

Paibona Community Borehole Project

Country: Uganda

Beneficiary: Paibona Parish

Donor Organization: Go 2 School Initiative Uganda

Project Cost: Ush 43,532,795 (€10,000)

Start of project: September, 2021

End of project: December, 2021

Table of Contents

Executive Summary	3
Project Background	4
Objectives.....	5
Specific Objectives	5
Project Cost	5
Environmental and Social impacts.....	6
Environment Impact.....	6
Social Impact.....	7
Project Implementation.....	7
Project Sustainability.....	9
References	10

Executive Summary

Uganda loses approximately 23,000 people including 19,700 children under 5 each year from diarrhea – nearly 90% of which is directly attributed to unsafe water, sanitation and hygiene (WASH).

The Paibona Community Borehole projected will be set up in Paibona Parish a village in Gulu district, northern Uganda. Gulu district was one of the areas most affected by the two decade long Lord's Resistance Army insurgency. The project aims at providing a sustainable water source to the residents of Paibona Parish in order to reduce the number of people falling sick due to using dirty water and also reduce on children absenteeism in schools. The project is expected to take 4 months to complete and will cost Ugx. 43,532,795 (€ 10,000).

The sustainability of the project will be ensured through community engagement before, during and after the project through setting up of a village water committee to oversee the proper use and maintenance of the borehole

Project Background

Approximately 23,000 Ugandans, including 19,700 children under 5, die each year from diarrhea – nearly 90% of which is directly attributed to poor water, sanitation and hygiene (WASH). In most cases, children get the diarrhea by drinking unsafe water or coming into contact with contaminated hands; theirs or parents or caregivers that have not been washed with soap. Early childhood diarrhea is not only deadly; it also contributes to Uganda’s high levels of stunting, which in turn affects children’s cognitive development and performance at school. In school, lack of proper sanitation facilities also leads to high absenteeism and dropouts, especially for girls (<https://www.unicef.org/uganda/what-we-do/wash>).

In addition poor sanitation is a contributing factor – through its impact on malnutrition rates – to other leading causes of child mortality including malaria, acute lower respiratory infections (ALRI) and measles. US\$1.1 million is lost each year due to Productivity Losses whilst sick or accessing healthcare: This includes time absent from work or school due to diarrheal disease, seeking treatment from a health clinic or hospital, and time spent caring for under-5’s suffering from diarrhea or other sanitation-attributable diseases.

Gulu has 626 domestic water points which serve a total of 248,972 people – 139,550 in rural areas. 138 water points have been non-functional for over 5 years and are considered abandoned (<http://wsdb.mwe.go.ug/index.php/reports/district/32>). However, there is sharp contrast between water coverage in urban areas and that in rural areas where some people have to walk more than 3 kilometers to access unprotected water sources such as wells or rivers (Akena, W., Odong, G., & Okot, J. O.; 2015). Some people are forced to buy water from water vendors where they spend as much as 22 percent of their income to access water from water vendors which makes it hard for them to build savings in order to break the vicious cycle of poverty (<https://water.org/our-impact/where-we-work/uganda/>).

Paibona Parish is a rural parish located in Gulu district, Awach sub-county in Aswa County. According to the Uganda National Housing Census carried out in 2014, only 4.3% of the population in Aswa County have access to piped water while about 45% collect their water from boreholes. Many people who cannot access the two water sources are forced to collect their water from unimproved wells and streams which are contaminated (Agaba, 2016). Because of this, children spend a great amount of time trying to collect water for domestic use and end up missing

out on classes as they come back tired. The absence of safe water exposes teachers, community members and pupils alike to diseases such as cholera, dysentery and diarrhea.

In February 2020, Go 2 School Initiative Uganda (G2SU) carried out an outreach in Gulu and we observed that a number of places that we visited such as Alero, Paibona, Lajwatek and Amuru lacked access to safe water. Paibona community was one of the most vulnerable communities that we visited. One of the teachers at Restore Hope Nursery and Primary School told G2SU that accessing safe water was a big challenge for the school and she had resorted to sending some pupils to the wells to fetch the water that they will use at school. This in effect meant that the would be class time is cut short as pupils and teachers try to find water for use

Objectives

The Project intends to build a sustainable community borehole for the residents of Paibona parish in Aswa County.

Specific Objectives

1. To provide affordable, safe water supply to the population of Gulu with focus on those in Paibona Parish
2. To ensure hygienic, ecologic sustainable basic sanitation;
3. To reduce the rate of infection of water-borne disease like cholera, diarrhea, dysentery and typhoid by 60%.

Project Cost

The Project is estimated to cost approximately Shs 43,5 million (10.000 euros) , net of taxes and duties. Table 1.0 provides a summary of the project costs by component. The unit rates are derived from suppliers and contractors, as well as from recent experience with similar on-going operations in the country and in the region. The estimates include a physical contingency of approximately 5% and a price contingency of 2 % per annum.

Table 1.0

	UShs	Euro (€)
Borehole infrastructure **	33,550,000	7704,69
Hygiene Promotion and Education	2,000,000	459,30
Project Management	4,000,000	918,59
Physical Contingency (5%)	2.089.500	479,85
Price Contingency (2%)	835.800	191,94
Miscellaneous	1,069,296	245,63
Total	43,532,795	10.000,00

** see detailed budget for Borehole infrastructure in table below

	DESCRIPTION	QTY	UNIT COST	TOTAL COST	TOTAL COST EURO
1	Surveying	00	2,000,000	2,000,000	459,29
2	Drilling	100m	15,000,000	15,000,000	3444,72
3	Casing	40pcs	100,000	4,000,000	918,52
4	Pedestal	1pc	200,000	200,000	45,93
5	Gravel packs	120bags	30,000	3,600,000	826,67
6	Well developing	100m	900,000	900,000	206,64
7	Pump test	100m	550,000	550,000	126,28
8	Water test	40,000	400,000	91,84
9	Plumbing work		700,000	700,000	160,72
10	Water pump	100m	2,000,000	2,000,000	459,29
11	Transport cost		200,000	200,000	45,93
12	Labor cost		4,000,000	4,000,000	918,52
	GRAND TOTAL			33,550,000	7704,69

Environmental and Social impacts

Environment Impact

The Project will involve drilling a deep borehole in an area which is neither protected nor sensitive. The Project has no detrimental effects and most of the impacts will be temporary and short-term during construction (such as dust emissions, noise pollution etc.).

Social Impact

Successful implementation of this Project will result in increased survival rates of children through reduction in water-borne diseases such as diarrhea, dysentery, cholera and others. The project will result in the following;

- Improving girl-child school attendance and survival in school primary seven by freeing them of the traditional role of fetching water for household use;
- Attracting and retaining teachers to the rural communities with the availability of safe water and sanitation thereby improving on learning outcomes; and
- Improving health conditions of pupils for learning.
- Creating job opportunities unskilled laborer's and artisans in the communities as Go 2 School Initiative Uganda is committed to using local people from the community in agreement with the contractor in the construction of water and sanitation facilities.
- Improving communities' abilities to manage community based development facilities.
- Preparing and disseminating information on hygiene, sanitation and water supply to the concerned population;

Project Implementation

The project will be implemented by a Project Management Team headed by the Programs Director of G2SU who will liaise with community members to ensure successful implementation of the project. The project shall run for a period of four months August to November 2021 upon which it will be handed over the beneficiary community.

Project Work plan																		
Activity	Tasks	Project Implementation Time (Weeks)															Deliverables	Responsibility
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
Community Mobilisation	Meetings with community members																Borehole acceptance agreement	G2SU
Borehole Siting and Design	Desk study																Siting report including borehole design	G2SU, Consultant

	Reconnaissance survey																						
	Geophysical survey																						
Procurement of Contractor & Contract Award	Pre-tender meeting																				Terms of Reference for Borehole Drilling Works	G2SU	
	Bid Evaluation																					Bills of Quantities	
	Contract Award																						
Supervision of mobilization and borehole construction	Pre-mobilization meeting																				File with copies of all communications on the project in respective folders	G2SU, Contractor	
	Introduction meeting with community																					Copies of sketch of the proposed assemblage of casing and screen for each completed location	G2SU, Village Chairperson
	Site meetings:																					Copies of signed borehole completion record	
Supervision of the pad construction, and the supply and installation of the pump	Inspection of materials for pad construction																						Project Leader, Contractor
	Supervision of pad construction																						
	Pump inspection																						
	Supervision of pump installation																					Signed certificates of Substantial	

																		Completion for all boreholes that have been substantially completed	
	Inspection and issue of certificate of substantial completion																	A summary of the work carried out with recommendations is to be included in the monthly progress report.	
Defects liability and final Inspection	Issue a Certificate of Final Completion for the sites that meet the specifications as set out in the Drilling Contract.																	Signed Certificates of Final Completion for all boreholes that have met all of the final inspection criteria as specified in the Drilling Contract	G2SU, Contractor
	Set aside a date for the handing over																	Condition report for the borehole	
Hand-over	Commission of Village Water Committee																	Village Water Committee	G2SU
	Hand-over of project																		

Project Sustainability

Boreholes are susceptible to mechanical breakdowns as well as damage resulting from vandalism. In order to ensure the sustainability of the Project, a Village Water Committee led by the chairperson of the village will be set up. This will be responsible for the operation and maintenance costs as well as the management of the services. Go 2 School Initiative Uganda will carry out a sensitization workshop for the community members especially those on the Village Water Committee to enable them appreciate best borehole management practices on top of learning how to keep their water safe. Overall, the Project will integrate sensitization and mobilization of the communities, and also promote the participation of the communities in the identification and implementation of the borehole enhances the sustainability of the services to be provided by the program. Additionally, the community will provide land and labor for construction of the borehole.

References

Akena, W., Odong, G., & Okot, J. O. (2015). Gulu District Council Score-Card Report FY 2013/2014. Local Government Councils' Performance and Public Service Delivery in Uganda. Retrieved from http://www.acode-u.org/Files/Publications/PSDA_38.pdf

Going, Peyton, "Exploring Access to Portable Water and Sanitation Practices in a Post-Conflict Environment: The Case of Gulu District, Northern Uganda" (2016). Independent Study Project (ISP) Collection. 2459.

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<http://wsdb.mwe.go.ug/index.php/reports/district/32>

<https://www.ubos.org/wp-content/uploads/publications/2014CensusProfiles/GULU.pdf>