MALEWA CLEAN WATER PROJECT

Background

World Water Crisis:

- Here in America, we may not have to worry whether our water is contaminated with dangerous bacteria, but in other parts of the world, this is not taken for granted.
  - "Each year more than five million people die from waterborne disease"
  - "84 percent of water-related deaths are in children ages 0 – 14."
  - "98 percent of water-related deaths occur in the developing world."
  - "At any given time, half of the world's hospital beds are occupied by patients suffering from a water related disease."

Kenya:

- "Over half of Kenyans live below the poverty line"
- "Only 61 percent of the population has any access to safe water sources"

Map of Africa
Kenya Circled

Map of Kenya
Gilgil circled

Malewa:

- We are focusing on establishing a business selling purified water in the slums of Gilgil -a town in the region of Malewa.
  - People in the slums spend about fifth of their income on water from a local tap, or walk long distances to get less clean water from the local river.
  - The wages in Malewa peak at around 12,000 sh a month. Many are unemployed or work unskilled labor for only 5,000 sh a month.
  - The children in Malewa are very interested in learning to better themselves.
  - The Ngechu School and Kimbo School specifically of fered to work with us to implement a safe water plan.

Malewa River- source of H2O for 2000 person community

Water tank in slums

IHSAN:

- The Industry's Humanitarian Support Alliance, IHSAN, is a non-government organization (NGO) which works to "increase the availability of safe drinking water, adequate sanitation, hygiene, and related education".
- We have been in contact with IHSAN to design and implement our clean water plan in Malewa, Kenya.
  - Field Researcher
    - We had a field researched from IHSAN go to Malewa to collect the data we used in designing the implementation plan

(above) school girls carrying water jugs

(left) Purifying water

Schools

- Students at schools will purify the water as part of thier gym class or afterschool.
- To allow the sutdent to use the BWM, they BWM must be part of a water education plan.
- 30min/day – 4 days a week they will purify water.

Girls carrying water en route from Malewa River into Gilgil town

Distance

- The distance between the schools and the slums poses a considerable challenge
  - 2-4 km away.
- An initial investment is needed via micro-financing to bridge the distance
  - Taxi – 500 sh
  - Invest in carts

Better Water Maker (BWM)

- We use the BWM to purify the water in the business.
- Invented by Bob Bechtold
- Hand Crank Powers UV light which kills bacteria in water
- Limited to One water crank at schools
- Purifies a gallon/minute

reservoir at Kimbo School.

Obtain water

- We obtain water to purify from the following water sources
  - City collection points
    - City Check Point
    - Buy
  - Places by the schools
    - Rainwater harvesting system
    - Mawaka and Kimbo have reservoirs
    - Nearby Rivers

Kimbo School

- Business supplies
  - Water, storage containers, etc.

Schools

- Enhancing the education in the participating schools by reinvesting the profits in
  - Books
  - Uniforms
  - Projects in the school
    - Refurbishing
    - Academic projects

Micro Loans

- Paying back the micro-loan which funded the initial start up cost

Goals

- Distribute Clean Water
- Enhance Water Education Program
- Bring in money

Project Introduction

- We're establishing a micro business in a third world country to distribute clean water in the slums.
- We will use schools in Malewa to run our business

Impact

- By expanding the project to other schools throughout Kenya we would ultimately take steps toward.
  - Ending the clean water crisis in Kenya
  - Enhance the awareness of water health throughout Kenya

Purify

Transport

Distribute

Profit

Obtain Water

Storage

- We needed to find a safe, economical, and sustinable solution to water storage.
- Jerry Cans
  - Invest in large container for transporting
  - Pour into existing Jerry cans
- Eventually, we will provide newer and more sanitary containers to be entered into the mix.

Families lining up for water at the only water collection point in Malewa, Kenya

Distribution

- We will sell and distribute the clean water in the slums.
- There is one water tap in these slums which prices water at:
  - 20L - 5 sh
  - Larger Bucket- 10 sh
- We will cut costs and waste by offering a 1 sh discount to those who bring their old containers to fill the water instead of getting a new one.

Making Project a Reality

Micro Loans

- In order to start this project we will have to make initial investments which will be paid for by micro loans
  - Kiva
    - Lends money to entrepreneurs in developing countries
    - Empowers the countries to lift themselves out of poverty
  - Optinnow.org
    - Part of Opportunity International (a non-profit organization)
    - Provides those that live in chronic poverty with the opportunity to change their lives
  - Opportunity.org
    - Creates jobs, start small busnesses, and strengthen communities among the poor
    - Their method is to work through idigenous partner organizations
  - Unitus.com
    - An international non-profit orgnizttion that wants to reduce global poverty
    - Seeks out and partners with young, high-potential microfinance institutions
  - Sba.gov
    - Created in 1953, to strengthen the economy of our nation
    - Helps Americans start, build, and grow businesses

Field Workers

- Malewa Trust
  - Malewa Trust, an NGO in Kenya, has offered to help us implement the device
  - The trust wants to create a plan for an environmental education, sustainable land management, and conservation of biodversity in the Malewa area
- Schools
  - Mawaka (primary), Kimbo (primary), and Ngechu (secondary)
- The students will be purifying the water as part of an education program
- Help deliver the water to the slums
- Interning with IHSAN
  - The team wants to intern with IHSAN in Kenya (as well as the members from our partnering team- Roche- who are doing work with soap in Kenya)
- Implement the BWM ourselves

"Water Facts" water.org. WaterPartners International . 9 Dec 2008 <http://www.water.org/waterpartners.aspx?pgID=889>.
Kitsman, Karin. E-mail interview. 23 Nov. 2008.

Photos by Karin Kitsman

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