

Carina Water Wells Project Impact Assessment Report June 2015

Inonelwa, Kwihala villages, Isukamahela, Kwihala and Kitete Primary schools

Tabora Region Tanzania

Implementing partner NGO Sudeso (Sustainable Development Solutions)

Background:

Projects Implemented;

Inonelwa Village – A shallow hand dug well community project constructed in 2005. The 13ft well cavity is lined with concrete rings, enclosed with a hand operated pump and a concrete apron for water runoff.

Isukamahela School - A 40,000 liter rainwater harvesting tank constructed in 2009. It is a circular concrete structure with a cone shaped top, wire mesh lining, and an overflow pipe. There is a faucet at ground level for accessing the water. PVC roof guttering funnels the rain water into the tank.

Kwihala Village –A shallow hand dug well community project constructed in 2009. The 18ft well cavity is lined with concrete rings, enclosed with a hand operated pump and a concrete apron for water runoff.

Kwihala School - A 20,000 liter rainwater harvesting tank constructed in 2009. The design is the same as the one at Isukamahela School.

Kitete School - A 20,000 liter rainwater harvesting tank constructed in 2011. The design is the same as the tanks at Kwihala and Isukamahela schools.

(Videos of the above projects can be viewed at <http://www.carinawaterwells.org/>)

Executive Summary

A preliminary impact evaluation was carried out in June 2015 for the Carina Water Wells Project in Tabora Region by Smart Decisiontz as a consultant supporting implementing partner Sudeso (Sustainable Development Solutions). Assessed was the impact that these projects brought to the community according to the view of beneficiaries and community from sampled residents of Inonelwa, Kwihala villages, and students from Isukamahela, Kwihala and Kitete primary schools. A number of participants were involved in this survey which involved structured questionnaires and observations. The team physically visited all five sites.

This report presents the findings, conclusions and recommendations from the community perspective. The community based water supply which includes two protected water wells (at Inonelwa and Kwihala villages) and three rain water harvesting tanks (Isukamahela, Kwihala and Kitete schools). The water well at Kwihala village and two rain water harvesting tanks at Isukamahela and Kitete schools were still functioning at the time of this survey. In all areas the Carina Water Wells Project implemented by Sudeso was a success in that the outcome impacted the lives of those households in the targeted villages and schools.

A sampling was organized to interview at least five respondents from the specific project areas. Some benefits that occurred include the reduced burden on women. Formally, collecting water from a source was a distance of more than two hours and was the women's responsibility. However, after the implementation of these projects women, students from the schools and village administration concluded the burden on women and children has been reduced.

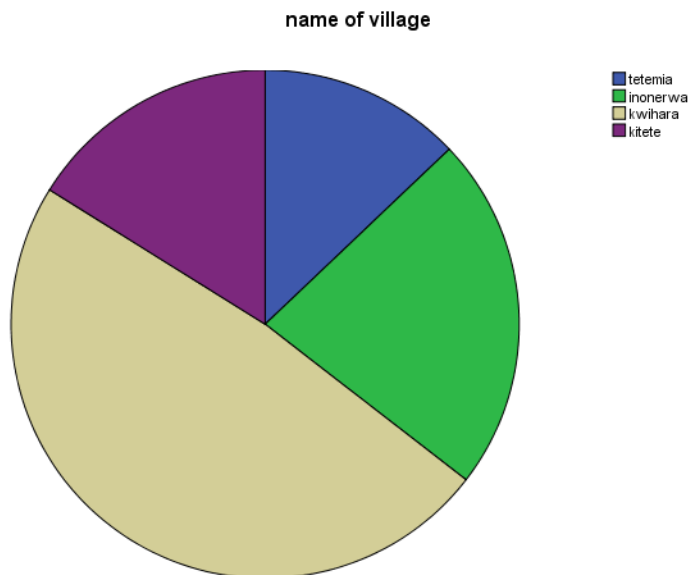
Moreover, the majority of households surveyed about the project agreed that now they have more time which allows people to engage in other socioeconomic activities, such as farming,

vegetable gardens or other businesses to help them earn a small income. Students who were interviewed also believe there have been significant health benefits by improving hygiene, washing hands and cleaning classrooms to reduce dust.

Another area the survey focused on was collecting the community views on how, and in which area improvements are needed if there are be any future projects.

The report also highlights some challenges and concerns of not having financial viability of the projects deemed a success. Operation and maintenance costs are the major challenges in these areas because two out of the five Carina Water Wells Project water sources were not functioning at the time of this survey. However, the village leaders expressed interest in meeting with the community water committees to discuss ways of controlling and maintaining the projects.

Distribution of respondents by location



Score of different variables by number of respondents

VARIABLES		
Gender	Frequency	Percent
Male	18	58.1
Female	13	41.9
Age group		
below 18	9	29.0
19 to 45	16	51.6
above 45	6	19.4
Marital status		
Married	11	35.5
Single	17	54.8
Widow	1	3.2
Divorced	2	6.5
Occupation		
Employed	2	6.5
Business	2	6.5
Farmer	12	38.7
Others	15	48.4
Education level		
Primary	24	77.4
Secondary	4	12.9
Other	3	9.7
Position in household		
household head	9	29.0

VARIABLES		
Frequency of fetching Water		
Everyday	27	87.1
twice a week	2	6.5
Other	2	6.5
Water usage per day-# of 20 liters container		
One	1	3.2
Two	3	9.7
Three	3	9.7
Four	7	22.6
more than four	17	54.8
Status of Carina funded Water source (Function or Not)		
Yes	24	77.4
No	7	22.6
Does Carina Water Project produce water throughout the year		
No	31	100.0
Yes	0	0.0
ANY PROBLEM WITH Carina Water Project		
Yes	30	96.8
No	1	3.2
Are you paying to collect water for other water project		
Yes	6	19.4
No	25	80.6
Responsible Person to Collect Water		
Only male	1	3.2
Only Female	11	35.5
Both Male and Female	19	61.3
Who Supports Maintenance of Available Water project		
Government	5	16.1
NGOs and other donors	26	83.9
Respondents Reported to Use Water Sources from the following sources		
Water from community protected well	11	35.5
Water from community well unprotected	15	48.4
Water from tap water connected to household	5	16.1

Results:

The Results presented in this chapter covers interviews from a total of 31 respondents from four locations where the Carina Water Wells Project were implemented. In the four locations a total of five water projects were implemented. The method of obtaining these respondents was by convenience of those who were around at the time of our visit for the evaluation.

However consideration was made for people living within one kilometer from the water projects. Included were those who had been present for at least two years prior in the villages, or at the schools where the Carina Water Wells Project was implemented.

Prior to interviewing each respondent consent forms were signed to agree to be interviewed, videotaped or have their picture taken during the evaluation exercise (which is the law in Tanzania). Approximately 9 (29%) out of 31 respondents were willing to participate in the interviews but opted not to be included in the videotape or have their picture taken.

The figures below represent the proportion of respondents from the four different locations in Tabora District Tanzania. Two villages - Inonelwa, Kwihala, and three primary schools Isukamahela, Kwihala and Kitete (in Tabora town).

The majority of respondents (58%) were male. Of these nearly 52% are between the ages of 19 and 45 and more than half of them (55%) were single. A total of 77% were educated to primary school level and 55% were sons or daughters within the households.

Only 35% of thirty one households interviewed had less than 6 people in a household. Most of the households reported to have between six and ten members currently living within their families. At the time of the evaluation 84% of respondents reported that the water source funded by the Carina Water Wells Project was not currently functioning. When asked whether the water

source functioned throughout the year (if it wasn't broken), all respondents reported the water sources are seasonal and do not function consistently throughout the year. However it is helpful during the rainy season and still functions three months after the rainy season ends.

It was interesting to find out how much water was used in their households every day and how frequently they go to collect water. 87% of households reported they use more than 60 liters of water daily. The same number of respondents (87%) reported they commute (walk/bike ride) every day to collect water. Apart from the time spent commuting and queuing for water most respondents (81%) were grateful that they are not paying cash at the water sources.

Amazingly, approximately 61% of households reported both male and female are now responsible for fetching water for their household use, only 1% of households reported males as being solely responsible to collect water. When inquiring about how water is transported from the source to the household, most women reported carrying it in containers on their heads while others use bicycles. An individual carries one container of 20 liters at a time while using a bicycle enables a person to transport up to 60 liters.

Another important point was how the respondents and community at large benefited from the Carina Water Wells Project and what the common uses of water were. The main use was for drinking and domestic use, the majority of school children mentioned water has been very helpful for hygiene.

We wanted to know what happened when the Carina Water Wells Project water sources stopped functioning, or something broke and needed repairing. Approximately 96% responded that the water sources at some point had been non-functioning. A majority of the respondents admitted that repairs have been the most challenging issue and that it took a long time to do the repairs. Approximately 84% said they expected repairs to be done by the donor or implementing partner

(Sudeso), while 16% said the local government does the repairs through the village water committees or school committees.

When asked whether the respondents were willing to contribute to the repair of their current Carina Water Wells Project water source (including future projects), 84% of respondents said yes, if a water committee asked them to fund the repair. Out of those who said they are willing to contribute, approximately 27% are willing to contribute in terms of cash, 46% willing to contribute in terms of participating in labor work, and 27% were willing to participate and contribute but did not specify the mode of contribution.

In addition part of this evaluation was to determine what is needed to improve any future projects. Talking to village leaders and the headmaster at Kitete Primary School, all suggested there is a need to include a sustainability plan for the projects, to ensure that should there be problems a solution would be found. This would include water committees, a plan for raising funds for repairs and regular communication between beneficiaries and implementing partner(s).

One respondent a student from Isukamahela made a comment saying “When we have water from this tank, it helps us to wash our hands and make sure our hands are clean before we eat and after using the toilet (hygiene)”

Discussion and Conclusion

Based on the evaluation assessment of the five water points funded by the Carina Water Wells Project, the findings of the rainwater harvesting tanks showed the following - The most recent rain water harvesting tank (20,000 liters) constructed in 2011 at Kitete primary school was functioning and in good condition. It collected rain water during the rainy season which started in December 2014 and stopped in March 2015.

At the time of the evaluation (June 18th 2015), the tank still had some water which the students were using for different purposes including hygiene and cleanliness.

The Isukamahela school rain water harvesting tank (40,000 liters) installed in 2009 was functioning and in good condition.

The Kwihala primary school rain water harvesting tank (20,000 liter) installed in 2009 was not functioning. The tank was in good condition but the PVC guttering pipe (funnels the rain water into the tank) was perforated. The village chairman reported that some children had thrown stones at it. As a result during the past three rainy seasons they missed the opportunity to collect water. At the time of evaluation (June 17th 2015), the headmaster was not on site due to the school vacation so unable to elaborate further. However, several students showed up to be interviewed and confirmed how important the rain water from the tank is for washing hands, cooking and other uses.

On Saturday July 3rd Jacqueline Simone Ambrose (Carina Water Wells) met with Christopher Nyamwanji (Sudeso) and provided additional funds from herself and two residents in Maui Hawaii totaling \$100.00 to replace the PVC pipe. Christopher committed to going to Kwihala village primary school that day with a technician to replace the pipe which would then be

removed (to prevent theft) after taking photos. The tank should then be functional for the rainy season beginning in December 2015.

The findings regarding Carina Water Wells Project two shallow hand dug wells showed the following - The well at Inonelwa village installed in 2005 was not functioning. The reason provided by the village chairman who was present, was that the water table had dropped below the end of the pipes. According to the interviews it had not produced water for approximately three years. When asked whether it could be fixed, Christopher Nyamwanji (Sudeso) replied that it would be more cost effective to dig another well.

Out of curiosity we wanted to know where they get water from since the Carina Water Wells Project source at Inonelwa village is not functioning. The respondents mentioned that there were other water sources although collecting it consumes more time, approximately one hour's walk to the source. 87% of those asked reported they had to wait in a queue for more than one hour, and sometimes more than 3 hours, especially during the dry season (September through November) before the rainy season begins in early December.

When asked where the other water sources in the area, we were shown to a covered water well (bore hole drilled) approximately two kilometers away from the Carina Water Wells Project well. Funded by the Tabora Anglican Church in 1996 (when Christopher Nyamwanji was the Development Officer for the Diocese) it was still functioning. At the time of this evaluation, the community were benefiting from it.

The Carina Water Wells Project well at Kwihala village installed in 2009 was functioning and had water due to the recent rainy season (Dec.-March) when the water table rises, during the dry season the level reduces as water is pumped. The village chairman commented that they now have a few water sources, all are unprotected shallow hand dug wells (funded by a local

businessman who died). The village council decided to lock the Carina Water Wells Project well with a chain after the rainy season to preserve the water. The community used the other water sources first, when they dried up the chain was removed and water was pumped from the well for a further three months before also drying up. When the team visited the Carina Water Wells Project well on June 17th it had just been unchained and there was water which would last for approximately three months until August.

In two of the three villages (Kwihala, Isukamahela) where the Carina Water Wells Project conducted WATSAN (water/sanitation) education, water committees were reported to have been formed. Most of the respondents did not seem to know exactly the last time the committees met, or what their functions was. However most of the people interviewed said there is a problem with water in their areas, so shallow hand dug water wells are not the solution because they dry up approximately three months after the rainy season.

One woman interviewed commented "When the dry season begins water in the wells dries up, and that is the time we really need water". By June they no longer produce water and people have to commute further distances to collect from other water sources.

They recommended that if there are future projects deep water wells must be implemented (bore holes) so that water is available throughout the year.

Although seminars and meetings (WATSAN education) were reported to have taken place during implementation of the Carina Water Wells Project, the consensus was for more support to strengthen the water committees. This would enable them to understand their responsibilities and suggest ways to raise funds. These funds can be used for repairs as needed, and even to implement their own water project. Most people who were interviewed are willing to contribute

cash or labor for the water projects. They mentioned they had participated in previous projects and would do so again for future projects.

Please note - funds for maintenance/repairs was discussed at the WATSAN meetings for the Carina Water Wells Project locations (except Inonelwa village and Kitete School). Mr. Moshi Changa'a the former District Commissioner (demised) chaired a meeting at the local government office near Kwihala village. He donated some money at the meeting requesting the villagers to do the same. It was agreed to set up an account at a micro finance bank. This did not take place.

Recommendation

In order to be self-sustaining it is necessary for the villages and school water committees to have the capacity for fundraising in order to manage minor repairs/maintenance of the water projects, thereby reducing the dependence on donor(s) and implementing partner Sudeso.

At the time of implementation of the Carina Water Wells Project the concept was that the villages and schools own the water source, be responsible for maintenance/repairs and thus be self-sustaining.