African Water Facility
Facilité africaine de l'eau
Mobilising Resources for Water in Africa
Mobiliser des ressources pour l'eau en Afrique

AFRICAN DEVELOPMENT BANK GROUP

PROJECT BRIEF

GHANA:
A BUSINESS APPROACH FOR IMPROVED SANITATION – ORGANIC FERTILISERS AND ENERGY AS DRIVERS, ASHAIMAN.

Un-sewered Sanitation Improvements for the Urban Poor

Circular approach:
Waste becomes a resource. ***Faecal and organic waste*** *is collected from urban areas, public toilets and food markets, transported to the recycling plant, and converted into* ***organic fertiliser and biogas****. Biogas is used to produce electricity. Wastewater is used for* ***irrigation purposes****.*

The SafiSana project

"The sanitation situation in Ghana is currently dire, with approximately 15% access to improved sanitation and with almost 20% of the total population with no toilets at all" (Ministry of Local Government and Rural Development, MLGRD, 2011).

Safisana's journey began in 2010 with a small-scale pilot waste processing plant on the outskirts of Accra.
In 2013, African Water Facility (AWF) invested EUR 1,084,500 in a municipal waste management programme in and around the Ashaiman Municipal Assembly (ASHMA), in the region of Ghana. The Organic Fertiliser and Energy as Drivers project was able to deliver improved sanitation and hygiene, reduce diseases, enhance waste management services such collection, treatment, and recycling in the unserved poor urban areas in ASHMA.

Through demonstrated and replicable business models, the project promoted as well the recovery of faecal sludge for the production of stable green energy and the manufacturing of bio-organic fertilisers.

The programme has the potential to leverage private sector resources for further expansion to other areas of the Greater Accra Region.

The strategy adopted by AWF was a multi-sectoral collaboration involving the private sector, local authorities and government agencies. The project aligned with Ghana's 2025 Shared Growth and Development Agenda (GSGDA II 2014 - 2017) and followed the African Development Bank's Country Strategy Paper (CSP) guidelines for development assistance to improve people's socio-economic well-being.

PIDAACC/BN

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Total Budget: EUR 1,530,700
AWF Funding Amount: EUR 1,084,500

Additional funding from:

Additional 1.2 million Euro funding from the Netherlands Embassy under the Ghana Netherlands WASH Project

Implementing partners:

- Ashaiman Municipal Assembly (ASHMA)
- SafiSana Ghana Limited (SSGL)
- Training Research and Networking for Development (TREND)

Geographical scope and scale:

- Irrigation Development Authority (IDA)
- Ministry of Energy (MOE)
- Ministry of Food and Agriculture (MOFA)
- Energy Commission (EC)
- Public Utility Regulatory Commission (PURC)
- Project beneficiaries ASHMA
- Academia
- Plant operational and supervisory staff
- Owners and operators of public toilets and cesspit emptier trucks, waste collectors and sorters

Impacts and Solutions

The project facilitated the **development of a business model**. Safisana's circular economy approach is modular and scalable in Sub-Saharan Africa. The efficient recycling concept will join efforts to solve the sanitation problem in Ghana. In addition, the use of compost in agriculture will improve soil fertility and increase yields and ensure sustainable year-round agricultural production, contributing to food security in Ghana.

The benefits of the project include access to **improved sanitation at a competitive price**. It has also enabled the reduction of disease through improved hygiene, linked to sanitation facilities provision and waste management. Other benefits include **access to stable green energy, increased use of bio-organic fertilisers** in urban agriculture with higher yields, and improved soil fertility.

More than 125,000 people directly benefit from the Safisana project through improved sanitation, job creation and waste collection businesses, marketing and selling bio-organic fertilisers and renewable energy through public-private partnerships.

The project ensures environmental sustainability by providing sanitation infrastructure to treat and reuse faecal sludge and organic solid waste generated and collected in the Ashaiman community. This practice prevents the **uncontrolled dumping** of waste into nature, while offering the possibility of economic benefits.

Key Challenges

The **lack of viable examples**, platforms or models to look up to led to errors in the preliminary stages of implementation that could have been avoided.

The **plant design was based on pilot studies** by SSGL without due consideration of the risks relating to limited quantities of collected waste, reuse pricing, plant capacity limitation, focus on bio fertiliser instead as main revenue source to finance costs, etc.

The fact that the fertilisers produced were not under the government's fertiliser subsidy programme initially represented a barrier to initial distribution. Besides, farmers were not used to this new bio-organic fertiliser, as they were mostly familiar with non-organic ones.

"The project aims to help reduce open defecation within the municipality and thereby making use of the liquid waste from the community and then convert it into fertiliser and electricity. It is also serving as a meansof taking care of the environment, the climate change, and providing job opportunities."

Mr. Kweku Quansah, *Deputy Minister for Sanitation and Water Resources.*

Key Lessons

- **Sustainable and replicable business models** allow for improved sanitation and waste management systems.
- A clear definition of the roles and responsibilities of implementing and collaborating partners facilitates **project implementation**.
- Achievement of the development objectives and desired outcomes depends on **implementation capacity**, which is driven by staff qualification, experience and level of motivation.
- Adopting a strategy to engage **key implementing partners** to support the Executing Agency in project execution is vital and facilitates and guides implementation to achieve desirable results.
- Sanitation pilot projects should carefully assess the conditions necessary for upscaling the projects, in order to achieve financial and institutional sustainability.
- Actions that address cost recovery and sustainability are important to achieve the financial and social sustainability of sanitation projects.

Recommended actions

From SafiSana project, it is possible to identify the below recommended actions regarding structures, policies and strategic plans:

Waste treatment infrastructure designed on the basis of sustainable operation and maintenance should have the capacity to produce adequate quantities of the reuse products, sustained by good pricing and a facilitative regulatory environment. The existing **plant capacity may be expanded to maximise and sustain benefits and fully demonstrate financial sustainability.**

The Ministry of Sanitation and Water Resources should take charge and spearhead the effort towards sector-wide dissemination and acceptance.

The lessons learnt, and knowledge generated from implementation of the project could be repackaged as **various knowledge products** for sector-wide dissemination and use.

Once the economic viability of this business model is established, it is expected that **further replication of the concept** is possible on the basis of common financing methods.

"Further to converting waste to electricity and fertilisers, SafiSana mitigates climate changes through environmental sanitation and creates employment opportunities for women and youth in our municipality"

Hon. Emmanuel Kwesi Agboson, *Assembly member Ashaiman*

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GROUPE DE LA BANQUE AFRICAINE DE DÉVELOPPEMENT

safisana

Other related Project Resource
A Business Approach for Improved Sanitation in Ghana – Organic Fertilisers and Energy as Drivers, Appraisal Report. May 2013. African Water Facility.
Ghana: A Business Approach for Improved Sanitation Organic Fertilisers and Energy as Drivers, Project Completion Report. September 2018. African Water Facility.
https://projectsportal.afdb.org/dataportal/VProject/show/P-GH-EBZ-001
Our Model - Safisana

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