

Water, Sanitation & Hygiene (WASH) Project for Bwama Primary School in Southwestern Uganda

WASH project in Bwama Primary School is crucial and in need of immediate implementation given the current practices and impacts of COVID-19. There are 370 students, 12 staff and 9 classrooms in this school. Currently, drinking water and hand hygiene services are not available. Students fetch water from the lake and boil the water for drinking, but it is not enough for the whole school. And, when the school is over, students can be seen drinking water directly from the lake as they go home. There are gender separated toilets in this school, however, menstruation hygiene management is lacking. During the parent teacher meetings, we learned that the female students go down to the lake to wash their menstruation discharge. Below are the proposed WASH interventions for this school based on our research and interactions with the parents, teachers, and students:

Proposed Solutions for WASH Challenges

Water

The for-profit/social enterprise based in Kampala, Uganda, called “SPOUTS of Water” manufacture and sell best-in-class ceramic water filters. They distribute filters to various sectors such as schools, health centers and refugee camps. They have three different models of ceramic filters under the brand name “Purifaaya.” Purifaaya filters are considered safe and effective in treating lake water by the tests conducted by Ministries of Health from Uganda, Rwanda and Tanzania as well as WHO. There are two components of the filters i.e., ceramic pot and bucket. These filters are culturally accepted as the community members already use bucket and clay pots to store water. Placing a 20L Purifaaya water filter inside each classroom would effectively tackle the problem with clean drinking water in Bwama Primary School. Below are the different models of Purifaaya filters.



Sanitation

SPOUTS of Water also manufacture and sell handwashing stations that they call “HandiClean.” It is a water storage tank with the 100L capacity that comes with a stand and a foot pedal. Water comes through the tap in the container when the pedal is pressed by a foot. This is to prevent the spread of germs and viruses when the tap is touched by hands. It will be essential for students to maintain good hand hygiene when they return to school post COVID-19 closure. Thus, having a HandiClean near each toilet can address the hand hygiene challenges in this school.

Hygiene

There also need to be liquid soaps available to make the best use of HandiCleans and ensure good hygiene. The soaps are readily available in the local markets.

Menstruation hygiene management needs to be highly prioritized in this school. GLI can assign an intern to research best practices and solutions for menstruation hygiene challenges faced by female students.

Financing

The total cost of the WASH project will come out to be \$935. This cost is for nine ceramic filters (one for each classroom) and two handwashing stations (one for each toilet). The willingness-to-pay by families for the school WASH project is absent. Thus, GLI will have to fund this project through donations and fundraising. However, there is an opportunity to sell the Purifaaya filters to households and use that profit to sustain the WASH project for the long term. This is encouraged because it is essential to have basic WASH services available both in school and at home for students to get optimal health benefits. The table below provides the cost-benefit breakdown.

Products cost & profit margins

Products	Purifaaya	Viva Purifaaya	Purifaaya XL
Wholesale	UGX 75,000	UGX 120,000	UGX 280,000
Retail	UGX 90,000	UGX 150,000	UGX 300,000
Margin	17%	20%	7%

Monitoring & Evaluation (M&E)

M&E will be conducted by local GLI staff along with school staff. They will simply measure the water volume in the Purifaaya filters and HandiCleans at the end of the school day to observe if the students are drinking clean water and washing their hands. This measurement will be carried out on a daily basis for at least a month. Moreover, school staff will inspect whether the students are adapting to the new WASH practices and report to GLI monthly.

Operation & Maintenance (O&M)

SPOUTS of Water train their costumers on how to use and maintain the filters before costumers make the purchase as well as explaining the value propositions. It is easy to operate and maintain the filters; the maintenance is done by cleaning the pot every two weeks with a piece of cloth and water, and the bucket with water and soap. This responsibility can be given to the local GLI staff, school staff or head of the students.

Additional Recommendations

If the ceramic filters and handwashing stations are proven to be serviceable based on the monitoring and evaluation, then GLI should invest in a solar pump and a storage tank after six months. A solar pump would pump water from the lake to the school providing easier access for the students as well as ensuring they do not have to toil and miss class to fetch water. Storage tank will be required to store water for future use. This is especially helpful in the winter when there is not enough sunlight to power the solar pump. The detailed specifications of the solar pump and storage tank are provided in the final report.

Note to GLI: Due to the virtual state of the practicum, not all tasks were completed. It is recommended that GLI carry out further assessment on the proposed solutions through field study and community engagement to ensure that they are viable solutions. Furthermore, GLI must work with the school to effectively address the lack of menstruation hygiene management to protect the safety and dignity of female students. Lastly, GLI must work with the school staff to integrate WASH into school curriculum to teach students about the importance of basic WASH services in school and at home. By implementing the WASH projects in Bwama Primary School, GLI will directly contribute to the sustainable development goals (SDGs) 4 & 6 that call for “inclusive and equitable quality education for all” and “clean water and sanitation for all” by the year 2030, respectively.