



## Tanzania FIELD TRIAL WORLDWIDE WATER GROUP

### Overview

Tanzania, especially in the rural areas, is challenged with poor access to clean water. Many water sources are either not maintained or poorly so. There is almost universal contamination of groundwater. Water coming from wells or bore holes often have unacceptable levels of microorganisms (bacteria, viruses, parasites and their cysts), as well as with chemical contaminants, including heavy metals, organic compounds, and petrochemicals. Remiti, a Maasai village in southern Moshi, Tanzania, is of special concern as it is located in a heavy agricultural area. The agricultural operations increase the risk for contamination of the available drinking water for Remiti with toxic organic chemicals.

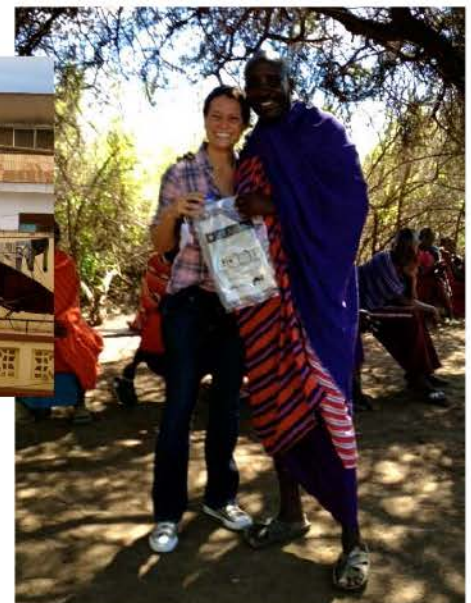
### Trial

Puralytics' SolarBAGs were distributed to Remiti users and monitored during use through FT Kilimanjaro. Brittany Douglas, a volunteer, oversaw the project. Stella Mserakia, a social welfare officer associated with FT Kilimanjaro who is fluent in Swahili, was instrumental in the initial training and periodically reinforced proper use of the SolarBAGs, responded to problems, and supplied replacements when necessary.

Several households received a SolarBAG to provide drinking water to a total of 114 individuals. The age distribution of the users was 68% under 18, 19% between 18 and 40, and 13% over 40. Households cycled the bags one to three times daily, and kept treated water in clean storage containers. Old water treatment practices such as boiling water were stopped during the use of the SolarBAGs. Acceptance and satisfaction were assessed by direct observation and by interview surveys.



Remiti





## Outcomes

The community was very enthusiastic, and that spirit was maintained for the duration of the trial, which was surveyed after six months, but continued for well over a year. Results were substantially positive.



## Aesthetics

SolarBag users enjoyed the aesthetics of the purified water. The overwhelming majority, 79%, said that water from the SolarBags tasted "good". The other 21% were neutral on the question.

## Health

Participants were asked how often they got sick before and after use of the SolarBag. 16 of the participants noted reduced sickness while 3 noted no change. Responses to this question were infused with great enthusiasm. Community members were delighted and appreciative that they and their children suffered noticeably less from what they perceived to be water borne illnesses.

## Partners

Thank you to all of the participants in this Field Study. Puralytics produced the SolarBags which were donated through the generosity of WadeRain. FT Kilimanjaro and its dedicated staff brought the SolarBags to the people of Remiti.

## Adoption

The community found the bags easy to use, and were assessed as being well trained by the coordinators. Part of the training success should be attributed to repeated reinforcement and retraining by a committed social worker fluent in the native language. On a scale of 1-5 (5 being best) training was assessed at 4-5.

74% of respondents said they were drinking more water, and the other 26% said the amount was about the same. All respondents had eliminated their prior means of water treatment in their homes. The SolarBags were still in use after six months using the bags between one to multiple cycles per day. It was decided that a minimal deposit should be charged for bag placement to give participants a sense of value and ownership in the project and the SolarBags. 12 were replaced due to damage or expiry. Four bags tested after approximately 200 uses were still functioning well. The bags are now valued instruments in the daily lives of families in Remiti.

