engineering for CHANGE

THE BIOSAND FILTER (BSF)



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User Experience Report

The BioSand Filter (BSF)

USER EXPERIENCE REPORT

I love the water from these filters, it tastes better than the tap. However, without follow-up, these projects don't last. The filters get clogged and can crack. They need to be maintained continuously.

FACTS

Mbale, Uganda



User: Local distributer.

Location of the interviewee: Mbale, Uganda. Primary education center.

Interview Language: English

Interview Date: August 2017

"Without follow-up, projects don't last. People aren't encouraged when they can't have their questions answered."

Friendly Water for the World Employee

User provision

The interviewee was an Ugandan employee for Friendly Water for the World (FWW), a distributer of BioSand Filters in Eastern Africa and India. In 2014, four BioSand Filters (BSFs) were distributed to an Education Center in Mbale, Uganda with funding from a European NGO. The funds were sufficient to install the filters and provide maintenance for roughly one year.



INTERVIEW QUESTIONS:

- What are your favorite aspects of BSFs?
 The water tastes good and is much cleaner than the source. The water is also nice to use for bathing and brushing teeth. [This is due to the lowered turbidity]
- What are the challenges with BSFs?

 The concrete can crack easily and the "nose" of the filter can break off. The filters get clogged over time and the sand needs to be washed. Also, people don't like to carry their water to the filters, they would rather it flow continuously. For users in households, the capacity of a single filter can be too little for a family's needs.
- What would you do to change about the design of the BSF?
 I would use plastic rather than concrete, that would allow the BSF to be portable and crack less. It would reduce the costs of installation and transportation as well.
- BSFs were designed to be built locally. Can you tell us about your experience with building and installation?
 Although all the materials are locally available, building the filters can be a challenge. The molds are expensive to manufacturer locally and finding the correct type of filter media is not easy. In Uganda,



CONSTRUCTION OF A BSF IN MBALE, UGANDA

the sand has a lot of clay and dirt. Before it can be used for a BSF, it requires an intensive cleaning process with a lot of water.

- How long did the school use the BSFs you installed?
 The school used the BSFs for about two years (2014 & 2015)
- Why did they stop using the product?
 When the funding ran out for FWW to visit for maintenance and repairs, the school no longer had the knowledge, means, or encouragement to continue to invest and use the filters.
- Tell us more about the maintenance requirements?
 BSFs require follow-ups every 3 months. The sand can easily be clogged and the concrete may crack (especially on the "nose" of the filter). The cost required to travel to the locations of filters and make repairs can be very high for FWW.