

Shiny Village Programme

Shiny Village 9

Final report - 31.12.2016

Final report

Summary of the project

The project was expected to provide for the drilling of 30 deep water wells for as many rural communities of the Ugandan district of Kotido located in the territory of the parish of Panyangara, roughly corresponding to the homonymous political Subcounty. The primary objective of the project was to bring the water coverage of the Subcounty from 24% to 60% and to reduce the daily time dedicated to the supply of water.

At the end of the project we reached the following results:

- 33 new deep wells were drilled, of which 24 are installed and operational, 1 is installed but with seasonal operation, 5 are dry and 3 are not very productive and therefore closed and not installed;
- the access to water ratio for the Subcounty of Panyangara reached 71%. The project also improved the access to water of the 4 other Subcounties of the District of Kotido;
- the communities that received a new deep well say that the time dedicated to the supply of water is actually decreased, leaving more time for productive activities and educational opportunities;
- the same communities say that the the hygiene and health have both increased after the installation of the new borehole.
- all of the 30 beneficiary communities were sensitized in order to form a management committee of the new water point (Water Users Committee), that include at least one woman;
- The 25 (24+1) communities who have received an operational well, were instructed to the proper use of water; the regular and extraordinary maintenance of the mechanical equipment of the well; to the management of the community's financial contributions concerning the operation of the well; and to the community hygiene.

Beneficiaries of the project

Originally the project was meant to benefit from 15000 to 30000 people. During the drawing of the final operational plans, we opted to decrease these numbers to a more realistic value of 300 people per each new water well, with each user able to draw at least 20 liters of water per day in a reasonable amount of pumping time (ca. 1.5 min).

On completion of the project there are 7'200 - 7'500 persons benefiting directly from it. The project also benefits the officials of the Water Office of Kotido, who have been able to gather experience during their work in the field with us and the authorities that have been able to increase their political and social awareness during all phases of the project.

Local partners

- ACT-U Uganda, general supervision of all operations;
- MBK Engineering Ltd. – (ACT-U is the main shareholder) – operations (geological surveys, drilling, installation, biochemical analyses of water, preparation of technical reports);
- Ugandan Government – in all its declinations related to a new water well (the Ugandan Ministry of water and environment – legal framework; the Water Office of Kotido – district water operations and coordination; District, Subcounty and Village administrations – political, social and financial framework.)



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Financial summary

	Budget - GBP	Final - GBP
Total cost of the project	174'662	173'782
Contribution from the beneficiaries	2'768	1'115
Contribution from local partner	541	1'338
Contribution from SPICMA - UK	50'000	50'000
Contribution from ACT-U Switzerland	63'867	60'564
Contribution from Swiss government	57'460	57'460

1. Evolution of the context

In this section of the final report we present the evolution of the context after the Shiny Village 9 project, including our change of approach towards the supply of safe rural water, originated by a renewed cooperation with the Ugandan authorities at all levels.

During the last hydro - sanitary projects implemented by ACT-U in the District of Kotido, our vision of the correct procedures to follow to provide safe water to the rural communities and our contacts with the local authorities were filtered widely by our local partners and our former supervisor.

This situation led us to prepare this project using fragmented data about the real water coverage in the District of Kotido and on the guidelines adopted by the Ugandan Government when rural hygiene and water supply are involved. The data that was available to us was up to date in 2010, but proved to be obsolete for this project and hid a framework that, in five years, has become less pessimistic, even though the emergency is far from being solved.

In the chapter "access to safe water" we present the evolution of the water coverage data from 2010 to the period immediately preceding the deployment of this project. The resulting data is useful to analyze the real impact of the project.

In the chapter "political awareness" we recollect the situation pictured by our former local supervisor and the steps we undertook to verify the situation and to rectify our approach.

We also introduce a chapter regarding the "context of the project" in which we outline the changes we made to the original project, as they had a great yet positive influence on all the operations and results.

ACCESS TO WATER

When preparing the Shiny Village 9 project, the data we had on the real water coverage of the District of Kotido was gathered and published in 2010 by the Directorate of Water of the Ugandan Ministry of Water and Environment in a document that indicated that the 33% of the population of the District had access to safe water, with Panyangara Subcounty being the less served with a coverage of 24% and Kacheri Subcounty having the greater coverage of all at 46%. The same document stated that 78% of all boreholes in the District of Kotido were operational.

From 2016 the Ministry has been publishing updated and more reliable data about water coverage and water sources type. The data is also available online. According to those data, Kotido District now has an average access to water rate of 68.4%, with Kotido Subcounty having the highest at 83% and Rengen Subcounty the lowest at 55%. Panyangara Subcounty has 71%. The data also includes access to water coming from other sources than deep boreholes, like protected springs, centralized distribution systems (public and private), rain water tanks, open sources and dams. Unfortunately, not all the mentioned sources are safe for human consumption. The data related to the operational conditions of the deep boreholes shows that 62% of them are fully functional - a decrement compared to the 2010 data, although the rural population remained roughly the same and the number of installed boreholes has augmented.

Our interventions began on a consistently different basis compared to the one outlined in the original project. When we finished the access to water percentage in the 5 Subcounties of the District of Kotido changed like this:

Kacheri Subcounty - from 54% to 57%

Rengen Subcounty - from 52% to 55%

Nakapelimoru Subcounty - from 70% to 76%

Panyangara Subcounty - from 68% (originally estimated at 24%) to 71%

Kotido Subcounty - from 78% to 83%.

As stated above, the safety of water coming from some type of sources is not or can not be guaranteed. Water harvested in the dams and tapped from rain water tanks is subject to contamination and while being convenient for uses other than human consumption, can still be a vehicle of potentially deadly diseases, especially for children and elderly people. Water supply systems based upon deep water wells, equipped with a manual pump or with an electrical pump feeding a distribution system remain the best methods to guarantee safe water and improve the hygienic and health conditions of the population.

The increase, at least in absolute terms, of the number of deep water wells mentioned in the official data, shows that the involvement of the Government in this field is only slowed only by inadequate finances and not by the lack of political willingness. The number of functioning boreholes went up to 239 in 2017 from 155 in 2010, an increment of roughly 13 units per year, while the number of non operational boreholes increased at a rate of around 15 per year, their number is currently 145 against 43 non operational units in 2010.

If there is a negative balance in the number of deep boreholes equipped with a manual pump, the number of centralised systems is growing rapidly. In 2010 there were only 5 such systems, today they are 38 (only one of them is currently not working). The trend is in line with the Ugandan politic of relying mostly on centralized systems for local growth centres while leaving the manual boreholes for the farthest villages.

POLITICAL AWARENESS

Our previous supervisor depicted a gloomy picture of the political and social mainframes in which we were supposed to work. In the reports that we received there was sign of continuous interferences from the local Water Office, especially towards the end of our previous project, that made us change the location of the water wells and in a couple of cases reached the extent of stopping the works.

Subsequent investigations and discussions proved that the procedural errors of the previous project began while planning the division of the tasks between us and our local partner. Our partner was put in charge of all the contacts with the district, subcounty and village authorities in order to coordinate the selection of the beneficiary communities and their mobilisation, sensitisation and training, while ACT-U got the drilling part of project. Unfortunately the partner did not do what was request from it, probably because it had the habit of working with big international organisations, that rarely followed the government guidelines. If ACT-U trusted the work of its partner without doubts, it is also true that we never crosschecked with it and the Water Office until almost at the end of the project, when the mushrooming of unexpected and unauthorised boreholes became evident and pushed the authorities to step in.

It is thanks to those issues that we started to move and to understand what was really happening and to study what corrective measures could be useful to successfully terminate the former project and to start the new one, this one, without problems. The talks with the Water Officer of Kotido were crucial. He helped us to eliminate doubts and misunderstanding and re-establish a climate of reciprocal confidence. He also helped us to outline the procedures to follow during the initial phases, that are very delicate but decisive for all the project.

What we found is a far better system than the one illustrated to us. Water supply is taken very seriously at all levels. To hinder the political willingness to give access to safe water to the whole population, there seems to be only tight finances and the adverse geology of some sites. Also the local population is determined in owning a source of safe water. The 110 applications for one of the 30 new borehole offered by our project show this somehow new, or at least unexpected attitude.

The Water Office is now able to keep updated records of the water sources of the District, differentiated by type and operational status. The same Water Office strictly applies the guidelines of the Ministry on water supply and does its best to see that all the organisations dealing with water adhere to them. By doing so there is guarantee that the boreholes are distributed equally and that the access to water rate increases in the same way throughout the whole District.

CONTEXT OF THE PROJECT

In order to be able to comply with the government guidelines on rural water supply, we made some important changes to the original project. Its goals and the number of boreholes remained unvaried while the approach changed as follows:

We modified the role of our original main partner, the Catholic Parish of Panyangara, as, we presume due to its involvement in relieving the famine outbreak in the area, it was not fully engaged in our water project. The selection of the beneficiary communities and their sensitisation, mobilisation and trading was handed over to the Water Office of the District of Kotido.

We followed the government guidelines and instead of giving the whole 30 deep water wells to the sole Subcounty of Panyangara, we attributed an equal number of boreholes to all the five Subcounties of the District of Kotido.

The financial contribution of the beneficiary communities was handed over to the Water Officer to be put into the solidarity water fund, dedicated to the maintenance of the existing boreholes of the whole district.

We lowered to 300 the number of persons benefitting from each new water well. This change assures all partners that each person will be able to pump at least 20 litres of clean and safe water in a reasonable amount of time. This will also enable to plan for multiple water wells for each community and a better access to water rate.

2. Logical framework

General objective

Planned	Achieved
To improve the hygienic and health conditions of the rural population of the Subcounty of Panyangara (District of Kotido, Uganda) by the end of this project.	The hygienic and health conditions have improved in all five Subcounties of the District of Kotido.

Comment

We preferred the governmental approach to the exclusive allocation of deep water wells to the sole Subcounty of Panyangara. The governmental approach supports an equal subdivision of the new boreholes among all Subcounties of one District.

Specific objectives

Planned	Achieved
To reach a water access rate of 60% in the Subcounty of Panyangara (Kotido District), thank to the provision of 30 new deep water wells in a radius of not more than 25 km from the Catholic Parish of Panyangara.	<p>The water access rate in the Subcounty of Panyangara reached 71%.</p> <p>The water access rate has been also augmented in the other four Subcounties of the District of Kotido.</p> <p>The Subcounties had the following share of new water wells: Panyangara, Rengen and Nakapelimoru 5 each; Kacheri 3 (+ 1 seasonal well); Kotido 6.</p> <p>The radius of 25 km from the Parish of Panyangara is only applicable to the homonymous Subcounty.</p>
To reduce the time consumed and the distances covered for fetching water in the Subcounty of Panyangara (Kotido District).	The time dedicated to water supply has sensibly reduced. The distances covered have greatly diminished. All the above is applicable to all the Subcounties of the District of Kotido.

Comment

The official documentation about the access to safe water in the rural areas of the District of Kotido that we used to elaborate the Shiny Village 9 Project was published in 2010, we were not aware of the ongoing census of the water wells and of the improved situation in the whole area.

This led us to elaborate the specific objectives of the project that included outdated numbers. In particular for the Subcounty of Panyangara we reported an access to water rate of 23% instead of a more realistic and up to date 68%. The achievement of a water access rate of 71% for Panyangara is therefore justified.

For what concerns the allocation of the boreholes we decided, after getting a positive reaction from SPICMA, to follow the government guidelines and to attribute an equal number of water wells to all the Subcounties of the District of Kotido. For this same reason the exclusive allocation of the entire number of boreholes to the Subcounty of Panyangara has been dropped along as the necessity of drilling in a radius of maximum 25 km from the Parish.

Of the 30 planned boreholes we drilled a total of 33. Among the 33 drilled boreholes only 25 have been installed and are now functioning, although one of those, located in Kacheri Subcounty, is a seasonal borehole with a low yield. The remaining 8 boreholes are unfortunately dry or very low yielding and therefore declared unsuccessful.

Realisations

Planned	Achieved
At least 20'000 people living in the District of Kotido (Panyangara Subcounty) have access to enough safe water - at least 20 litres per person and day. The water well is at a reasonable distance form the Village, maximum 1 km.	At least 1'500 persons living in the Subcounty of Panyangara have now access to safe water in a sufficient quantity (20 litres per person and day). Most of their new water wells are located inside the village boundaries or, when this is not the case, at a distance inferior to 1 km. Another 5'700 - 6'000 persons living in the other 4 Subcounties of the District of Kotido, have now access to safe and sufficient water at the same conditions.

Comment

The number of beneficiaries has been reduced to 300 people per borehole. The original number was not realistic and was weighted upon the count of people occupying 300 households and not upon the individuals. This would have preempted the requirement for each borehole to yield at least 20 litres of safe water per day.

Activities

Planned	Achieved
To sensitise the beneficiary communities about hygiene and to help constitute a water user committee for each borehole.	The sensitisation activities have been conducted as planned. A water users committee has been formed for each drilled and installed borehole. There is at least one woman in each water user committee.
To drill and install 30 deep water wells in the District of Kotido, Panyangara Subcounty.	We drilled a total of 33 boreholes. 24 are fully functioning, 1 is seasonal - yielding water only during and immediately after the rainy season. The 25 boreholes are distributed among the 5 Subcounties of the District of Kotido. Panyangara Subcounty received 5 of the originally planned 30 boreholes.

Comment

The women presence in the water users committees was strongly demanded by ACT-U and is part of the guidelines of the Ugandan government. The committees that had no women among their members were re-sensitised and now include at least one.

3. Local partners

The main institutional partner was the government of Uganda at almost all levels:

- The Directorate of Water Department (DWD), is a department of the Ugandan Ministry of Water and Environment - it is responsible to prepare and disseminate the guidelines for the supply of water at various levels (urban, rural and industrial). It also coordinates all the water exploitation activities of the country;
- The Water Office (WO) of the District of Kotido - is the representative of the Ministry of Water and Environment in the District. It coordinates all the interventions that include water and the related community hygiene. It maintains an up to date registry of all the water points. It also ensures that all the operators follow the ministry's guidelines on water supply;
- Chairman of the Local Council V (LCV) - he is the elected president of the District and has a primary political role. Normally he signs as a witness the contracts aimed at constructing water supply points of any kind, Shiny Village 9 as well. It also eases the contact at political level between the various operators and the governments of the Subcounties and the Village councils;

- Office of the District Administrative Officer (CAO) - it is responsible for the resources and finances of the District. He signs the contracts where the District is called to contribute financially and with Human Resources.
- Subcounty Local councils (LCIII) - the governments of the Subcounties were very important in the coordination of the preliminary operations of the project: circulation of the notice of the project, collection and validation of the applications, selection of the communities, preliminary talks with the beneficiary villages and collection of the community funds;
- Village Local Councils (LCI) - they had many duties regarding the project: establish the real need of a new deep water well; manage all the issues about the property of the land where we drilled the boreholes; raise all the necessary funds to start the procedures to get a new safe water source, support the creation of a Water User Committee with the membership of at least one woman;
- Panyangara Catholic Parish - the Parish has a direct contact with all the rural communities of the homonymous Subcounty. Its original role was to help us select the beneficiary communities for a new deep water well in its territory. Unfortunately we failed to have it involved due to reasons that we'll explain later in this chapter. It was still a very important partner for the logistics of the project, as all the materials were kept in safe custody in their compound.

Operational partners:

MK Engineering Ltd. - it is a Ugandan Limited society that manages ACT-U's drilling equipment with a leasing scheme. It deals with all the operations directly linked to the physical deep water well. It does it directly and by subcontracting some of the works to other local companies, for instance for the geological surveys and water quality analysis.

The long list of institutional partners shows how seriously they take the issue of the supply of safe water to the rural communities. Also the vision of the rural communities about safe water has changed since our very first deep water well in the area. The commitment of the communities is now visible as they started to understand the relation between safe water and health and between less time dedicated to the collection of water and more time for farming and schooling.

We are led to understand that the major hurdle to overcome, apart from the continuous lack of finances, is the coordination of all the players in the field of safe water supply. A tight control and cooperation between the organizations and the government is the key to avoid the overlapping of the interventions and to keep updated data about all the existing water sources and their operating status. In our case we tried hard to conform to the national guidelines about water supply. Communication and cooperation with our primary interlocutors, the DWD and the WO, were both essential for the success and the smooth implementation of the project.

Thanks to this cooperation, the signature of the contracts with the District authorities and the interaction with the District CAO and the other local authorities (LCIII and LCI), went ahead without problems or misunderstandings. Our collaboration on the field with the officers of the Water Office was successful and fruitful as well.

If ACT-U had the chance to draw profit from this cooperation, the WO and its officers had a similar opportunity when working with us. They can now disseminate among all the players the experiences they made with us in the field and we now have access to a larger knowledge base for the future.

We are somehow disappointed, but we take this feeling is reciprocal, of the collaboration with the Catholic Parish of Panyangara, that, according to the original project, should have been our major partner. Although we decided to strictly follow the guidelines of the Government of Uganda for the selection of the beneficiary communities, we still gave the chance to the Parish to point out some candidates chosen among the lot they though more needy than others. Unfortunately the offer was not taken by the Parish, we think that their attention was diverted by the still ongoing severe famine and draught, and the coordination of all the operations put in place to fight against them.

We worked well with our associate MK Engineering Ltd. This Ugandan company dealt with all the practical work related to the drilling of a new deep water well, apart from the geological surveys, that have been subcontracted to another Uganda company and the water quality analysis, performed by the Ministry of Water and Environment laboratories. For the company, this was the first important assignment and it performed well and was praised by

the authorities for its dedication, accuracy and speed. Nothing to object also for its openness, pricing was fair and the budget was respected, documentation was kept up to date all the time and was immediately put at our disposal upon request.

4. Positive and negative effects

One positive effect, not predictable when preparing the original project, is the renewed and fruitful cooperation with the Water Office of the District of Kotido and the direct contacts, not mediated or filtered by third party organizations with all the players involved in the project, most especially the beneficiary communities and their representatives.

We do not mention the benefit of having clean and safe water at hand and an improved community and personal hygiene, but we want to underline the commitment of the communities to have an efficient water users committee with a mixed female/male membership and their willingness to raise enough funds to get their new water well and to be sure that it will run smoothly in the years to come. A decisive proof of responsibility, trust and solidarity is the deposit of the maintenance funds into a communal account for all the boreholes, managed by the District of Kotido. All this was made possible by the proximity work of our Supervisor with the support of the officers of the Water Office of the District.

Another positive outcome is the dissemination of knowledge. It is of great importance that all our reports about our field work are shared among all the players dealing in rural water supply. Documents, including various reports about this and other projects, are now available for consultation at the Water Office of the District and meetings are frequently organized at various levels among the organizations dealing with water and between them and the authorities. The results of the project, are also published online, where they can be seen on an interactive map.

5. Sustainability of the project

Sustainability of the improvements brought by the Shiny Village project 9 can be found in at least two aspects: The first one is the great care that was put into the sensitization of the communities, that included the election of a Water User Committee and the deposit of a minimal amount of money into a communal fund managed by the district, corresponding to the money that is usually spent for the yearly regular maintenance of the deep water well. Collecting this money, although we are only talking of about GBP 50, really shows that the communities have understood that clean and safe water is a very important foundation for their future.

The second one is the commitment of the District of Kotido to monitor continuously the operational status of the water wells and the guarantee, thanks to the solidarity fund for water, that money will always be available for the ordinary maintenance.

In more detail, and going through the administrative procedures put in place during the initial phases of the project, we may confirm that:

- the communities that received a new deep water well, filed their request following the invitation of their respective Subcounties, that were informed of the coming of the project by the Water Office. 110 communities sent in their application, and selection was made by the Subcounty authorities, favoring first the most needy communities and then the District planning.
- the communities have been visited at least twice by our supervisor together with the representatives of the local Water Office in order to define all the details of the planned water well. The meetings lasted for many hours and represented a moment of proximity of all the partners, good for building up mutual trust.
- the communities have been invited to sign two contracts with the District of Kotido. The first contained all the commitments that the communities had to accept before even starting to talk about the new water well. The most important were the financial contribution amounting to GBP 50 and the election of a Water Users Committee with at least one female member. The second contract dealt with land property, whereby the owner of the land on which the borehole was to be drilled, accepted to allow the right of access to the drilling machines and, once the borehole is installed, to all the users of the community.
- we trained a pump technician in each community for the ordinary maintenance of the new well. The same technician is also able to determine the cause of the major faults that may happen to the borehole and to select the best way to deal with the problem.
- the communities received a complete training on the correct use of the borehole and water. Stress was put on the connection between safe water and better health.

6. Chronogram

The original chronogram was as follows:

Activity	In charge	2015						2016											
		7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Planning	ACT-U, Panyangara Catholic Parish, Water Office																		
Realisation	ACT-U																		
Evaluation	ACT-U																		

The effective chronogram has evolved as follows:

Attività	Responsabile	2015						2016											
		7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Planning	ACT-U, Water Office, District, Subcounty, Community Authorities, MK Engineering Ltd.																		
Realisation	MK Engineering Ltd. ACT-U.																		
Evaluation	ACT-U, Water Office (only partially, during the hand over of the boreholes, also the Authorities were involved).																		

The six months delay is due to the late completion of the previous Shiny Village 8 project. The delay and the interactions with the civil Authorities of the District of Kotido gave us the chance to better define some very important facets of the project, that were not pointed out by our previous supervisor. Those aspects coincide with the changes described in this report.

6. Financial report

	Budget GBP	Final UGX	Final GBP	Balance GBP
Costs				
Investments				
Geological surveys	4'766	24'000'000	5'352	586
Drilling site setup	11'898	24'000'000	5'352	-6'546
Drilling	45'055	228'000'000	50'844	5'789
Casings	11'560	58'500'000	13'046	1'486
Screens	4'157	21'000'000	4'683	526
Complete handpump	27'277	138'000'000	30'774	3'497

Gravel	2'400	12'000'000	2'676	276
Pump test	4'766	24'000'000	5'352	586
Biochemical analysys	4'766	24'000'000	5'352	586
Salaries drilling crew	16'224	60'000'000	13'380	-2'844
Administration	5'746	29'000'000	6'467	721
Transport	4'969	16'000'000	3'568	-1'401
Total investments	143'584	658'500'000	146'846	3'262
Running costs				
Supervision costs	17'784	79'748'300	17'784	-0
- including evaluation	13'296	26'224'000	5'848	-7'448
Total running costs	31'080	105'972'300	23'632	-7'448
Total costs	174'664	764'472'300	170'477	-4'187

	Budget GBP	Final UGX	Final GBP	Balance GBP
Revenues				
Local contribution				
Small materials and work	1'578	0	0	-1'578
Logistics	541	6'000'000	1'338	797
Local contribution	1'190	5'000'000	1'115	-75
Total local contribution	3'309	11'000'000	2'453	-856
Foreign contribution				
SPICMA	50'000		50'000	0
Swiss Cooperation	57'460		57'460	0
ACT-U	63'869		60'564	-3'305
Total foreign contribution	171'329		168'024	-3'305
Total revenue	174'638		170'477	-4'161

8. Conclusion

We are very satisfied about the way the project was carried out. The initial months of inactivity due to the late completion of the previous Shiny Village project have been fruitful as they gave us the chance to patch up the relations between ACT-U and the local Water Office, caused by a number of facts that cumulated in the past.

The renewed collaboration with the Water Office has also been useful as we are now building, also with the contribution of other NGOs dealing with water supply, a repository of reference documentation of good practices to use for the future of water and hygiene development in the region.

The certainty that the new and operational water wells will be continuously monitored, not only by the Water Users Committees but also by the Water Office and the existence of the District's solidarity fund for water, are for us guarantee of sustainability and durability of the interventions.

The deep water wells will remain for a long time the only alternative for the supply of safe water for the more remote rural communities of the District of Kotido. Their cost and relative ease of realization and maintenance being the reasons. Their real impact on the betterment of the communities' health and hygiene is tangible and we hope that the boreholes will become the vehicle for a quicker social and economical development of the rural villages. With an investment of less than GBP 3.00 per capita per year, one person has clean and safe water for at least 8 years (average lifespan of a borehole before the major maintenance).

We are also very satisfied, and so is the Water Office of the District of Kotido that has been positively impressed, of the efficiency and speed we kept while implementing the project. Our operative partner, MK Engineering Ltd, has been an excellent performer that greatly contributed towards the success of the entire project especially when dealing with contingencies of various nature that could have delayed us for months.

Our new supervisor, although at his first assignment, proved himself very attentive and capable, intervening fast when problems or doubts arose, communicating to us and to the Water Office.