**Title**: **Integrated water project for improved health for women and children in Mutulani village Makueni County Kenya**

**Background**

Poverty Eradication Network (PEN) is a Kenyan NGO registered in December 2001. PEN fight against poverty and injustices that come in different forms; wastage of resource, destruction of environment, corruption and malpractices and climate change related mitigations. PEN zealously works with communities and like-minded organizations, networks and coalitions to conserve and utilize natural resources for a greener and prosperous future. Our mission is to build “a society where all people have access to a life of dignity, devoid of absolute poverty”

PEN empowers citizens and their organization to become effective agents of change in order to confront the many challenges that they face in the struggle to provide for their families. Our ultimate mission is to create wealth and prosperity among the poor through value driven programmes that enhance capacity, sector coordination, sustainability and citizen’s voices.

We have been mobilizing citizens and civil society organizations since 2009 to push for enabling environment for civil society sector by reforming the outdated 1990 NGO Act with an all embracing Public Benefit Organization (PBO) Act that was approved and signed into law by the president of Kenya in 2013. Although the government has not implemented the law, it is a progress that we are proud of and that we continuously work with other Civil Society actors, political leaders and the courts to advocate for the full implementation of the Act**.**

**Update on Global Giving supported activities**

The following are some activities supported through Global Giving Fund in Mutulani todate:

1. Purchase of three storage tanks of 10,000 liters each, one for the secondary and two for the primary schools. The tanks are mainly used to harvest rainwater from roof catchments during the rainy season. One filled tank supplies water for 2 weeks to the primary school and 1 week to the secondary school respectively. More than 700 children benefit from this intervention in the two schools for about 8 months of a year.
2. Although not in the initial plan, the project supported community to construct 1 sand dam that has significantly improved self-sufficiency in water by 9 months. The community now has a whole year water supply although poor sanitation practices contribute to pollution of the water especially three months to the rains due to growth of algae, requiring filtration and treatment to be potable. The sand dam has also reduced siltation of an earth dam downstream, which does not dry now unlike before. “The sand dam does not dry and is the main water source for livestock and household in Mutalani area” Says Mary, a project officer with PEN. The dam is however not enclosed and is shared with livestock and wild animals which contaminate the water. The seasonal stream avails water only during the rainy season making the community experience long spells of water shortage especially when rain distribution is poor. “We however need to improve sanitation levels by constructing toilets, to stop pollution of dam water and also improved water filtration and treatment especially three months before the rains due to built-up of algae caused by stagnation of water and pollution”. She continued. The dam currently serves about 300 households and approximately 1800 people.
3. In 2016 when PEN received a disbursement of 15,000 USD from Global Giving, the Mutulani Community was supported to sink a borehole, which was successfully completed in May 2017. The Borehole is now complete although external accessories such as the water pumps and distribution lines and power to the well have yet to be fitted. As a positive step forward, the Makueni County Government has agreed to fund these remaining activities to make the borehole fully operational. The challenge with the borehole is that it did not yield sufficient water as anticipated. Current estimates indicate that the borehole has a potential to yield 1.2 cubic meters (1,200 liters) per hour and a total of 10,000 liters per day and although this would provide adequate water to the two schools and also community, there are risks that this amount would decline due to declining ground water stocks. It is for this reason that we seek through the second phase of the project to improve recharge of ground water through conservation of rain water to ensure improved storage of ground water. Anticipated activities include construction of water conservation structures; bunds and terraces, tree planting, roof catchments for rain harvesting, erosion and flood control. Examples in Rwanda and Ethiopia suggest that such conservation would dramatically transform ground water levels in the next three years and green the environment through availability of ground water, reduced erosion and planting of trees.

**Project Impact**

The project though still not fully completed, has had tremendous impact on families and children with improvements in mean grades in the primary school. It has provided a great reprieve to children as they no longer need to carry water from home to the school for cooking and cleaning duties. The project has reduced water shortage by more than 6 months. There are now only 3 months of drought where water for drinking is scarce. The project has served more than the targeted number of people. When completed, the project will serve 2,500 people instead of the anticipated 1500.

The next allocation from Global Giving will be dedicated to sanitation and hygiene training for schools and communities and management training for water projects boards to ensure that the project will be sustainably managed in the longer term. Increased collaboration with the County Government with the promises to support in fitting the water pump and extending electric power to the site are positive steps that would significantly improve benefits to communities. “We are fore-seeing a community that will be water secure for the next 15 years arising from the support. We have gone beyond planned activities and we would like to appreciate 132 donors who supported the project. Much appreciation to Global giving for giving Mutulani Community the infrastructure to meet these number of donors.

**The need**

Mutulani village in Makueni County is located at the lower Eastern region of Kenya. This is a semi-arid zone with low levels of rainfall, highly prone to frequent droughts, severe food shortages and scarcity of water. Makueni is one of the most food-insecure areas of the country and over 70 percent of the households are classified as poor or very poor.

The main livelihood of the people is rain-fed subsistence agriculture. Other sources of livelihood include: livestock rearing; hired labor; selling of charcoal and fire-wood; brick making; petty trading; and when available, food aid. Most of the agricultural activities are done by women as men are largely involved in other income generating activities and a good number of them have migrated to urban centers of Nairobi, Machakos and Wote. The community of Mutulani faces severe water shortages especially during the dry seasons

Our collaboration with Global Giving Fund in improving water and sanitation services to schools in Mutulani Village has been going on since 2013, when we initiated the establishment of clean water and improved sanitation project to serve 1500 women and children affected by acute water shortages and related water borne diseases in Mutulani village in Makueni County in Kenya. The project was set up to improve the health of women as they would not need to fetch water on their backs from long distances (previously more than 3 kilometers) and now less than 1 kilometer.

Children are great beneficiaries as they are able to learn better as they would spend less time and labor fetching water used in schools and at home. It is also anticipated that improved water and sanitation would reduce absenteeism by reducing and eventually curbing the prevalence of water borne diseases among children. Girls would also be the greatest beneficiaries because of culture that placed a lot of burdens on them supporting their mothers in carrying out myriad domestic chores, particularly fetching water and fuel wood.

Improved water and sanitation for water fetched from dams and rivers is also a critical need as highlighted above and should be tackled through sanitation and environmental education, support to construct toilets and water filtration facilitation at water sources. The two schools share pit latrines that are not adequate and not well maintained. The latrines also lack hand washing facilities. Another unrelated problem is that of girls’ absenteeism in the two schools due to lack of sanitary hygienic towels during their monthly periods although the government has put a policy of free sanitary pads for girls in all schools, which is yet to be implemented.

**How will this project solve the problem?**

To sustain the available water, this project has been identified as a priority by the people of Mutulani Village with the support of Poverty Eradication Network (PEN) and the local leaders. Experts from the water and agriculture departments have been brought in to provide technical skills about sustaining the available water for the needs of Mutulani community. The project will target initiating hand washing programmes to eliminate hygiene related diseases and will launch a programme to upgrade the school toilets as well as distributing sanitary towels to keep the girls in school and improve the general sanitation of the community. The leaders from a local Community Based Organization (CBO), MAWE and the project committee responsible with overseeing water issues will be trained in running the project. It is expected that by the end of the project, there will be increased access to clean water, improved health and sanitation as well as increased engagement in agriculture and non-farm economic activities and more time available for school children to play and study, improving academic performance.

**Proposed solutions**

To resolve the challenges faced by the Mutulani community, the following will be done:

1. The project will initiate ground water recharge mechanism targeting approximately 10 hectares for the already drilled borehole and train the community on surface water harvesting tree planting and environmental management to improve ground water recharge and ensure adequate water supply all year round;
2. Construction of 6 modern toilets in Mutulani Primary and Secondary Schools and establishment of a hand washing program to ensure there are zero cases of water related diseases reported;
3. Installation of a Bio-digester to ensure safe fuel (Biogas) is produced for energy needs for the schools;
4. Educating girls on their rights to free sanitary pads as per education policy and support distribute sanitary towels to teenage girls to keep them in school throughout the term; and
5. Training the youth, women and students on water supplies management, total community led sanitation, water conservation, tree planting and use of water for productive activities, and hygiene.

This project is aimed at serving over 350 households within Mutulani community including all the community institutions estimated at 2,000 people.

On its part, the community will provide all local resources needed in this project including bricks, water, sand, stones and unskilled labor, resources sought will be used to purchase materials that are not available locally like machinery, cement and skilled labor.

**Proposed Activities**

Some of the proposed activities to actualize this project include:

* Construction of surface water harvesting and recharge structures;
* Construction of modern toilets;
* Purchase and installation of hygiene equipment for hand washing
* Installation of a Bio-digester for fuel production to conserve forests within the schools;
* Training on income generating initiatives (both farm and nonfarm) such as vegetable production and tree planting;
* Establish a sustainable programme to distribute sanitary towels;
* Development and implementation of a health education programme for school children and community.

**Short/long term impact Indicators**

Some of the intended impacts of the project are:

* Improved health for children and community at large;
* % increase in per capita consumption of water;
* % decrease in incidence of water borne diseases;
* # of days of absenteeism by children
* improving academic performance;
* % Increase in time to engage in other social and economic activities e.g. vegetable production and tree planting; and
* % Improvement in sanitation for all in the community especially children and women.

**Budget**

Total project budget $226,164.

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| **#** | **Project Activities** | **Cost in USD** |
|  | **Budget Items** |   |
| **1** | Drilling borehole and Installation of water pump | 17,647 |
| **2** | Provision of piping and water storage tanks | 9,412 |
| **3** | Development of 2 community water collection points | 2,353 |
| **4** | Training of water artisans on repair and maintenance of water supplies | 2,353 |
| **5** | Health education and water conservation training sessions for women and school children | 1,500 |
| **6** | Support to women - grow vegetables and other social and economic activities | 3,529 |
| **7** | Training of water Management committee |  7,220  |
| **8** |  Awareness creation on water & sanitation issues |  8,205  |
| **9** | Training of the MAWE CBO |  32,820  |
| **10** | Construction of 2 water recharge and harvesting structures |  13,128  |
| **11** | construction of 4 modern toilets |  59,076  |
| **12** | Installation of the hand washing equipment |  19,692  |
| **13** | Bio-digester system & Bio gas piping |  24,615  |
| **14** | Supply of sanitary towels to school going girls  |  19,692  |
| **15** | Dialogue forums to enhance girls’ hygiene and sustain the sanitation program |  4,923  |
|   | **Total** |  **$226,164** |