

## Executive Summary

### Vision

To develop integrated community-based water and sanitation solutions that put an end to water scarcity, poor sanitation, and outbreaks of water-related diseases in rural and peri-urban communities through advocacy, training and provision of WASH services.

### Mission

We strive to become a global champion in implementing sustainable community-based and integrated WASH solutions

### Core Values

We are driven by innovation, integration, community engagement and impact-driven programs.

### Solution Summary

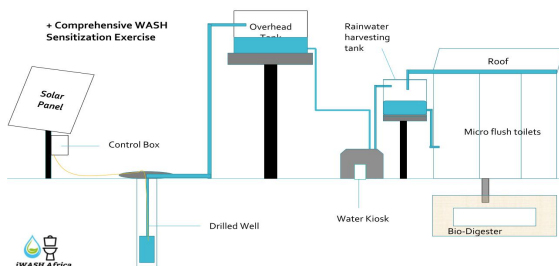
Solar-powered potable water systems and clean toilet facilities to be provided for communities with none or insufficient infrastructure.

### Insight and Problem Framing

In Ghana, there are about 3.4m people in hard-to-reach rural areas with no access to potable water and safe sanitation.

### Value proposition for Key Stakeholders

Households from the hard-to-reach communities will have access to safe potable water and sanitation facilities. The district assemblies and government as well as other companies will use our solutions as conduit to fulfill social responsibility.



### WAC - Providing WASH solutions to rural communities

#### Organization registration:

- *We are fully registered as a Company Limited by Guarantee*

#### Areas of Operation:

- *Abutia Amesianyakope, Volta Region, Ghana*

#### Key Partners:

- *Node Eight*

#### Traction:

- *3,000,000 Litres of Potable water supplied to 1000 population community, \$2,000 revenue, & \$8,200 funds raised*

#### Funding Overview:

- *Raising: \$90,000*
- *Target close date: 31/12/2023*

#### Revenue Streams (per annum - exclusive of grants)

- *Water System: \$4,200 / one system*
- *Toilet System: \$6,300 / one system*

## Solution Prototype



### Target Market

Our current target market is primarily 2,871,563 households in rural communities in Ghana with no safe drinking water. In 3years we plan to service 10% of these people.

### Competitive Advantage

Solution plan is community based and integrative. Labour for installation will be from the community as well as maintenance and management.

### SDG Targets & Impact Indicators

- SGD 3:** Good health and wellbeing (reduce mortality rate associated with unsafe water and sanitation)
- SDG 6:** Clean water and Sanitation (increase proportion of population using safe water)
- SDG 13:** Climate Action (reduce greenhouse gas emissions arising from burning of wood)

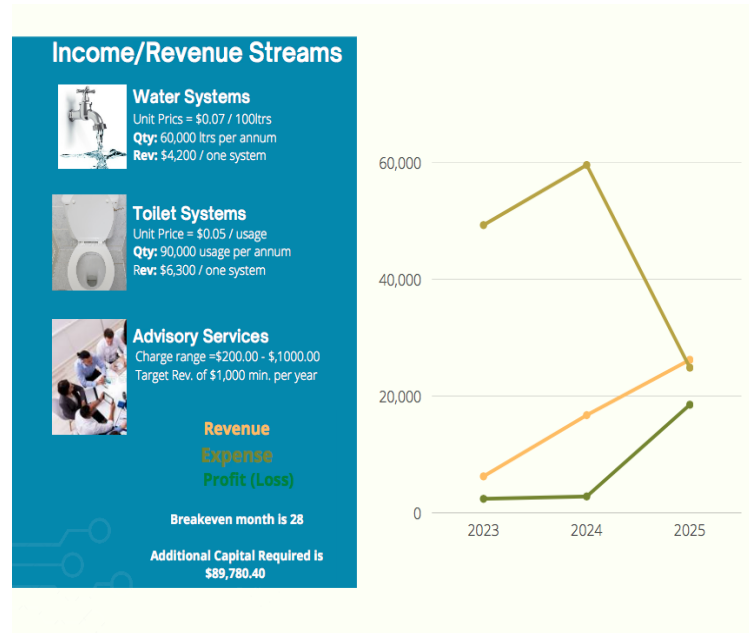
### Direct & Indirect Beneficiaries

Direct beneficiaries are households in rural communities with no access to safe potable water whereas the indirect beneficiaries are local governments and district assemblies.

### Team, skills and experience

Members have backgrounds spanning from Environmental Engineering, Water and Sanitation, Environmental Management, Sustainable Development, Public Health, Economics, Monitoring and Evaluation as well as Accounting, Fundraising, Credit Risk and Social Work

### Financial Model



### Funding Roadmap

WAC seeks to raise \$90,000 to fund procurement of expansion resources, workforce, office space & items, transportation and community entry. This required is divided into 3 trenches below

1. December 31, 2022 - \$10,000
2. March 30, 2023 - \$40,000
3. December 31, 2023 - \$40,000

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## Country Overview

Ghana is located in West Africa, sits on the Atlantic Ocean and borders Togo to the east, Côte d'Ivoire to the west, and Burkina Faso to the north with a population of about 31.7 million people (2021) up from the 2010 census figure of 24.2 million. Ghana has about 100 different ethnic groups who speaks over 50 indigenous languages (Dakubu, 1996), *with English as the official language*. National literacy rate (15+) is 69.8% (2021) and the average life expectancy at birth is 64 years (2020). Ghana is well endowed with natural resources and is the second-biggest producer of gold on the African continent, and the world's second-largest cocoa producer. The country is also home to one of the largest discoveries of oil in recent decades, and a major tourism destination. Ghana is the closest location to the Centre of the World.

Ghana is a free, democratic and stable country. Ghana was one of the first nations in Sub-Saharan Africa to gain independence from colonial power in 1957 and is often seen as a model for political and economic reform in Africa. Ghana consistently ranks in the top three countries in Africa for freedom of speech and press freedom, with strong broadcast media. Approximately 57.98% (2021) of Ghana's population lives in urban areas and the largest cities are Accra and Kumasi. About 58.1% (15+) is economically active (employed and unemployed) while the economically inactive population constitutes 41.9%.

In September 2018, Ghana rebased its GDP from 2006 to 2013. The economy accelerated to 7.6% in 2019, placing Ghana among the top three (3) fastest growing African economy. Ghana's rapid growth (7% per year in 2017-19) was halted by the COVID-19 pandemic. After slowing to 0.5% in 2020, growth rebounded to 5.4% in 2021. In the first quarter of 2022, the overall GDP grew by 3.3%, year-on-year, down from 3.6% over the same period in 2021. GDP growth is expected to slow to 3.5% in 2022 and average 3.3% over 2022-2024.

## Water & Sanitation Sector in Ghana

**Water Sector:** The water sector in Ghana faces a number of challenges, including intermittent supply, high water losses, low water pressure, and pollution of water bodies. Also, domestic water supply competes with a rising demand for water by the expanding industry and agriculture sectors. Disparities exist between urban and rural safe drinking water access. According to the Ghana Multiple Indicator Cluster Survey of 2011, urban dwellers are more likely to have access to safe drinking water than the rural dwellers at 91% and 69%, respectively.

**Sanitation Sector:** While the country enjoys a marked success in achieving 89% access to safe water, the same cannot be said for sanitation. That achievement is eclipsed because of the mere 15% coverage of improved sanitation (JMP, 2015). There are still about 19 million people who either lacked access to adequate sanitation or were without toilet facilities. Most communities are left with no option but to openly defecate in nearby bushes and hideouts, and this has negative consequences for health and general well-being.

**Financial Aspect:** Since economic efficiency as well as cost recovery in the sector are extremely low, financing water and sanitation investments in Ghana relies heavily on external funding.

There is also limited private sector interest in rural basic sanitation since there is a perception that investments in rural sanitation businesses are not profitable. Improved sanitation technologies are quite expensive and there's a lack of innovative financing mechanisms to support poor households to build latrines.

## Problem Concept /Opportunity

3.4 million people in rural hard-to-reach communities in Ghana are without access to potable water and safe sanitary.



*Unsafe water sources      Poor toilet facilities*

### This causes:

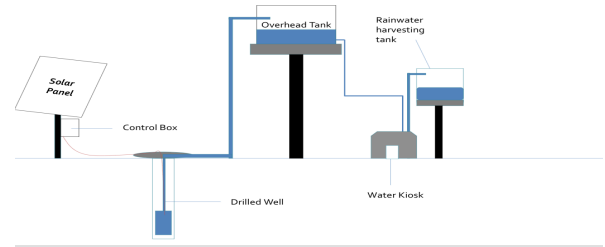
- ❖ Water-related diseases with negative consequences for health and general well-being.
- ❖ Loss of school hours
- ❖ Loss of productive hours and reduce productivity
- ❖ Increase healthcare cost
- ❖ Trapping communities in poverty.



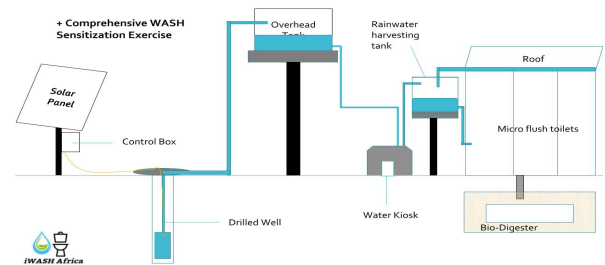
*Productive hours looking for safe water*

## Solution & Prototype

- ❖ Building of a community-based solar-powered water provision system and clean toilets.
- ❖ Comprehensive awareness raising on best practices in water, sanitation and hygiene



*Standalone Water System Design*

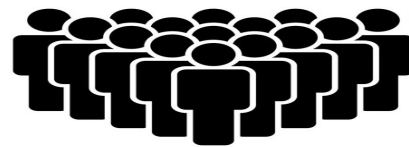


*Integrated water system with Micro Flush Toilet System*



*One 10,000L/Capacity Solar Water System – Pilot Project providing 3,000,000 litres of water supplied*

## Market Size



Only 16% of rural population (13,332,254) has safe WASH services (**SAM -2,871,563 Household (SOM - 28,715 Households)**)

## Business Model



### Water

### Toilet

\$0.07 per 100L of water vs \$0.05 per visit per person



### Competitive Advantage

- ❖ Community-Based and Integrative
- ❖ Young people trained to maintain facility.
- ❖ Women trained to manage facility

### Impact (SDG Target)



Exposure to unsafe Water, Sanitation and Hygiene for All. (WASH services)



Proportion of local administrative units with established and operational policies and procedures for participation of

local communities in water and sanitation management



Indicator 13.2.2 Total greenhouse gas emissions per year

## Team Members



### Jacob Amengor

Master's, Civil Engineering  
University of Calgary, Calgary  
**Experience:** Environmental Engineering, Water & Sanitation, Entrepreneurship



### Linda Sampedey

MBA Finance (ongoing)  
University of Ghana  
Business School, Ghana  
**Experience:** Banker, First Degree in Economic



### Eric Senoo

MBA Finance (ongoing)  
University of Ghana  
Business School, Ghana.  
**Experience:** Chartered Accountant, Credit Risk & Social work