

## MAJI SAFI, ELIMU BORA: CLEAN WATER FOR A BETTER EDUCATION

Kenya

Vassar College

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Date range of project implementation: 06/2022 - 08/2022

### BACKGROUND/NEED:

The water shortage crisis has been affecting Kenya for decades and not much has been done to come up with a sustainable solution to cater for the rising population and poverty rates. According to UNICEF(1), 9.9 million people drink from contaminated surface water sources in Kenya alone. This problem especially affects people living in rural areas such as the Bosamaro village in Nyamira county. Children in such areas of sub-Saharan Africa are forced to walk an average of 6 kilometers a day(2) just to collect water which is often polluted. In the long run, this has adverse effects on their lives and education.

There have been attempts to implement water projects across the country to combat the shortage.

Unfortunately, many of the projects often only work in the short term since they require constant financial backing and resources to maintain. Such resources are extremely scarce and are heavily invested into the larger cities leaving the poverty-stricken rural areas to fend for themselves.

The need for a sustainable water supply project has never been higher. My project idea utilizes a simple, effective, and proven method to improve clean water supply that is highly cost-effective to maintain in the long term.

### PROJECT IDEA DESCRIPTION:

Depending on the water supply provided by the county government has constantly proven to be ineffective since it is highly erratic and often dependent on how well developed and urbanized the area is. Nyamira county is in the highland regions of Kenya where most of the tea and subsistence crop production is done. The high altitudes coupled with vast forested lands have made the county have one of the highest precipitation levels in the country. On average, the county receives rain 82% (300 days)(4) of the year. My project idea leverages this fact to provide a steady supply of water especially during periods when government supply is low.

I propose to build one 10000-liter tank and two 5000-liter tanks in each of 3 schools in Bosamaro village: Nyachururu Secondary School, Motagara Secondary School and Marani Secondary School.

The project will implement a simple rainwater collection system from which the run-off from various structures and buildings will be channeled through a system of gutters into the 10000-liter tank that will be placed in a strategically low position. The water will then be pumped into the 5000-liter tanks which will be placed in a position of high elevation using Pedrollo water pumps that are proven to be highly effective and long-lasting when used in such water systems. From these tanks, the water can flow its various points of use by gravity. This water will primarily be used in the bathrooms.

The next phase of the project involves educating the community (with an emphasis on the students) on proper use of the water. I will hold a seminar in each school for the students where members of the community are invited. The seminar will focus on water conservation, proper sanitation, and its importance in promoting a healthy education for children and maintaining peace in the community.

Additionally, posters on the same will be hung on various school and classroom announcement boards as a constant visual reminder.

### PEACE/EXPECTED OUTCOMES:

Ease of access to clean water will enable children to focus on their education rather than spend their days fetching water. It will reduce the high dropout rates in the county hence lowering the chances of girls being forced into early marriages and boys being forced to work on farms and herding cattle. It will also increase literacy levels in the county which will promote youth development. An estimated 400 children will be directly impacted, in addition to the indirect impact on the surrounding community.

Deadly communicable diseases(3) related to polluted water such as diarrhea and cholera that affect child mortality in sub-Saharan Africa will be alleviated in the community.

The project will also decrease the risk of children drowning in rivers and streams brought about by the increase in flash floods in the county in recent years. It will decrease the risk of children being attacked by

water animals such as hippos. The children will also become less susceptible to violent crimes such as kidnapping and physical assault that often happen along the paths to the rivers and streams.

#### PROJECT TIMELINE:

February – April 2022: Researching and Planning

- Maintain close contact with the three schools and liaise with them on execution of the project.
- Contact local manufacturers to determine the best supplier for project materials.

First week of June 2022: Travel to Kenya.

June 13th – July 29th: Project Construction

- Transport of construction materials to the schools.
- Hire experienced local labor and supervise the construction of tanks and water systems in the schools with the help of the local MCA (Member of County Assembly) Charles Keganda.

August 1st – August 5th: Project Dedication and Education of the Community

- Dedication of the project to the schools and community.
- Putting up posters and holding a seminar to educate the community on water usage.

#### WHY I QUALIFY

I have very close ties with Bosamaro village since I spend at least 2 weeks there every year visiting my paternal grandparents. Due to my good grades in both primary and secondary school, I'm often requested by headteachers in the local schools to speak to and inspire the students as they prepare for their national examinations. During these interactions, I'm able to witness the struggles the children and community go through trying to access their basic needs in life. With the funding from the Davis 100 projects for peace, the project will not only be improving the lives of the Bosamaro community, but it will also be a source of inspiration for all the children in the village to strive for more and hopefully go on to promote peace in their own way.

Additionally, I worked on a similar rainwater collection project with my father on his 31/4 acre farm in Nairobi in 2019. The project has been a success so far, with the water collected being sufficient for the crops, chicken, and domestic use. Considering this success in an area that receives much less rainfall, I believe I'm highly capable of successfully implementing the project in the Bosamaro village.

#### SUSTAINABILITY AND FOLLOW-UP PLANS

As mentioned earlier, due to the altitude and forested nature of Nyamira county, there is constant rainwater supply to ensure sustainability of the project. The simplicity of the project ensures that the only recurring costs incurred are the maintenance and cleaning costs of the pumps and gutters. This comes to 50\$ (at most) every two months and will be funded from the project funding for the first 4 months, after that I will request the local municipality to cater for the costs using the Constituency Development Funds. I also plan on following up on the progress of the project every year when I visit the schools to speak to the students. In addition to helping them with their academics, my talks will involve reeducating them on the need for a consistent supply and use of clean water to better their lives and education. I intend to write up brief annual progress reports and submitting them to the MCA with the hope of incentivizing the local government to implement similar ideas to battle the water crisis in the county and hopefully in the long run it can also spread throughout the country.

#### CITATIONS:

1 "Water, Sanitation and Hygiene". Retrieved from: <https://www.unicef.org/kenya/water-sanitation-and-hygiene> UNICEF 2021.

2 "Water within reach: Compare two 5-year-olds' walk for water. Retrieved from: <https://www.worldvision.org/clean-water-news-stories/compare-walk-for-water-cheru-kamama> World Vision 2017.

3 "Childhood diseases". Retrieved from: <https://www.unicef.org/health/childhood-diseases> UNICEF 2021.

4 "Nyamira, Kenya climate". Retrieved from: <https://tcktcktck.org/kenya/nyamira> Weather and Climate.