



Addressing Safe Water Access in Uganda

GLOBAL IMPACT ARTICLE SERIES

Left: Community outreach efforts include providing these schoolchildren with safe drinking water.
Right: Dow Fellows team members install filtered water coolers in a local school to protect children from deadly diarrheal disease.

About 61% of Ugandans lack access to safe drinking water, which includes about 26 million people. Diarrheal diseases are the number one cause of death among children under five years old. SPOUTS of Water (SPOUTS) is responding to this problem in Kampala, Uganda by creating a ceramic water filter that hopes to provide an effective and affordable method of water treatment to households that lack access to clean water. However, the social impact of these filters is unknown.

A Dow Distinguished Award Student team is working with SPOUTS to better understand the social and environmental impact of their water filters. To achieve this, the team is conducting consumer surveys and a social life cycle assessment (SLCA). “No matter where you are, drinking water is a public health issue and there are so many similarities, more than we realize,” says Annalisa Wilder, a public policy student at the University of Michigan and a member of the Dow team.

GAINING INPUT

The consumer surveys examine the effects of the water filters on the health, environment, and livelihoods of Ugandans. Each participant is given a filter and surveyed about their before and after use experience. Participants were determined through SPOUTS contacts in Uganda. Some participants bought the filter themselves and others were given a filter by the team. The surveys were administered in a digital format via a tablet. To promote inclusivity, the team hired an enumerator to conduct surveys with participants who do not speak English.

The SLCA examines the social impacts of the ceramic water filter using a life cycle assessment framework that includes the extraction of raw materials to the product end of life. It is a fairly new technique for analyzing the social implications of sustainability solutions. For the first part of the SLCA, the team focused on two stakeholder groups: value chain actors and the workers.

COMMUNITY ENGAGEMENT

The group traveled to Uganda in the summer of 2019 to perform on the ground research and data collection. They conducted the consumer survey and SLCA interviews along with the ethnography. The team also purchased and donated ceramic water filters to two rural primary schools in Uganda. They demonstrated the use and care of the filter along with lessons on water-borne illnesses.

There are several benefits of the filters:

- Do not require electricity
- Economically beneficial because they allow people to stop buying bottled water
- Save time because people don't need to boil water and let it cool

AWARD-WINNING TEAM

The team received a \$5,000 seed grant from the Dow Distinguished Awards competition, which supported their work in addressing safe water access in Uganda. Additionally, they received \$25,000 in the second round of the Dow Distinguished Awards competition to support continued research in Uganda. The team will use the additional funds for travel to Uganda each summer and will be able to engage in more community service projects and provide donations to the community.

RECOMMENDATIONS AND NEXT STEPS

Preliminary Recommendations

- Discuss the possibility of non-managerial worker unionization
- Implement cultural humility training
- Diversify SPOUTS' board of directors and advisory board in terms of race, ethnicity, and nationality

The team plans to travel to Uganda each summer to conduct additional surveys and SLCA interviews and perform additional ethnographies two more times. SPOUTS is responsible for administering the survey in February of each year when the team is not able to be in Uganda.

// [We aim to] have a public health social impact because health issues affect everybody," adds Wilder.



Dow Fellows team members with their client contacts in Uganda.

PROJECT TEAM

- Fantasia Williams, School of Public Health (SPH) and School for Environment and Sustainability (SEAS)
- Ebony Johnson, SPH and School of Sociology
- Alexa White, Ecology and Evolutionary Biology
- Annalisa Wilder, Gerald R. Ford School of Public Policy and SEAS
- Quinn Favret, School of Business
- Addison Carr, College of Literature, Arts, and Science
- Lauren Balotin, SPH and SEAS
- Lynn Socha, SEAS
- Jessica Yelk, Taubman College of Architecture and Urban Planning

FACULTY ADVISOR

- Jose Alfaro, SEAS

CLIENT

- SPOUTS of Water

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This project addresses the following United Nations Sustainable Development Goals.

SUSTAINABLE DEVELOPMENT GOALS



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