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
Block 4:

ELECTRICITY/BIOGAS

Photo credit: Safisana
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
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**:

- **Organic fertilizer**
- **Biogas + electricity**
- **Irrigation water**
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.

COLLECTION & TREATMENT
92% all waste water in low income countries not treated.
An end to end service model for low-cost waste treatment
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
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 throughout 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.

Marleen Nelisse
Programme Director
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Please visit our website for more information www.safisana.org
Q & A
ELECTRICITY/
BIOGAS

Photo credit: Safisana
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
Re-inventing the Public Toilet

Presented by: Benazir Omotto
Integrated Urban Environmental Planning Officer
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
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
Q & A

ELECTRICITY/BIOGAS
THANK YOU FOR JOINING US!