



REHABILITATION OF LOCAL WATER PIPE LINE

**By Alexandre Rurangwa
CorpsAfrica/Rwanda Volunteer Group 4**

District: Ngororero

Village: Kariha Village; Kageshi cell, Kageyo sector. Ngororero district, Western province

Google Map link: [//goo.gl/maps/YjXyEMenWiqrd9GR7](https://goo.gl/maps/YjXyEMenWiqrd9GR7)

Community Partner Organization: Abatiganda (courageous people)

Community Counterpart - name and background: KABANDA Shadrack is a resident of Kariha. He completed his Secondary School education, and he is an opinion leader in this village. He has been on the village committee and is involved in conflict resolution at the village level, which allows him to organize different community works and mobilize the people of Kariha to build houses, kitchen gardens, and toilets for the most vulnerable people in the village. The activities he is involved in have made him a trustworthy man in the community and make him an excellent choice to be the Project Leader for the Water Pipeline Project.

Project timeline:

It is planned to start in July 2020 and finished by November 2020.

Project Summary:

NYABIHANGA-KARIHA is a water pipeline of 3km 320m long that served KARIHA village from 1985 to 2016. After 31 years of use, it was finally damaged in 2016 and the lack of water supply in the village has persisted ever since.

Not having water supply in their village has resulted in lack of access to clean water, placing a heavy burden on women and children as they are mainly responsible for home activities including fetching water. After the implementation of this project, the village will have access to clean water, water borne illnesses will become less prevalent. Children's performance in classes will improve since they will be able to invest time in studying instead of fetching water, and school dropout rates will also decrease as a result. Community members will save time they currently use to fetch water for other activities that contribute to community development.

The rehabilitation of this water pipeline will include the fixing of water leakage at the source, excavation of trench, buying and installation of new pipes, backfilling the trench, building three water taps and repairing water tanks. Costs of this project will include labor materials and equipment. In the implementation of this project, 33% of the whole project will be community contribution through cash, donation of land for infrastructures and community in-kind activities.

About the community:

Kariha village is situated in Kageshi Cell, Kageyo Sector, Ngororero District, in Rwanda's Western Province. This village has 294 families with total population of 1097. It is a rural and remote area where the main economic activities are cultivation of subsistence crops and cash crops, farming, and small business. It experiences rainy and cold weather. Residents of Kariha cultivate during most seasons but especially in September and January. Onions, sweet potatoes, maize and tea are the main cash crops in this area. While conducting door-to-door visits, it was clear that hygiene and sanitation is a big issue because they do not have access to clean water. The community came up with the project of rehabilitating the Kariha water pipe line because they understand that water is very important in their daily survival and to improve their circumstances.

Kariha village consists of men, women and youth. They live in different ways due to their differences in age, gender, and beliefs. Men, women and older children are busy harvesting tea and cultivating other crops from 6 am to 4 pm as many families in the village totally depend on agricultural activities. During this time, young children attend school at Kariha Village Primary School. At sunset, you find many people, especially men, in the local bars having beer at the village shopping center, while women stay at home for evening activities such as cooking and cleaning. Community members in this village meet on Tuesday afternoons in community assembly (inteko y'abaturage) to solve existing problems between them. They also participate in community works such as building houses and toilets to help the neediest ones among them. They all go to the market on Tuesdays and Saturdays to purchase and sell food in the neighboring sector.

How did the project come about?

As a CorpsAfrica Volunteer, I received one month of training on Design Thinking approach. This method helps to engage community members to identify assets and needs by using Asset-Based Community Development and Human-Centered Design. I organized different community meetings to better understand my community. The meetings created unity among them and provided a safe platform where everyone felt comfortable to raise their thoughts on the most pressing issues of the community. When it came to looking for solutions of their problems, there were many good ideas raised by community members.

They finally agreed on the project rehabilitating their local water pipe line of 3km320m because it addresses several overlapping issues. The damaged water pipeline has placed a large burden on women and children as they must instead walk down into the valleys to get water from the natural water sources and small rivers that have resulted from the mountainous landscape of this community. This damaged pipeline was used as the main water supply in both the village and its neighboring villages, and it has been impossible to find another prepared water source nearby. Some families send their children to fetch water in the valleys, which eventually leads to poor performance in classes and school dropout as their responsibilities at home take priority, and they ultimately receive bad results in national exams. Lack of water leads to lack of access to appropriate hygiene and sanitation. Those who cannot walk long distances fetch unclean water near their villages and suffer from waterborne diseases. Those who do get clean water for their homes are less likely to use it to wash their hands than to cook and hydrate themselves.

How does the project engage and build on assets of the local community?

This project has long been a priority of the community of Kariha that is why this community is keen on giving their best to rehabilitate this local water pipe line. In the past, they had tried to pass their issue to

local government authorities with no success, but it will be facilitated by the CorpsAfrica volunteer as their established field partner. It will directly benefit a part of Kariha Village and Kariha Primary School because they are in the area covered by the water pipeline and it will also indirectly benefit other neighboring communities. All these communities will work hand in hand to sustain the Kariha local water pipe line. We are also working on connecting this organization with a water organization working in Ngororero district to collaborate with them on future water projects. The other effort they build on is the agreement of CorpsAfrica to do continued follow-up on this project, in line with the government's goal of putting forth all efforts and working with partners to make sure all Rwandans have access to clean water by year 2021

How is this project sustainable?

The idea for this project was identified and proposed by the community after doing door-to-door visits and community mapping exercises with the CorpsAfrica volunteer. But even before the volunteer's arrival the people of Kariha had tried to address the issue with local government authorities. Kariha community members are highly committed and they are willing to do anything they can to make this project successful and sustainable. The CorpsAfrica volunteer made sure everyone's voice was heard while facilitating the community to choose a project. This will make every community member feel ownership over this project. Direct beneficiaries of this project have already started to save money for their contribution during the implementation of this project; they will keep saving money monthly on their account to make enough money available to use if any damage to the pipeline occurs. Any repairs that require manual labor will be done through voluntary community works. Community group leader, local government authorities and CorpsAfrica will play a great role of making sure the sustainability and impacts of this project are measurable and continuous.

How will success be measured?

After this project is implemented, all 200 families in Kariha village and 574 students of Kariha primary school will have access to clean water and sanitation. The following indicators will display the success of the project:

1. Water supply in the village: 200 families and Kariha primary school will have access to clean water; at least 75 liters will be available for each family per day.
2. Women and children will save time fetching water from the new pipe. People in this village usually spend more than three hours a day on fetching water. After the implementation of this project they will save those hours for other activities hence reducing a burden upon women and children as they are the ones responsible for home activities including collecting water for home use. They will also use the saved time for economic activities and they will have time to take care of their children after work and increase their children's performance in classes.
3. School dropout rates will decrease. At Kariha primary school, the dropout rate is about 5%. After the implementation of this project, we expect that school dropout rate will decrease to below 2%. The problem of lacking of water supply is not the only cause of school dropout in this village; rural families experience different problems that affect the education of children. The extent of the implementation of water pipeline project on decrease of school dropout is that when the children use less time to fetch water for their families, they will be able to prioritize their studies and will be less likely to drop out of school

What will be the impact of the project?

This project will have a major impact on Kageshi community livelihood and that of neighboring communities. It will especially reduce the burden on women and children, who are responsible for home activities, and who currently travel long distances to fetch water in valleys. Those who cannot travel long distances will now be able to get water near their homes where before they had to restrict their water use or use unclean water sources. Women and young girls will benefit greatly from having access to clean water in their homes and school as they need appropriate hygiene and sanitation more than others while having their periods. There will also be enough water supply for irrigating kitchen gardens and other crops to ensure regular supply of vegetables to fight against malnutrition. Time wasted to fetch water will be used for other activities that contribute to family development. Children performance in classes will also increase, as children will have more time to dedicate to their studies. They will be less likely to drop out of school as their burden of work at home is lifted. Increasing the Kageshi community's access to clean water will elevate levels of hygiene and general health of the people living in this remote area.

Is there anything else you would like to add?

Yes, it has been a good experience to integrate and serve this community. I know it quite well through all community meetings I attended, voluntary community works I participated in and all activities we have done together so far. The community members are very active and they are keen on contributing their time, land, cash and efforts in the implementation of this project. They have team spirit and show great ownership of the project. In addition, the local government authorities value the idea of rehabilitating Nyabihang-Kariha water pipeline.

Exchange Rate	1 USD = 950	Rwandan Franc - RWF										
		Unit Cost		Total Cost	Grant Request		Community Cash Contribution			Community In Kind Contribution		
Line item description	Category	Local currency	Quantity	Local currency	Local currency	USD	Local currency	USD	Expected Source of Community Cash Contribution	Local currency	USD	Describe Community In Kind Contribution
<i>user inputs below</i>	<i>user selects below</i>	<i>user inputs below</i>	<i>user inputs below</i>	<i>locked formula</i>	<i>user inputs below</i>	<i>locked formula</i>	<i>user inputs below</i>	<i>locked formula</i>	<i>user inputs below</i>	<i>user inputs below</i>	<i>locked formula</i>	<i>user inputs below</i>
Site clearing & Excavation of land drainage	Labor	20,000	15	300000.00	300000.00	\$315.79	0.00	\$0.00		0.00	\$0.00	
Project Engineer	Other	600,000	2	1200000.00	1200000.00	\$1,263.16	0.00	\$0.00		0.00	\$0.00	
Supply and installation of pipes	Materials/Supplies	300	3320	996000.00	996000.00	\$1,048.42	0.00	\$0.00		0.00	\$0.00	
Supply of cement	Materials/Supplies	10,000	30	300000.00	300000.00	\$315.79	0.00	\$0.00		0.00	\$0.00	
rebar	Materials/Supplies	8000.00	10	80000.00	80000.00	\$84.21	0.00	\$0.00		0.00	\$0.00	
rebar tie wire	Materials/Supplies	1500.00	10	15000.00	15000.00	\$15.79	0.00	\$0.00		0.00	\$0.00	
Grounds for water infrastructure	Land/Venue Rental	800000.00	1	800000.00	0.00	\$0.00	800000.00	\$842.11	community's contribution(weekly savings)	0.00	\$0.00	
water repellent cement	Materials/Supplies	50000.00	2	100000.00	100000.00	\$105.26	0.00	\$0.00		0.00	\$0.00	
supply and intalling of sheeting	Materials/Supplies	25000.00	1	25000.00	25000.00	\$26.32	0.00	\$0.00		0.00	\$0.00	
supply and installation of strainer	Materials/Supplies	10000.00	1	10000.00	10000.00	\$10.53	0.00	\$0.00		0.00	\$0.00	

transport fee	Equipment/Materials/Supplies Transport	4000.00.00	1	4000.00.00	4000.00.00	\$421.05	0.00	\$0.00	0.00	\$0.00	
supply and installation of clay	Materials/Supplies	2000.00	15	3000.00	3000.00	\$315.8	0.00	\$0.00	0.00	\$0.00	
supply of water gavel	Materials/Supplies	3000.00	8	2400.00	2400.00	\$25.26	0.00	\$0.00	0.00	\$0.00	
excavation of trench	Labor	4000.00.00	1	4000.00.00	0.00	\$0.00	0.00	\$0.00	4000.00.00	\$421.05	Through Community work they will put together
backfilling of trench	Labor	3000.00.00	1	3000.00.00	0.00	\$0.00	0.00	\$0.00	3000.00.00	\$315.79	their efforts and take their time to excavate and
rehabilitating the main water tank	Labor	1000.00.00	1	1000.00.00	1000.00.00	\$105.26	0.00	\$0.00	0.00	\$0.00	backfill the trench and plant grasses on water
building of water tapes	Labor	3000.00.00	3	9000.00.00	9000.00.00	\$947.37	0.00	\$0.00	0.00	\$0.00	source
valve (vanne)	Equipment	1200.00	3	3600.00	3600.00	\$37.89	0.00	\$0.00	0.00	\$0.00	
supply of sand and stones	Materials/Supplies	4000.00.00	1	4000.00.00	0.00	\$0.00	400000.00	\$421.05	0.00	\$0.00	
Grass planting and fencing source	Labor	1000.00.00	1	1000.00.00	0.00	\$0.00	0.00	\$0.00	1000.00.00	\$105.26	
Administrative fee	Other	3375.00.00	1	3375.00.00	3375.00.00	\$355.26	0.00	\$0.00	0.00	\$0.00	
Summary Totals				6853500.00	4853500.00	\$5,108.95	1200000.00	\$1,263.16	800000.00	\$842.11	