

# Freshwater Spring Protection

## Shisasari Community, Western Kenya

### Background

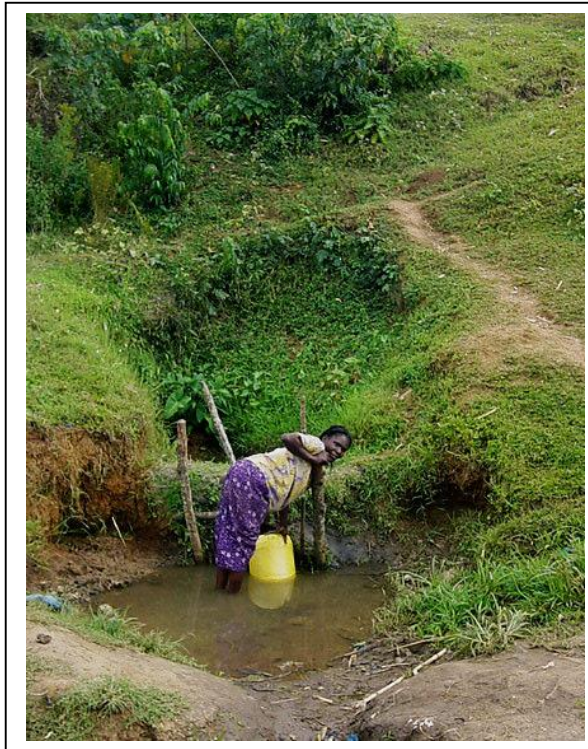
The Shisasari Community in Western Kenya has a population of approximately 3,000 people, 800 are students of the Shisasari Primary School.

Anthony Isayia, born and raised in the Shisasari Community, and his wife Tricia founded an organization called Operation Orphans International (OOI), whose mission is to improve the lives of children in the areas of education and health in Western Kenya through programs, designed to provide the basic necessities (food, water, shelter, clothing and love) required for orphan children to succeed. In 2006 OOI received registered as a non-profit organization.

OOI began their porridge for orphans project in 2005 feeding 80 orphans at the Primary School. Since then the program has expanded along with enrollment in the school to include 165 orphans, all of whom receive a hot porridge breakfast and bean and rice lunch every day courtesy of OOI and their supporters.

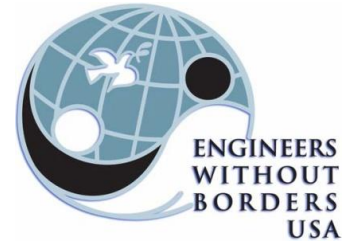
Even with all the help and support OOI has received and given to the community there are still some serious health and safety issues that need to be addressed. The biggest on OOI list is protection of the community's natural freshwater spring. Lack of protection of the spring, along with unsanitary conditions, have left the community ravaged by water born diseases and dysentery.

Early in January 2007 OOI contacted the Sacramento branch of EWB-USA requesting help in protecting the community's water source from contamination.



### Moving Forward

- **FUNDRAISE:** This is number one objective right now because without funding the project stops progressing
- Determine a design that will meet the needs of the community as well as our objective of providing safe drinking water.
- Continue with our innovative sanitation and hygiene lesson plan for the students of the Shisasari Primary School
- Coordinate construction materials and return to the project site to implement the design
- Monitor community improvement through health and wellness statistics of children at the Shisasari Primary School.
- Upon completion of this phase the team plans on expanding the project to include a conveyance system from the spring sites to the school providing for a more localized collection point for the community
- It is anticipated addition projects such as latrine sanitation and drainage issues will also be addressed in the future.



Engineers Without Borders™-USA (EWB-USA) is a non-profit organization established in 2000 to partner with developing communities worldwide in order to improve their quality of life.

### The Need

Over 3,000 residents in the community collect their drinking water from a natural freshwater spring that is currently left unprotected from contamination due to human, animal and storm water runoff. The residents who drink the contaminated spring water suffer from water-borne diseases, i.e. cholera, hepatitis and diarrhea and with no medical help death is the most common outcome. In addition, there is no safe access to the spring and as a result many trip and fall suffering additional life threatening injuries.

### Assessment

An EWB-Sacramento Valley Prof. Team traveled with OOI to Kenya in August 07' for a fact-finding site visit. That visit turned out to be very productive. The team worked with the community to open up two more spring sites for collection as well as fencing off all three springs in order to eliminate livestock contamination. Water samples were gathered for testing and an assessment of latrine facilities in the area was performed. Latrines determined to be within the spring safe zone were recommended for relocation downstream of the spring site. Topographic data of the spring sites was also gathered to aid in the design. In addition basic health and hygiene manuals were provided to the school for distribution amongst the students.