Sustainable Soap and Hygiene for Malewa, Kenya

Matt Connolly  
*Worcester Polytechnic Institute*

Alyssa Gottshall  
*Worcester Polytechnic Institute*

Edwin Muniz  
*Worcester Polytechnic Institute*

Vu Dang Nguyen  
*Worcester Polytechnic Institute*

Mike O’Brien  
*Worcester Polytechnic Institute*

*See next page for additional authors*

Follow this and additional works at: [http://digitalcommons.wpi.edu/gps-posters](http://digitalcommons.wpi.edu/gps-posters)
**Abstract:** In Malewa, Kenya, lack of soap and knowledge about sanitation and personal hygiene contribute to poor health conditions. Our team is working with community members, schools, and Industry’s Humanitarian Support Alliance NGO (IHSAN) to develop a sustainable approach to conquer these problems. Our three main objectives are to (a) establish a program through which young community members can produce a basic soap for themselves and their community, (b) educate Malewan students about proper sanitation, hygiene and water purification, and (c) assist a local business that will provide jobs for the community and to facilitate the basic soap production program. Through these initiatives, we will provide Malewans with a sustainable supply of soap and an educational system to help them use it properly.

**Problem:**
Diseases such as cholera, typhoid and dysentery are prevalent in Malewa, Kenya.

**Reasons for problem:**
- Scarcity of affordable soap in the community
- Lack of knowledge about proper hygiene and sanitation

**Produce Affordable, Sustainable Soap:**
Our team will establish a club through which children can make a traditional, inexpensive soap. In exchange for making the soap, the children will get to keep some of the soap which they produce. The excess soap produced will be sold in the community as inexpensively as possible. Some of the older children will be in charge of selling this soap throughout the community.

**Teach Proper Hygiene:**
We will create a course to be taught at two schools that will focus on teaching students about water purification, hand washing, and other sanitation issues through a combination of traditional informational lectures and demonstrations. The course will challenge Malewan students to target problems in their community involving hygiene or sanitation and develop a solution for those problems through teamwork.

**Strengthen Economic Stability:**
We will help a local business utilize a microloan to expand its aloe soap product line. As this business expands, its owner will hire young adults who are unable to attend secondary school for financial reasons to provide jobs and teach them responsibility.

**Implementation and Real Life:**
This project was an opportunity to spend time creating a sustainable solution that we could implement to help people. Our team has already committed to continue work on this project beyond the term’s time limits and to ensure that there is financial support for this proposal. We will propose our project to IHSAN, a Non Government Organization that has already conducted research for us in Malewa. Provided that they find our solution attractive and sustainable, we will implement our plan in Malewa. Several team members have already expressed interest in an internship with IHSAN and are committed to assisting the people of Malewa and creating better lives for them through sustainable solutions—we are committed to making this dream a reality.

**Measures of Success:**
- The prevalence of cholera, typhoid and dysentery is reduced
- An inexpensive and sustainable soap is provided to community members
- Free soap provided to youth involved in club’s production program
- Increase in proper sanitation and hygiene habits
- Students provided for struggling community members

**Acknowledgments:**
Many Thanks to Jose Gomez-Marquez, program director at Innovations in International Health at MIT, for sharing his expertise, Karin Kitsman, the executive secretary of IHSAN, for her field work in Malewa, Team Alcoa for their collaboration, and our advisor, Professor Diran Apelian from the Metal Processing Institute for guiding us through the process.