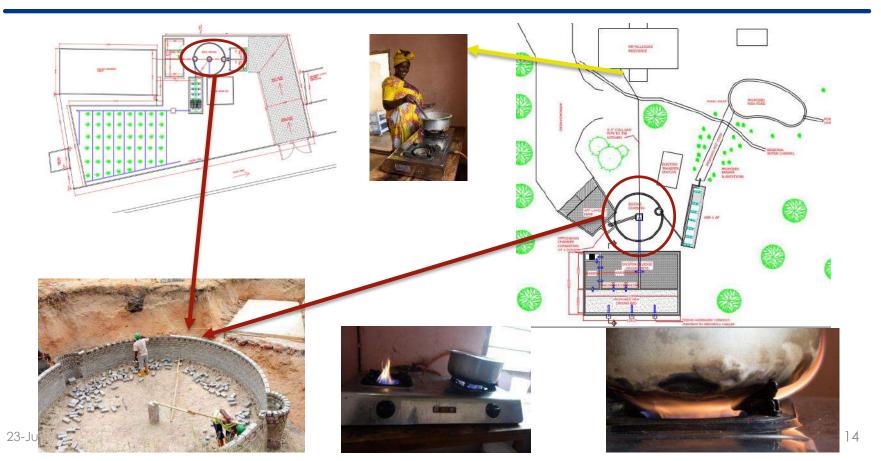




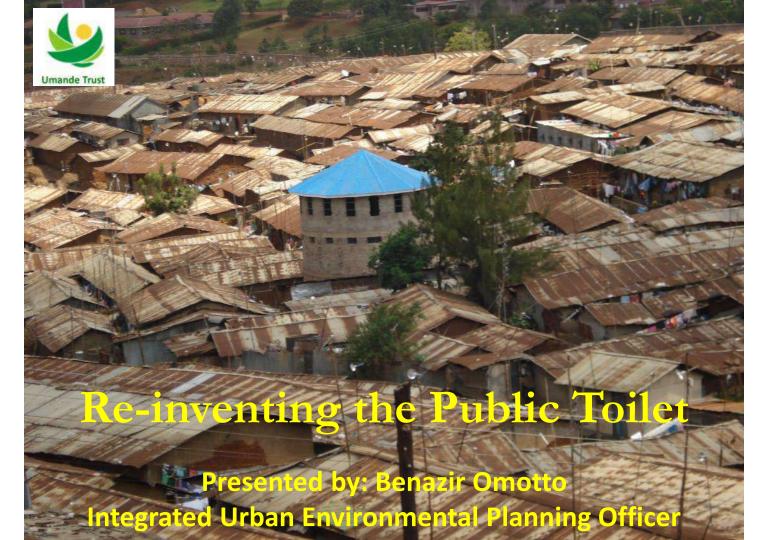


FS Treatment and Re-use of by products











Umande Trust

Umande Trust is a rights-based agency, which 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.



Sanitation Situation







Energy Situation





Our Solution



Site selection, designs, excavation and foundations

Training of community artisans

Community, professionals and UT





Dome and super structure construction

Community, professionals and UT





Complete structure and use of biogas

Community and UT





Bio-gas Products









Holistic Solution

Nucleus for Sustainable Development





Access to water and sanitation

Health and well being

Livelihoods

Solid waste management

Urban Greening

Drainage

Crime and safety

Better Housing

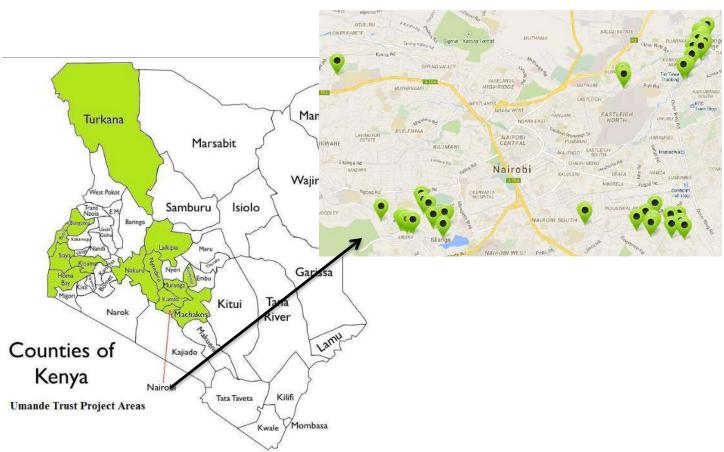
Energy

60m radius

Small enough to implement strategies; big enough to influence individuals and settlements



Project Locations





Our Impact

- Improved sanitation access and health
- Income-generating centre: dividends and savings used in investments
- Job creation
- Reduced household/school expenses
- Access to education and information
- Partnerships between local and international schools
- Resource recovery and environmental conservation



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Q & A ELECTRICITY/ BIOGAS



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THANK YOU FOR JOINING US!





















