WATER AND LIVELIHOOD PROGRAMME

Integrated Agriculture, Clean Water Supply, Environmental Sanitation and Water Catchment Project in Rukungiri, Kanungu and Mitooma Districts in South Western Uganda

Final Evaluation Report

Prepared by: Partnership for Development Consult Limited

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LIST OF ACRONYMS

CBOs	Civil Society Organisations
DAC	Development Assistance Committee
DWSCCs	Water and Sanitation Co-ordination Committees
GFS	Gravitational Flow System
HIV/AIDS	Human Immune Virus/ Acquired Immune Deficiency Syndrome
L	Litre
LADA	Literacy Action and Development Agency
LLG	Lower Local Government
NDP	National Development Programme
NGOs	Non-Governmental Organisations
UNICEF	United Nation International Children Emergency Funds
UWASNET	Uganda Water and Sanitation NGO Network
VSLA	Village Saving and Lending Association
WASH	Water Hygiene and Sanitation
WBs	Water Boards
WCT	Water Care Taker
WHO	World Health Organisation
WUCs	Water User Committees

EXECUTIVE SUMMARY

The final evaluation of water and livelihood project in Rukungiri, Kanungu and Mitooma districts focused on both the process and outcomes of key project inputs, activities, outputs and the extent to which it addressed the development challenges/problems highlighted in the project context. The Consultants collected information through reviews of some relevant document availed to them and also conducted field visits where the respondents were categorized into treatment group (beneficiaries) and non-beneficiaries (control group) that were randomly sampled.

KII with LADA staff revealed awareness of the project plans - an indication that the plans were observed and adhered to during the execution of the program, however, there was no mid term review that could have checked the process. Therefore, some of the planned activities where not complied with. For example the introduced accounting software application was not adhered to. In addition, there were gaps between the allocations and expenditures that greatly varied across each of the year due to lack of coordination and partial budget release among others. Overall, the expenditures were high with reductions in the surplus volume over the project period. Self- sufficiency ratio indicated absence of accumualted funds or investment in infrastructures / assets, although the project funded the construction of a new office block. No details were provided for the income generation enterprises (micro finance support center, poultry enterprise and tree nursery department). The poultry enterprise was no longer operational.

The ground breaking for the construction of the water sources was done by the district officials. These have not been commissioned after their completion. Unlike for the shallow wells, the designed for Gravitational Flow System (GFS) was obtained from Kanungu district. Water from all sources were allowed to accumulate in reservoir tanks before supply. Local mansions were used during the construction and some of the water sources have already developed cracks. Water user groups were instituted, although others are not functional. Interference with the water catchment potentially increased the risk of soil erosion and silting, contamination, poor drainage channels and the local micro-climate variability. It also affected the fencing of the water sources and resulted into access of poor water quality. While, the water catchment were planted with *Albizia*, *Grevellia*, *Senna, Araucaria, Calliandra, Terminaria and pine,* some were stolen. The Village Saving and Loans Association (VSLA) appeared to impact on the water source management through the potential for water fee payment and aided investment diversifications of the group members. Other HHs could not pay the water user fees. Nonetheless, VSLA is a demonstration of widening water management beyond mere grouping for water issues only.

Beneficiaries of the project exhibited an increased use of piped line/public taps, and protected hand pump/borehole/tubewell and majority of the non-beneficiaries accessed unprotected/open dug well. Water was fetched mainly by the adult women and the boys. However, more girls were involved in fetching water by 2017. Higher number (54.6%) of the beneficiaries' fetched drinking water within 500 m and they (50.9%) spent only 15 mins at the water source. Overall, there was general reduction in the time taken in fetching water by 2017. Unlike for the non-project-beneficiaries (97.6%), there was higher number of beneficiaries (98.8%) that used jerry cans for fetching drinking and storage (67.5%) in 2017. Similar containers were also used by the non-project-beneficiaries.

Water was reported a free commodity and fewer beneficiaries (77.3%) treated drinking water in 2013 compared to the 82.2% in 2017. Smaller number of the non-project-beneficiaries (66.7%) treated drinking water in 2013 compared to the 73.8% in 2017. The number that boiled drinking water increased for the

beneficiaries (79.8%) than the non-project-beneficiaries (64.3%). Inadequate knowledge of treatment of drinking water (4.9%) was among the reasons for not treating water by the project beneficiaries. Majority HHs of beneficiaries and non-beneficiaries consumed from 20 -75 litres of drinking water in a day. Approximately 50.3% and 2.4% of the project beneficiaries and non-project-beneficiaries respectively covered water storage containers. Better method that minimises drinking water contamination was used for withdrawal of water from the storage containers by both the project beneficiaries and non-beneficiaries.

Latrine coverage remains constant for the project beneficiaries (98.8%) and non-beneficiaries (92.9%). Highest number of beneficiaries (94.5%) and non-project-beneficiaries (95.3%) had constructed their latrine. The pit latrine types were with slab, without slab and composting pit latrine. Majority of the latrines were located within 50 m (75%) and a few at more than 50 m (20%). HHs (19.7%) sharing latrine remained the same over the project years. Baby's faeces were thrown into latrine (98.2% and 92.9%) and buried (1.8% and 2.4%) by the project beneficiaries and non-beneficiaries respectively. Garbage pit was the commonly used for wastes disposal by beneficiaries and non-project-beneficiaries.

Hand washing was by water only (22.1%) and water with soap (84%) by beneficiaries while the non-beneficiaries (16.7% and 81%) used the same elements respectively. The reasons for not washing hands with soap were; takes longer time, soap is not a practice even before, water alone cleanses the hand, soap is expensive and others mentioned negligence/laziness in using soap. Beneficiaries (35.6%) were not having hand washing facility in 2017 and only 34.4% had water facility and soap near or within the latrine. Others (4.9%) had water and soap in designated hand washing areas while 2.5% hand only water in such areas.

The disease burden of the beneficiaries of the project were diarrhoea (22.7%), malaria (81.6%), typhoid (27%), schistosomiasis (1.2%) and amoebiasis (1.2%) and those of non-beneficiaries were diarrhoea (19%), malaria (69%), typhoid (19%), schistosomiasis (0%) and amoebiasis (9.5%). Except for malaria (0.6%) that killed HH members within the last 3 months before the evaluation, the morbidity of other diseases were 100%. The causes of the diseases were reportedly dirty food, poor hygiene, rain, germs, open defecation among others and some were ignorant of the preventive measures. Hygiene/health messages were received through different channels. The main preferred channels were mosque/church and radio.

The monthly income of the project beneficiaries was higher than that of the non-beneficiaries. However, the monthly expenditure of beneficiaries was above their income. Overall, the project challenges were of the water access, livelihoods, and social-cohesion. These were according to the status, gender, disadvantage groups and location among other factors. However, the inter linkages of the project shaped the ways in which the governance operated. The approach shows some potential of an effective, integrated and sustainable solutions to the rural communities. The project minimized the district funding constraints, strengthened the existing groups and integrated them into VSLA. The shortage of personnel in the Local government was addressed by recruiting full time Enterprise Development Officer/Conservationist and Child Development/Social Support Officer that worked at the community level.

1. INTRODUCTION

1.1 BACKGROUND

The water and livelihood project that was implemented by LADA in the 3 districts of Rukungiri, Kanungu and Mitooma was based on the situational analysis of the vulnerability of the communities after an extension of LADA-WATSAN project that ended in September, 2013. The intervention was to fill the gaps that LADA-WATSAN project did not sufficiently address. In addition, there were other emerging needs of food and income insecurity, and the need to protect more water sources which formed the basis of the water and livelihood project that ended in 2016. This report is the Final Evaluation and presents the details of the approach and methodology that were used in conducting the study, findings in line with the implementation of the project, and also the issues that were underlined in the proposal that was funded by GORTA through Self Help Africa.

1.2 GLOBAL WATER SECTOR

The management of public drinking water sources and sanitation presents a significant challenge for water and the community. An assessment report on water supply and sanitation in the year 2015 by World Health Organization (WHO) / United Nation International Children Emergency Funds (UNICEF) Joint Monitoring Programme indicate that 32% of the world's population (2.4 billion people) lack improved sanitation facilities. Although there are improved water systems, a total of 663 million people still use un-improved drinking water sources. In addition, 1 billion people defecate in the open. Furthermore, an estimated 1.8 billion people may be drinking water contaminated with faecal material. The scarce access to safe water and sanitation services, coupled with poor hygiene practices, lead to deaths and sickness in children, and also disadvantage and reduce opportunities in poor communities. Therefore, the security of the water sources should not be taken for granted.

The momentum to bring safe water is becoming even more challenging due to climate change, which threatens both water supply and water safety in drought or flood prone areas. The populations usually resort to unsafe surface water during droughts. The most vulnerable are the children under 5 years old who live in areas at high risk of drought and in the flood zones. Floods on the other hand damage water and sewage treatment facilities, and spread faeces around, resulting into an increase in waterborne diseases. The rising temperatures brought on by climate change also escalate the incidence of water linked diseases like malaria, as mosquito's population rise and their geographic stretch expands.

1.2.1 SITUATIONAL ANALYSIS OF WATER SECTOR IN UGANDA

Regardless of the successes in the Water Sector in Uganda, the sector still faces continuing challenges. The high population density and the lack of equal access to safe water contribute to the poor access to safe water in the country. According to the national documents about eradication of poverty, the consumption of safe water in the most underserved areas is almost 10 liters/person/day, which is far lower than the recommendations for the enjoyment of the right to access to water estimated between 50 and 100 liters/person/day. This is even lower than the national objectives of 20 liters/person/day, according to the "Ministerial Political Communiqué 2015/16" of the Ministry of Water and Environment.

In addition, there has been increased frequency of high temperatures, and droughts that have led into food insecurity, scarcity of water resources, and wild fires in Uganda. The Ministry of Water and

Environment (2013) reported that the frequency and intensity of extreme weather events will continue to increase in the country with increasing climate change.

Moreover the socio-economic, cultural, political and environmental conditions, and the challenges in improving sanitation facilities, and changing hygiene behaviours and practices differ from community to community. That notwithstanding, the responses to water, sanitation and hygiene (WASH) of communities also differ. As consequences of poor WASH, a girl child is denied right to education because the schools lack private and decent sanitation facilities. Due to the limited access to safe water in rural areas, women and children continue fetching water within a 1.8 and 2.5 km radius, spending 30 or 45 minutes at day. In addition, poor community members are less productive due to illness, and the health systems are overwhelmed and therefore, the national economies suffer.

The Uganda Vision 2040, section 5.2, number 35 under water development infrastructure indicates an expected improvement in water consumption per capita from the current 26 m^3 to 600 m^3 per year. The main objective in the NDP2 is to increase access to safe water supply and sanitation in rural areas from the current 65% to 79% and 69% to 90% respectively by 2020. The approach will be in the development of bulk water supply systems which is multipurpose in nature in order to improve on the access to safe water supply. The Uganda Water and Environmental Sector Performance Report (2016) also indicates NGOs and CBOs sustaining their involvement in water and sanitation subsector through mobilizing funds for the sector, supporting water and sanitation infrastructure development and building the capacity of the communities to demand, develop and maintain WASH facilities. The Uganda Water and Sanitation NGO Network (UWASNET), continues to register more NGOs and CBOs joining the water sector. This has also been formalized by LADA in 2011, and over many years, the organization has made efforts to proactively manage drinking water sources and address livelihood of the communities (Figure 1.1). Through responsible and proactive management of drinking water sources, LADA aims to demonstrate that it is a good NGO and good neighbour, willing and able to meet current standards of safe water sources and expectations of the local communities, and perhaps most importantly a responsible steward of the natural assets we are so heavily reliant upon.

Figure 1.1: The mission, vision and goals, and certificate of membership of UWASNET of LADA.

1.3 THE FINAL EVALUATION

The Final Evaluation is in line with the donor agency practice, the OEDD's Development Assistance Committee (DAC) established in 1991 indicating several principles of evaluation to guide DAC member states. These principles have subsequently been developed into 5 specific criteria which are used in development evaluation. These criteria include relevance, efficiency, effectiveness, impact and sustainability.

1.4 DESCRIPTION OF THE PROJECT AREAS AND THE PROJECT SITES

GORTA Self Help Africa with funding from Open Gate Fundraising and in partnership with LADA implemented a 3 year clean water supply, environmental sanitation and livelihood program in the 3 districts in the South Western Uganda. The project intended to improve the quality of life of the community at large.

The specific objectives were to:

1. Strengthen partner ability to support and sustain grass root activities.
2. Increase access to clean and safe water in 1,452 households (8,712 people) inclusive of school pupils and 7 sub counties in Rukungiri, Kanungu and Mitooma by end of 2016.
3. Improve hygiene and sanitation, knowledge, attitude and practice in 3,600 households and 8 schools in three districts of Rukungiri, Kanungu and Mitooma by end of 2016.
4. Conserve and protect water catchment areas surrounding the 41 protected water sources.
5. Build and strengthen community structure to sustain project benefit.

The stakeholders involved in the projects were smallholder farmers, water source committees, Self Help Africa Uganda staff, LADA staff, district officials, local leaders, and schools.

1.5 PURPOSE AND OBJECTIVES OF THE FINAL EVALUATION

The overall purpose was to measure the contribution of the project towards improving smallholders' quality of life in terms of incomes, food access, returns on enterprises, partner sustainability to support communities, access to clean and safe water supply, hygiene and sanitation KAP and conservation of water catchment areas. The final evaluation focussed on both the process and outcomes of key project inputs, activities, and outputs and the extent to which it addressed the development challenges/problems highlighted in the project context. To achieve this, the consultant assessed and documented both intended or unintended project impact or consequences, lessons learnt, and gave recommendations to support future designs and implementation of similar projects. The final evaluation also assessed the effectiveness of the monitoring systems towards achievement of results.

Specific objectives

a) Assess the extent to which project original targets – inputs, outputs, and outcomes - have been achieved.
b) Clarify program situational context and identify barriers/challenges that have affected project progress.
c) Document lessons learnt and good practices to inform future programming.
d) Document case studies/stories (involving beneficiaries, partners and other stakeholders).

e) Clarify on challenges faced by smallholders and also reasons for poor quality of life under the project.

In addition to the specific objectives, the final evaluation responded to the following:

a) Consistency of the project with key aspects of Self Africa approach.
b) Consistency of the project with the Self Help Africa Uganda strategic plan and/or regional strategy.
c) The level of integration of the action into other Self Help Africa interventions/projects.
d) The contribution of the internal monitoring system to the implementation of the project and its monitoring and evaluation.
e) How the project worked with local governments, other community based organizations, communities, and smallholders, gender and excluded groups including persons with disability, persons living with HIV, etc?
f) How the project benefited from working with local governments, other community based organizations, communities, and smallholders, gender and excluded groups?

1.6 THE FINAL EVALUATION SCOPE

The project set out to reach the project households to access clean and safe water, and to have knowledge and improve water and sanitation practices. However, given the absence of baseline survey and Mid Tern Reviews, performance measurements in the various impact areas was based on the periods before the project (recreating baseline) and after the project. Therefore, for the final project evaluation: The Consultant started by collecting information through reviews of project proposal, disbursements, monitoring and evaluation plan, Log frame, budget and other relevant documents.

The evaluation process was also based on the Development Assistance Committee (DAC) guidelines for evaluating development programs. The 5 criteria of the OECD-DAC (2000) were used in a complimentary manner, along with several key questions that helped in the engagement and framing of the water and livelihood project evaluation.

Relevance: The extent to which the activity is suited to the priorities and policies of the target group, recipient and donor.

- To what degree do the programme's objective remain valid?
- Are the programme's activities and output consistent with its key goals and attainment of objectives, and also the intended impacts and effects?

Effectiveness: A measure of the extent to which an aid activity attains its objectives.

- To what degree were the programme's objectives achieved, and what chief factors were responsible for the achievements or failure?

Efficiency: Efficiency measures the outputs – qualitative and quantitative – in relation to the inputs. It is an economic term which signifies that the aid uses the least costly resources possible in order to achieve the desired results. Comparison of alternatives approaches to achieving the same outputs were done, to see whether the most efficient process were adopted.

- How cost efficient were programme activities?
- Were objectives on time?
- How efficient was the programme/project implementation compared to alternatives?

Impact: The positive and negative changes produced by a development intervention, directly or indirectly, intended or unintended. This involved the main impacts and effects resulting from the activity on the local social, economic, environmental and other development indicators. The examination was concerned with

both intended and unintended results and must also include the positive and negative impact of external factors, such as changes in terms of trade and financial conditions.

- What occurred as a direct result of the project/programme?
- What real difference was made to the beneficiaries as a results of the activity?
- How many people were affected?

Sustainability: Sustainability is concerned with measuring whether the benefits of an activity are likely to continue after donor funding withdrawal. Projects need to be environmentally as well as financially sustainable.

- To what degree did the programme/project benefits persist following the end of donor funding?

Focus was also on the results chain that was developed by the consultant.

Furthermore, there was adoption of a longitudinal approach to attribute changes. This entailed visiting all the project beneficiaries in Kanungu, Mitooma and Rukungiri districts. Field observations and physical sampling were done during the visits. The assessment of the bio-physical of the water sources, social and community issues pertaining to the project with direct or indirect impact on the environment and community were also assessed.

All respondents were the treatment group and non-beneficiaries as the control group. The treatment and control groups provided for 70:30 ratio. The number of non-beneficiary was allocated based on the proportion of beneficiary per LLG. Overall, the baseline of the socio-economic and cultural conditions that existed in the project areas, and the impacts of the project on the water sources and the surrounding environment were assessed.

2. METHODOLOGY

2.1 LADA CONSULTATION

The Consultant team met with the Executive Director of LADA who briefed them about the setup of their Organisation. He also appreciated the contribution of the project that included the facilitation of their staff capacity development and the construction of the new office block (Figure 2.1). The consulting team leader re-echoed the importance of the project final evaluation to the organization. Both LADA and the consultant agreed on the schedule of the activities during the evaluation and LADA staff members were assigned to the team to help guide them to the project areas in the 3 districts of Rukungiri, Kanungu and Mitooma.

Figure 2.1: Constructed office block.

2.2 THE EVALUATION DESIGN

The consultant used a mixed method approach that enabled the triangulation of quantitative, qualitative, and PRA methods of data collection and analysis. While the quantitative method focused on the quantifiable results, qualitative and PRA methods generated explanatory data for the project progress, outcomes, lessons, challenges and solutions. Water quality status were assessed through sampling and on site quality analysis. Pathogenic indicator number was used for water quality standards. The project final evaluation was in three phases, namely:

Phase I: Refining the study boundaries – This involved the review of the various project documents, elaboration of the project result map, agreement on the sample size; and refining study tools.

Phase II: Field data collection. This phase covered field visits to collect the agreed upon data from project implementing agency staffs, communities, partner organizations, and government officials among others.

Phase III: *Reporting*. This included data entry, collation, analysis, and report generation. A draft report was then presented to Self Help Africa Uganda for review. A validation meeting with project stakeholders was held in order to help disseminate and validate the findings. The feedback comments was then used to prepare the final project evaluation report.

2.3 STUDY SITES AND SAMPLING METHODS

The evaluation covered all the three (3) project districts of Kanungu, Rukungiri and Mitooma and the participating project sub-counties. The various respondents were sampled using the project base population. To note, however, is that:

a) All support agency respondents were purposively sampled. This was agreed upon at inception meeting with Self Help Africa team.
b) The targeted smallholders and community members were randomly sampled using a single proportion of study population sampling method in equation 1.

$$n = \frac{Z^2 pq}{e^2} \quad \text{..... (i)}$$

Where;

n = Sample size of the project population.
Z^2 = Abscission of the normal curve that cuts off an area α at the tails (1 - α equals the desired confidence level of 95%).
e = Desired level of precision of 95%.
p = Estimated proportion of smallholders and communities reached to date for water and livelihood project is 85%.
q = 1 - p.

A total of 205 individuals from the different households (HHs) from Buhangari, Kirima and Kiyanga sub-counties were interviewed, and the villages covered were Buhamba, Bukyiriro 1, Bukyiriro 2, Bukyiriro T C, Kutunguru, Kitunguru 1, Kyitariro and Nyamiyaga B. The respondents were both males (36.6%) and females (63.4%) who were beneficiaries (79.5%) and non-beneficiaries (20.5%) of the project. The respondents' age ranged between 15 – 90 years. The HHs had members from 1 to 13. Some of the

respondents were married (73.7%), while others were divorced (2.9%), widowed (4.9%) and single (18.5%).

2.4 DATA COLLECTION METHODS

To elicit comprehensive information from the various respondents, the following data collection methods were used:

a) **Document review**: The consultant reviewed all the available relevant documents of the project. These included the Project proposal, Results Framework, Annual work plans, budget and bank statements, and Self Help Africa Uganda Strategic Plan. The financial sustainability plan was assessed by revewing the strategic plan (2013 - 2015) and financial plan. The appropriateness of accounting policies used and the reasonableness of accounting estimates made by LADA, as well as evaluation of the overall presentation of the Financial Statements were evaluated. In addition, the Consultant conducted the comparative analysis of the statements with the view to assess the overall compliance of the budget. The budget was considered as the guiding tool in the management of the project. A summary of significant accounting policies and other explanatory notes were given.

b) **Individual smallholder/community survey:** To ascertain whether or not the project increased smallholder incomes, food access, partner sustainability to support communities, access to clean and safe water supply, hygiene and sanitation KAP and conservation of water catchment areas, a survey among communities was conducted. Research assistants were recruited from the project areas and trained by the Consultant to conduct this survey. The survey used a structured questionnaire with open and closed ended questions developed in line with the project target indicators (and result chain).

c) **Focus Group Discussions (FGDs):** These were conducted with the project beneficiary in their groups. A few in-depth sessions were undertaken within the group discussions using participatory rapid appraisal (PRA) tools such as proportional piling and pair-wise ranking (e.g. for the Most Significant Changes).

d) **Key Informant Interviews (KIIs):** By use of a standard interview guide, KIIs were conducted with the project stakeholders. These included staff of Self Help Africa Uganda; Partner Organizations (LADA), and district and lower local governments among others.

e) **Observations and water analysis:** The consultant observed the different project areas and actors in order to confirm existing quality of life aspects, and water, sanitation and hygiene, and catchment conservation practices and changes in livelihoods. Water source inspections and laboratory water analysis were also done to ascertain and document successes in both livelihood, and water, sanitation and hygiene practices that can be replicated.

   Water quality field assessment was carried out using the WHO field analytical protocol. Samples were directly collected in a filtration funnel from which the filtration was done immediately at the water sources. The filtration assembly kit consisted of a manifold that was always fitted at every time with one set of sterile filter funnel, 100 ml syringe, pre-pregnated petri dish and sterile gridded membrane filter. After filtration, the pads were transferred into a portable incubator, 3 litre capacity constructed with a layer of polymer material capable of absorbing and maintaining

heat for over 18 hours. Hot boiled water of approximately 100 ^{0}C was poured into the incubator and the setup was left to stabilise (gain heat) for 1 hour before the petri dishes containing the samples were placed inside. After 16 – 18 hours, the petri dishes were removed and the bacterial growths were counted. The golden blue colours were counted as *E. coli*. In addition, site description were done to provide information on water source construction integrity and the maintenance. Information generated were to inform on the need for regular monitoring and interventions where necessary.

f) **Cases studies**: These were captured during the process of participatory discussions and site observations. They depict what worked well and what did not work well, how, and why? The case study approach used a mix of personal story and most significant change story. This approach helped in the identification of what changed, the scope of change, what (f)actors facilitated/curtailed those changes, and whether or not these changes are sustainable.

2.5 DATA ANALYSIS

During the data collection phase, a data mask was set to guide data entry and analysis. Data collection and data entry processes were supervised to ensure quality adherence. Data collation and cleaning were done. Data was analysed using SPSS (V23) to generate descriptive statistics in line with framework derived from Self Help Africa Uganda report guideline. Content analysis of both qualitative and PRA data using the daily transcriptions (in MS Word) of FGDs and KIIs was done in order to triangulate the quantitative (descriptive) and qualitative/participatory (narrative) data. The various data sources were then integrated during an internal meeting that discussed the findings of the final evaluation focus.

2.6 QUALITY CONTROL

To ensure that the consultancy service was provided in line with the Terms of Reference and at an appropriate professional level, the Consultant used the following quality control measures:

- *Adherence to international and sector standards:* At the study inception, clarification of the result chain using international and sector standards for agriculture, water, sanitation and hygiene outcome measurements, and smallholder livelihood improvement was done.
- *Design of study instruments*: The survey adopted and or adapt the random approach in the selection of sub-counties, villages and groups for data collection tools. This was to strengthen the reliability, acceptability, question flow, and the duration of the interview.
- *Involvement of M&E unit at all stages*: Maintained a close consultative relationship with the client's M&E unit to ensure that indicators, tools and procedures meet internal standards.
- *Social mobilization for data collection:* To increase the response rate, the Consultant identified suitable research assistants, and Self Help Africa and Partners mobilized respondents for data collection.
- *Data management procedures*: The data management and analysis plan was discussed and agreed upon with Self Help Africa Uganda before data collection and analysis began. Besides, all data sets were returned back to Self Help Africa Uganda. The final evaluation team presented its data analysis in line with the reporting guidelines and the agreed upon indicators to be tracked. This data management strategy ensured that data storage, handling and the types of analyses were relevant for the final evaluation.

2.7 ETHICAL CONSIDERATIONS

To ensure adherence to International research, the consultant ensured that:

- Data collectors seek and confirm consent from respondents to participate in the survey before data collection.
- A statement of confidentiality for the beneficiary was included in all the tools, explaining the purpose of the survey and committing not to divulge individual respondent details except when consented to.

3. RESULTS

The final evaluation analyzed the context of implementation process and management, all the stakeholders / society and the development over the three (3) years of the project. The project had an initial consensus, both on the scale of the water and livelihood problems that were faced by the selected community. These resulted into the processes that were needed to solve the problems through the delivery of the water schemes and the livelihood program. Therefore, the implementation of the project was ultimately affected by the project targets which also has direct relationship to the future governance and sustainability.

3.1 PROJECT AREA AND TARGET BENEFICIARIES

The program was implemented in the districts of Rukungiri, Kanungu and Mitooma in the South Western Uganda. The area is characterized by siltation in the low land, soil infertility in hilltops and drying of water points which are used by communities for domestic and agriculture needs. In addition, water runoff washes faecal matters to homesteads down the valley; leading to poor sanitation and hygiene at the household levels. Pressure due to population increase and poor methods of soil management and the land tenure system have also negatively affected the soils and degradation is therefore rampant.

In Kanungu district for instance, where 60% of land is arable, there are small open water points that can be protected into springs, shallow wells and a few with prospects of Gravity Flow Schemes (GFS). Boreholes drilling also form part of increasing water accessibility strategy in sub-counties like Kambuga and Kihiihi Town Council where there is shortage of open water sources.

The targeted number of the project beneficiaries per categories of the different communities is summarized in Table 3.1. It is clear that the proposal did not include all the special interest groups in the water user committee trainings. The children and disadvantage were excluded. However, there was gender mainstreaming strategy.

3.2 PROJECT SETUP

LADA has a legal status as an NGO with the registration number S.5914 / 7998. It is well established with the focus of empowering and supporting the disadvantaged and at risk members of the community. The organisation adopts the pro-poor strategy in working with the community and helps the community to access support, quality health, education, sanitation and hygiene, and also improve their incomes and human rights awareness creation and protection.

The water and livelihood project was a 'brain child' of the partnership of LADA with GORTA Self Help Africa- that provided the funding under the reference number S.03/13. The overall monitoring of the

activities were conducted by GORTA Self Help Africa, and the final evaluation is the overall assessment of the project achievements. The monitoring was to ensure progress towards achieving the project deliverables according to the plan and also forms the corrective actions in case of deviation in order to bring the project back to its planned path. It also attempts to measure the project outcomes in terms of real money payoffs.

Table 3.1: Target beneficiaries of the water and livelihood project.

Beneficiaries of water user committee training	**Direct**	**Indirect**
Male	123	738
Female	164	984
Children	0	0
Total	**287**	**1,722**
Beneficiaries for 5 shallow wells, 15 springs and 2 constructed GFSs with 21 taps		
Male	360	2,160
Female	407	2,442
Children	477	2.862
Disadvantaged	208	1,248
Total	**1,452**	**8,712**
Beneficiaries of community resource persons training		
Male	14	84
Female	23	138
Children	0	0
Disadvantaged	4	18
Total	**41**	**240**

Source: LADA proposal that was submitted to GORTA for funding.

The human resources involved in the project implementation were both males (7) and females (4). The full time staff were from LADA and the part time employees from local government (Table 3.2). Overall, 73% of the implementers were full time employees of LADA and therefore had adequate time for the project activities. This was evidenced by their full participation during the evaluation.

3.3 FINANCIAL SUSTAINABILITY OF WATER AND LIVELIHOOD PROGRAM

The financial sustainability means the long term support LADA can provide to their beneficiaries. The support of the project activities, therefore required sufficient funds to enable LADA function as an organisation and also provide service. These are anchor on the good financial management of planning to foresee and predict, organize and adhere to the planned activities, monitor the activities to compare and match to the original plans and also review the performance of the activities. The financial analysis in this report therefore covers the general financial analysis and the income generation.

3.3.1 GENERAL FINANCIAL ANALYSIS

Presence of financial sustainability plan

The existing Strategic Plan and Financial Plan of LADA were an indication of potential Financial Sustainability. KII with LADA staff revealed their awareness of the plans - an indication that the plans were observed and adhered to during the execution of the program. However, the staff were stuck to their old accounting software application, although a new accounting system was introduced and training was also conducted for them. The reason for the non-compliance to the newly introduced system was unclear.

Income diversification

In 2013, there was under spending of 35%. The budget variance percentage were more than 100% for 2014 and 2015. These indicate that the total budget was over spent with a burnt rate of 153% (Table 3.3).

Table 3.2: Implementers of the water and livelihood program.

Name	Designation	Status	Employer
Mbabazi Arthur	Executive Director	Full time	Literacy Action and Development Agency (LADA)
Kasubo Rebecca	Projects Coordinator	Full time	LADA
Adim Solomon	Research, Monitoring and Evaluation Officer	Full time	LADA
Waniiye Glory	Finance and Admin Officer	Full time	LADA
Ampurire Bruno	Enterprise Development Officer/Conservationist	Full time	LADA
Kashaija Wilson	Child Development/Social Support Officer	Full time	LADA
Mandela Nelson	Admin Assistant	Full time	LADA
Tugume Moses	Water Engineer	Part time	MUMA Technical Services
Kasande Lovence	Volunteer PMTCT	Part time	Rujumbura Health Centre III
Gloria Nyinomuhngi	Volunteer Child Development/Home Based care (CHBC)	Part time	Kebisoni Health centre IV
Arijuna Frank	Volunteer Community Health Promotion	Part time	Bwambara Health Centre III

Source: LADA proposal that was submitted to GORTA for funding.

Table 3.3: Budget utilization in Ugandan shillings. The year 2016 is not included because of lack of information.

Budget period	Approved budget	Spent budget	Variance	Variance (%)	Under/(over) budget
2013	528,327,814	184,949,081	**343,378,733**	**35**	**343,378,733**
2014	444,535,764	781,505,615	**336,969,851**	**176**	**336,969,851**
2015	152,115,764	760,310,343	**608,194,579**	**400**	**608,194,579**

There were gaps between the allocations and expenditures that greatly varied across for each of the years. The following were the factors recognised as responsible for the discrepancies:

- The timing of preparation of budget allocations and expenditure reports.
- The timing of funding requests.
- Partial budget releases.
- Lack of coordination between the Donor and LADA that implemented the projects.
- Cumbersome and lengthy tender procedures.
- Capacity problems.

Over the period from 2013 to 2015, the gross revenue grew from Ug. Shs. 289,194,660 to Ug.Shs. 766,189,789 (Table 3.4).

Table 3.4: LADA 's revenue and expenditure for 2013 – 2015. The information of 2016 were not available and therefore have been excluded.

Year(s)	2013	2014	2015
Total operating revenue (income)	289,194,660	847,243,104	766,189,789
Total operating expenditure	208,463,550	781,505,615	760,310,343
Surplus / (deficit)	**80,731,110**	**65,737,489**	**5,879,447**

The expenditure was high in 2014 and 2015 and there were reductions in the surplus volume over the period. The detail analysis of the expenditure showed gaps for the period 2014 to 2015 (Table 3.5).

Table 3.5: LADA's expenditures. Information for 2016 was not availed to consultant.

Items	2013	2014	2015
CSDP project/SLF direct support	27,154,500	-	-
CSDP project support and review	800,000	-	-
Materials & equipment for projects implementation	4,463,100	-	-
Design and construction for shallow wells & tanks	35,035,400	-	-
Survey & technical designs of Bukanga gravity flow scheme	4,000,000	-	-
Water and Livelihood projects	65,404,500	31,117,500	338,806,270
Water conservation costs	-	24,484,500	-
Investment in poultry	-	82,351,000	-
Micro credit	-	114,928,100	-
Capital items purchased	-	254,404,040	-
Total project expenditure	**71,453,000**	**507,285,140**	**338,806,270**
Total grand expenditure for LADA	**208,463,550**	**781,505,615**	**760,310,343**
Percentage project expenditure (%)	**34.3**	**64.9**	**44.6**

In 2013, the project cost accounted for 34.3%, which implies that much of the fund (65.7%) was spent on other activties. Heavy expenditure was realised in 2014, accounting for 64.9% of the total's LADA's expenditure while in 2015, the expenditure was lower (44.6%) compared to 2014.

The income source were from GORTA Self Help Africa's Contribution (GORTA's contribution / Total income) x 100% and through the Self- sufficiency ratio (Total own income/ Total expenses) of the organisation (Table 3.6). This shows that;

- The organization (LADA) ran heavily on GORTA Self Help Africa's contribution thus it has dependence on the donor funds.
- Break down from the income statement shows much of the income / funds come from donors.
- Self- sufficiency ratio indicates that the organization is not accumualting funds or investing in infrastructures / assets. Therefore, LADA can not sustain the water and livelihood programme after the funding from the donor ends.

Tabel 3.6: Income over the period from 2014 – 2015. Information for the year 2016 was not available.

Sources of income	2013	2014	2015
LADA – WATSAN / GORTA	46,774,000	531,327,814	444,560,785
Income from projects		54,145,050	21,947,354
Total operating revenue(Income)	289,194,660	847,243,104	766,189,789
Total operating expenditure	208,463,550	781,505,615	760,310,343
GORTA's contribution ratio (%)	**16**	**62.7**	**58**
Self- sufficiency ratio	**-**	**0.069**	**0.029**

However, there was evidence of diversification of sources of funds with donors leading the busket. These include Stephen Lewis Foundation, LADA-WATSAN / GORTA, LADA (Tree nursery and village savings, ITT-0012114-B/O First people Batwa World project, Poultry and WWF.

3.3.2 INCOME GENERATION BY LADA

The evaluation has revealed that LADA owns income generation enterprises. These include the micro finance support center, poultry enterprises and tree nursery department. The analysis of the project performance over 2 years is in Table 3.7.

Table 3.7: Project revenue and expenditure over 2014 - 2015. The information of 2016 was not availed to the consultant.

Sources of income	2014	2015
Interest from loan	26,151,050	
Loan processing fees	5,815000	
Sales pass books	3,242.000	
Sales of loan applications	1,100,000	
Sales of tool kits	3,915,000	
Total micro credit income	***36,986,306***	
Agritech / tree nursery department	***31,200***	
Poultry department	***13,735,800***	
Total income	**50,753,306**	**21,189,789**
Expenditure		
Micro credit	114,928,100	
Investment in poultry	82,351,000	
Total expenditure	**197,279,100**	
Surplus / (deficit)	**(146,525,794)**	

There were indications that;

- The general performance of these IGAs are not encouraging with a deficit of **146,525,794=** shillings.

The detail information on poultry and micro credit scheme are in Tables 3.8 and 3.9 respectively. In 2014, the poultry project had breakeven level (there was neither profit nor loss), with slight profit in 2015 of Ug. shs. 2,658,495. Overall, the poultry project did not do well with over 50 % deficit reflected in the total loss of shs. 5,938,390 in 2016.

Table 3.8: LADA 's poultry project revenue and expenditure for 2013 – 2016.

	2013	2014	2015	2016
Total operating revenue(income)	-	82,351,000	66,309,786	17,468,000
Total operating expenditure	-	82,351,000	63,651,291	23,406,390
Surplus / (deficit)	**-**	**0**	**2658495**	**(5938390)**

The credit scheme had a fair performance but with a declined rate of 50% in 2016. This equally implies that the credit scheme is not sustainable in the long run. This is also confirmed by Statement of Financial position of 2016, where the project had a liability of shs. 31,280,320 (MSc Loan); stamp duty of 925,000 and decline in loan portfolio from shs 177,570,600 in 2015 to shs 171,840,112 in 2016.

Table 3.9: LADA 's credit scheme revenue and expenditure for 2013 – 2016

	2013	2014	2015	2016
Total operating revenue(income)	-	40,223,050	76,502,550	74,015,885
Total operating expenditure	-	25,640,731	54,279,033	62,910,163
Surplus / (deficit)	**-**	**14,582,319**	**22,223,517**	**11,105,722**
Level of performance (%)	**-**	**100**	**152**	**50**

Other factors notwithstanding, the key observations from the financial statements that were provided are as follows:

1) The financial documents provided for the income generation projects are not authentic since they were not verified by external auditor. In principle, audited statements are the ones to be analysed. So this is a gross professional error and makes the documents unreliable. Otherwise, there is a direct manipulation of figures, not matching with the other documents given to the consultant which were dully audited.
2) Poultry project did not do well with over 50 % deficit reflected in the total loss of shs. 5,938,390 in 2016 which means the project is not sustainable in the subsequent period even though there was a poultry house in place (only viable asset) and also the land on which it stands. Although, the poultry project was reportedly successful and supplemented on the income of the organization, and also contributed to the construction of new office structure. The off layers were sold in November and December, 2015. Five (5) secondary schools also identified the project as ideal destination for students' study tour. These included Immaculate Heart Girls Schools in Rukungiri and Kyabugashe and Kambuga SS. However, the poultry enterprise was no longer operational (Figure 3.1). It is therefore realistic to conclude that the project was not doing well and management closed it. This could be attributted to the high spending especially in terms of feeds. Some of the restocked chicks also died as a result of the bad weather.

Figure 3.1: The closed poultry investment.

3) From the statement of changes in equity of poultry for the period ended 31st Dec 2014: opening balance and changes in accounting polices each stand at a figure of shs. 36,515,200 giving a total of shs. 73,030,400. Thus, the question that arise are;

    - The where about of the opening balance figure coming from and yet in 2013 there was nothing in for the project as per other statements. What is the source of this money, if it's really meant for poultry project it should have been specified.
    - Clarification is needed on changes of policy contributing to the stated sum of shs. 36.515,200.
    - When did changes in policy become an income? And also how did the money come into the project. This should have been specified in the IAS being applied?

4) From the statement of position as at 31st Dec, 2014; it can be noted that the document is not in required comparative format and it is confusing in the sense that it is difficult to tell whether it is for 2014 since the column for 2014 has no figure. This is an indication that there was no activity in the year, therefore, contradicting with the project year of commencement.

5) The statement of position as at 31st Dec, 2014 for the saving and borrowing from other projects of shs. 46,495,200 in 2015 and shs. 36,518,200 in 2014 indicate that the project is in liquidity problem. The current ratio is very high, implying current liability is greater than current assets.
6) Water and Livelihood project responsive budgets have their greatest potential impact if they are on-going, rather than one-off and if they are driven by local groups rather than donors; and
7) The revenues for financing the Livelihood projects should be derived principally from self-generating sources, if the program is to be self-sustaining.
8) There is a big challenge with the internal control system that is why records are not matching and not systematic as required by IAS.
   The organization needs a build-up in financial management for successful sustainability.

Overall, there was no recorded on general revenue and expenditure, and budget information for 2016.

3.4 PROJECT OUTPUTS

When the water and livelihood project objectives were set, the term "deliverables" was used to specify the tangible things that would be produced. The other kinds of outputs were the tangible plans, measurements, tracking processes and status reports pertaining to the planning, managing and closing of the project. Sections 3.1 to 3.3 have covered some of the planning and management issues related to the project. Section 3.4, however, does not reflect in details the measurements of the outputs. This is because the consultant was not provided with the sources and means of verification of the achievements. The consultant only based the reporting on the FGDs, KII, and field observations.

3.4.1 MECHANISMS OF PROJECT IMPLEMENTATION

LADA is a 'formal' institution that works with the local government structures in the districts and the sub-counties. LADA consulted with the local government authorities, and beneficiary communities that included the more needy areas within the project districts of Rukungiri, Kanungu and Mitooma. The organisation was to respond and bring to reasonable limits the occurrence of water borne diseases and increase access to clean and safe water. In addition, the project also organised water groups to engage in productive agriculture, promoting what grows well in the community for commercial and subsistence exploitation. All the project resources were assigned to LADA that implemented the project (Table 3.2) and were to report to Self Help Africa in line the deliverables in the project proposal. As already stated in the previous sections, there were scanty documentations to help in the quantification of the project outputs.

3.4.2 PROCESSES OF MANAGEMENT AND PRACTICE

The mechanisms of success of the project were mediated through a set of procedures of management and practice which enabled the allocation of the resources and also maintained the systems. The management processes were at LADA office, the local government and the community scale. However, the regional and the national scale were not ignored since there was regional water board. In addition, the district water officers of the respective districts were regularly submitting the district water performance reports to the Ministry of Water and Environment.

The identification of all the water sources that were worked on by the project were demand driven. All were located in the rural areas except for a few that were in the outskirt of urban centre of Rukungiri.

During the KII with the water officer of Kanungu district, he reportedly said that;

The design of the Gravitational Flow Scheme was made by their office. The office also assisted in the identification of the project sites in the selected communities. These were all guided by the water accessibility in the district. LADA merely financed the construction of the different water schemes.

The KII with M&E of LADA revealed having used the local mansions in the processes of construction of the water sources. Other resources included the Water Boards (WBs), Water User Committees (WUCs) and community Water Care Takers (WCTs). However, the functional WUCs were few during the field survey. The reason could be the weak follow up since the project ended in 2016. The District Water Engineer of Kanungu, Mr Abdala Haziz said;

Ground breaking for the construction work of the water sources was done by the district officials. However, the water sources were not commissioned, therefore, handing over to the district was not yet done. Thereby, there is confusion as to whether LADA is still responsible for supervision of the water sources or not. This has affected the governance of the water sources and therefore, impacting on their sustainability.

3.4.3 CONSTRUCTION AND MANAGEMENT OF THE WATER SOURCES

Although 41 spring water sources were to be worked on as stated in the project proposal, only 21 were constructed. The reason was unclear to the consultant. The streams that were worked on were identified by the community and these were based on their flow. The community were mobilised and they provided labour while the project provided the construction materials. All the identified water points were worked on. However, the M&E officer of LADA said;

The quality of sand that was used was rather low as better quality sand was very far off the points of the construction. He added, this could explain some of the cracks on the water points.

However, the credibility of the mansions used is also questionable since they were reportedly handpicked from within the community.

To enable the community respond to emergency, the community water management system was agreed upon. The water user groups were instituted for each of the water sources, in addition to the village council and water board. The membership of the WUC were to be inclusive, comprising of children, men, women and disadvantaged persons. Table 3.1 shows that the disadvantage groups were excluded from the WUC training. Implying they were not members of the committee. It should be noted that the social interaction of these committee members with their family, community and particularly land owners that provided the catchment area, affected the project implementation. These have a future bearing on the sustainable management of the water sources.

The WUC mechanisms were complemented by the pattern of social institutions of the family and kinship which interacted with one another. In addition, the interaction out smarted the realm (across the boundaries) of the WUCs. An example is the practice of some individuals (land owners) cultivating in the water catchment area and others uprooted / stole the transplanted tree seedlings in the catchment (Figure 3.2). The interference with the catchment area has increased the risk of water contamination due to poor drainage channels; resulting into surface runoff entering the reservoir tanks of the spring water sources. The poor catchment conservation also spread the risks of soil erosion and silting of the drainage channels (Figure 3.3), and causes local micro-climate variability.

Majority of the VSLA group members were women with only few men. The member diversified their saving groups through farming, small scale business of retail shops and selling of food stuff, and rearing of animals. This appeared to have impact on the water source management since it enhanced the prospect of burrowing for water fee payment. The members were also opportune to collective labour

during farming season and joint income-generating activities. During the FGDs, the members of such groups were able to articulate their issues and reported regular attendance of any public meetings. However, not all the members of the different groups had active participation during the FDG meetings. Others had passive participation by listening, but were encouraged to air out their views.

Figure 3.2: Cultivated bananas in the catchment area (a), examples of catchment areas without the planted trees (b & c).


Figure 3.3: Bushy and silted drainage channel.

Some the respondents reportedly said they are poor, and it has affected payment of the water user fees. The financial mechanisms play a significant part in the water source governance. The water user fee is the source for monthly payment of the water mechanics and also for the repair and buying of spares for the water sources. Individual labour contribution was also considered particularly during the physical maintenance of the catchment environment and the surrounding of the water sources. In Rugyeyo sub-county, Kayungwe parish, Kigarama village in Kanungu district, the community could not raise money to replace a broken water tap. They argued that it was the responsibility of the project, an indication of social dependence. Such is inter-woven with the rights to free access to water and services.

In 2016, there were 13 groups belonging to farmer, enterprise and youth groups with soft loans. These groups borrowed over UGX 44,100,000 shillings and UGX 5,500,000 shillings was borrowed by 4 individuals that graduated from their respective groups and built their capacity to manage bigger loans. LADA micro credit scheme groups were trained in small scale enterprise development skills training and capacity building in managing small businesses and land use management. The training benefited the produce dealers operating in market stall and small shops in rural trading centers. Land use management training was done for the rice and coffee enterprises. Overall, 5 VSLAs have been trained and institutionalized to receive LADA microcredit scheme services. Further, the VSLAs have shaped water accessibility and sustainability, and repair of broken down water points because members cannot only loan for their other investments but also for payment of water user fees. Nonetheless, this is a demonstration of the importance of diversification of income generation, but also the incorporation of the decision making and also sustainability arrangements for the maintenance of the water sources.

In the GFS, water was distributed and supplied through the stand taps in the community. Water was allowed to accumulate in reservoir tanks (Figure 3.4) before distribution. This was aimed at eliminating intermittent flows along the system. The conditions of the tanks such as seepage from the walls due to

some cracks needed fixing as growth of fungi and mosses at such points would eventually weaken the areas.

Figure 3.4: Reservoir tanks for water storage in the gravitational flow system.

Whilst in some cases, the processes of management involved the control or manipulation of physical infrastructure such as fencing of the water sources, the structures were dilapidated and majority were without and were also characterised by bushy surrounding (Figure 3.5), thus allowing easy access of animals to the water points.


Figure 3.5: Shallow well and spring water source without fence and bushy environment.

The catchment conservation and human resources of water governance at the community level was rather ineffective in some cases. This is because of the perception of the community that the water sources belong to the project, and therefore there is lack of understanding of how the interactions could be moulded in order to efficiently evolve to sustainable structure. The community types and their cohesion in some cases, affected the management and practice at the water sources and yet these are key in the water source governance. For example, land resources for catchment conservation were limited in most of the project areas (Table 3.13). The delineated catchment areas were less than the 50 x 50 m^2, thus contrary to the initial planned / agreed on stretch. This is an indication that the social and group resources, and rights and entitlements within the catchment were rather complex. The informal land acquisition for the project activities and the integrated social issues of land fragmentation and customary ownership, in addition to the main livelihood being agriculture attributed to the complexity. However, in areas where land was owned by the government or bought, catchment conservation was better off.

Notably, the water sources inter-relate to further reproduce social inequalities. The staircases of then water sources are not friendly to the disabled persons. In addition, the poor HHs in the catchment had limited financial resources which affected their contribution towards the maintenance of the water sources.

3.5 PROJECT OUTCOMES

The outputs of the project management and practice lead to outcomes which occurred at different levels. The consultant used the reports of 2015 and 1st quarter of 2016, and also the Golden indicators put in place by the Ministry of Water and Environment to assess the outcomes of the livelihood and water project.

3.5.1 DIVERSIFICATION OF FARMING SYSTEM

The diversification of the farming component was introduced in the second year (2015) of the project. A total 720 farmers were reached, and have adopted the practice of diversified farming. Of these, about 28% were the Batwa that live in settlements in Kanungu district, and 25% rice farmers in Rukungiri and Kanungu districts. The farmers grew climbing beans and fruit (mangoes, oranges, Avocado, passion fruits, quavers and guavas), woodlot and watershed tree seedlings include *Leucaena, Calliandra, Maeopsis Emini, Albizia, Terminalia Cattapa, Cordia africana, eucalyptus* and *Grevellia*. *Leucaena* and *Calliandra* are used as fodder crops for the goats and cows as well as mulching of banana plantains. A total of 514 of the farmers undertook subsistence and market oriented production methods of growing tomatoes (89 farmers), onions (53 farmers), cabbages (174 farmers) and assorted vegetables (198).

There was rice value addition processing with a medium term objective of packaging and promoting bulk marketing and export within and outside the project area. The rice farmers (1,384) were supported with credit to finance value addition and they also form the bigger percentage of borrowers at LADA micro-credit. The methods of storage (post-harvest handling practices) and food preparation were reportedly integrated during the trainings of good land use management and farming practices as well as in field based support activities by field officers.

By the end of 2015, 20 new VSLAS comprising of over 400 members had their governance capacity improved especially in the areas of financial management; book keeping, recovery of borrowed money from group members and portfolio management at the group level. This helped in the prioritization and setting of goals and objectives especially in investment and expenditure priorities. In the same period, over 131 VSLA groups loaned money from LADA micro credit - the 101 groups engaged in rice farming were reported to have improved access to markets in and outside the districts, including parts of DRC, bordering Kihihi area.

3.5.2 ACCESS TO IMPROVED WATER SUPPLY, COVERAGE AND FUNCTIONALITY

The value across drinking water sources from 2013 to 2017 indicate an increased use of protected water sources than unprotected water sources for project beneficiaries and non-project-beneficiaries (Figure 3.6). Increased access was for piped line/public taps, and protected hand pump/borehole/tubewell. The non-beneficiaries exhibited higher access to the unprotected/open dug well.

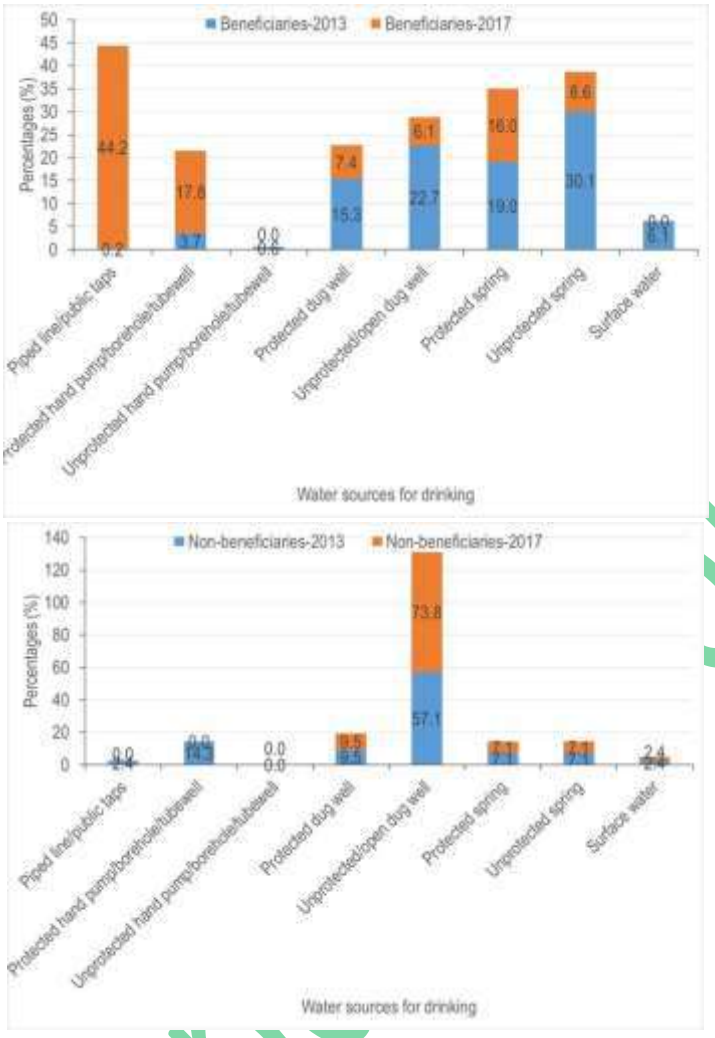


Figure 3.6: Drinking water sources of beneficiaries and non-beneficiaries.

An increased access of protected water sources for cooking by the project beneficiaries occurred from 2013 to 2017 (Figure 3.7). The unprotected/open dug well was commonly used for cooking by the non-project-beneficiaries (Figure 3.7). The magnitude of access of the water sources for laundry and bathing by the beneficiaries and non-beneficiaries of the project (Appendix) were not different from that for drinking and cooking.

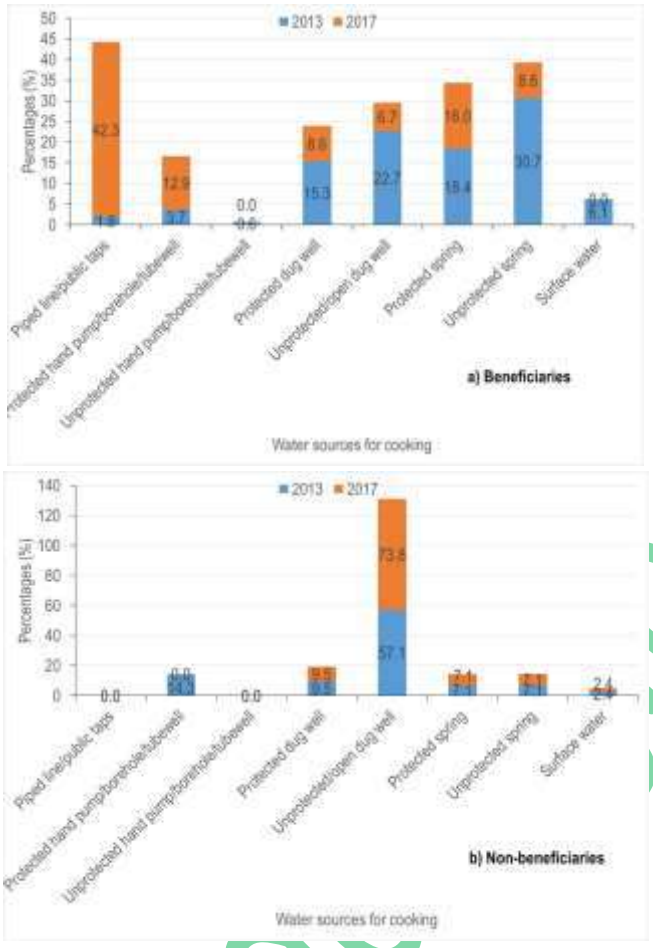


Figure 3.7: Water sources of the beneficiaries (a) and non-beneficiaries (b) for cooking.

Water fetching among the beneficiaries was mainly carried out by the adult women and the boys (Table 3.9). However, more girls were involved in fetching water by 2017. Similar trend occurred for the non-beneficiaries. Overall, there was lower number of beneficiaries that fetched drinking water between 500 m to 1 km in 2017(Table 3.9). This is because higher number (54.6%) were fetching drinking water within 500 m and this did not affect the time taken for fetching water. Majority (50.9%) spent only 15 minutes at the water sources (Table 3.9). In general, there was a reduction in the time taken by the project beneficiaries in fetching drinking water at the sources by 2017. The distance of drinking water sources did not change for the non-project-beneficiaries by 2017 and time taken for fetching water was relatively the same.

Majority of the beneficiaries (89%) and non-beneficiaries (97.6%) were using jerry cans for fetching drinking water in 2013. Unlike for the non-project-beneficiaries (97.6%), there was improvement in the number of beneficiaries (98.8%) that used jerry cans for fetching drinking water in 2017. However, the jerry cans were commonly dirty (Figure 3.8). Drinking water was stored in the jerry cans (67.5%), buckets (20.2%) and clay pots (9.2%) by the beneficiaries in 2013. Similar containers were also used by the non-project-beneficiaries – jerry cans (78.6%), buckets (14.3%) and clay pots (2.3%). Overall, there was an increased number of beneficiaries (75.5%) that used jerry cans compared to that of the non-beneficiaries. that remain constant (78.5%) in 2017. More non-project-beneficiaries were using buckets (16.7%) in 2017.

The percentage of the beneficiaries that treated drinking water was 77.3% in 2013 compared to the 82.2% in 2017. Non-project-beneficiaries (66.7% and 73.8%) treated drinking water in 2013 and 2017 respectively. Majority of beneficiaries (73.6%) and non-beneficiaries (66.7%) were boiling drinking water

in 2013. A rise in the number that boiled drinking water was recorded only for the beneficiaries (79.8%) than the non-project-beneficiaries (64.3%). The percentage of beneficiaries (82.2%) and non-beneficiaries (71.4%) who said water treatment was not applicable were higher in 2017 compared to the lower values of 78.5% and 69% respectively in 2013 (Figure 3.9). Inadequate knowledge of treatment of drinking water (4.9%) was among the reasons for not treating water by the project beneficiaries.

Higher percent of the project beneficiaries consumed between 20-37L and 38-75L of drinking water during the project period (Figure 3.10). High numbers of non-beneficiaries also consumed similar volume of drinking water. Although water was a free commodity to most project beneficiaries, a few spent some money on water in a day (Figure 3.11).

Table 3.9: Individuals that majorly fetched water, distance of water sources and time spent in fetching water.

	2013		2017	
	Beneficiaries	**Non-beneficiaries**	**Beneficiaries**	**Non-beneficiaries**
Categories that fetched water				
Adult men	11.0	9.5	11.7	9.5
Adult women	43.6	52.4	35.6	40.5
Boys	27.0	14.3	27.0	21.4
Girls	17.2	21.4	25.2	28.6
Others	1.2	2.4	0.6	0.0
Distance of drinking water sources				
Within 500 m	41.1	47.6	54.6	47.6
500 m - 1 km	40.5	38.1	36.8	38.1
1 - 3 km	13.5	14.3	8.0	14.3
More than 3 km	4.9	0.0	0.6	0.0
Time spent in fetching water				
Within 15 minutes	45.4	35.7	50.9	33.3
15 - 30 min	32.5	35.7	27.0	35.7
30 min - 1 hr	12.9	11.9	16.6	19.0
More than 1 hr	8.6	16.7	4.9	11.9

Figure 3.8: Jerry cans used for fetching water

Not all the containers for water storage were covered by the beneficiaries (9.2%) and non-beneficiaries (35.7%) of the project. Other HHs of the beneficiaries (39.2%) and non-beneficiaries (62%) did not cover the water storage containers while 50.3% and 2.4% of the project beneficiaries and non-project beneficiaries respectively covered the containers. The project beneficiaries that withdrew water from the storage containers by tilting and pouring into a mug/glass and those that usually dipped their hands into

the water storage containers using any available mug/glass were 67.5% and 28.8% respectively in the year 2013. There was a decline in the number (22.8%) and an increase in number of the beneficiaries that tilted and used any available container respectively for drawing water from the storage containers in 2017. The non-beneficiaries had 54.8% and 31% withdrawing water by tilting and dipping their hands using any available container respectively in 2013. A rise in the number of non-beneficiaries was recorded for those that tilted the storage container (62%) and dipped their hands using available mug/glass (26.2%) in 2017.

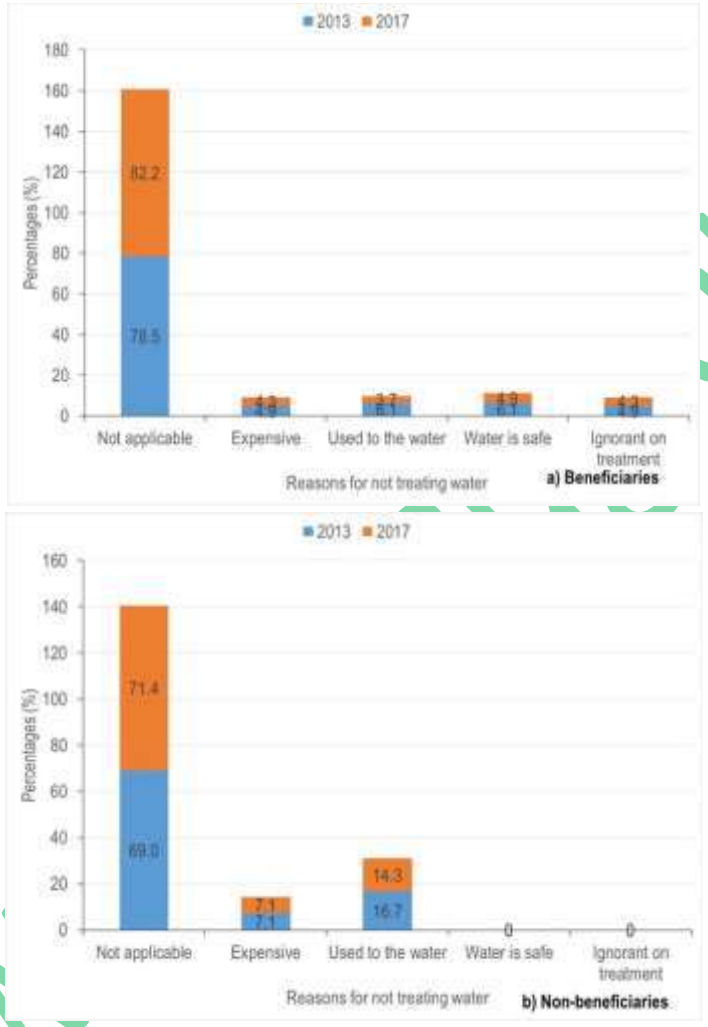


Figure 3.9: Reasons for not treating drinking water.

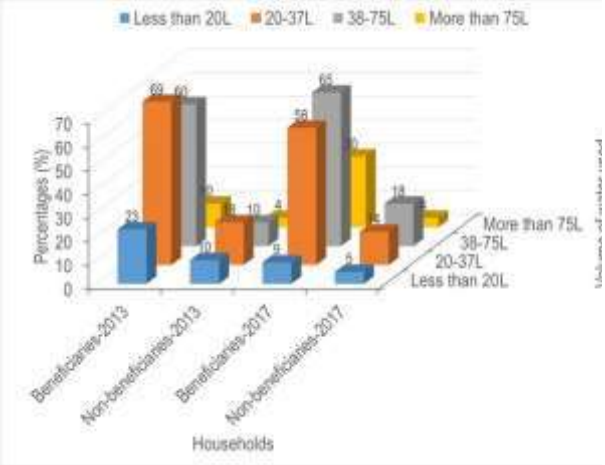


Figure 3.10: Volume of water consumed by the beneficiaries and non-beneficiaries of the project in a day.

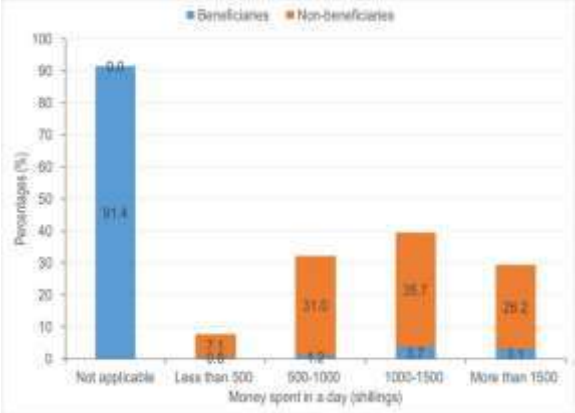


Figure 3.11: Amount of money (shillings) spent on water per day.

3.6 SANITATION AND HYGIENE

There was reportedly 6 sanitation and hygiene sessions: 2 in Kanungu and 4 in Rukungiri District. These included the demonstration of tippy taps, birthing shelter, and composting pit, drying rack, tippy tap, covering foods, use of clean utensils and having good latrine pits. These were formed as learning sites for acquisition of knowledge to six villages of 180 households (900 individuals). One audio visual show on sanitation and hygiene was reportedly conducted in Bikurungu trading in Rukungiri District during the sanitation and hygiene week.

3.6.1 LATRINE COVERAGE AND USE

The latrine coverage was 98.8% and 92.9% for the project beneficiaries and non-project-beneficiaries respectively. These did not change over the project period. Highest number (94.5%) of the project beneficiaries constructed their latrine while some NGOs constructed for only 2.5%. A few said the construction of latrine was not applicable to them (1.2%). Highest number (95.3%) of non-project-beneficiaries also constructed latrine. The common type of the latrine among the project beneficiaries was pit latrine with slab (20.2%), others were without slab (70%) and a few were composting latrine (8.6%) while the non-project-beneficiaries had pit latrine without slab (2.4%) and majority without slab (95.2%). The project beneficiaries reportedly said their latrine were located within 50 m (87.1%) and more than 50 m (11.7%) from their houses while 76.2% and 23.8% of the non-beneficiaries reported similar distances respectively. Although majority of beneficiaries (81%) and non-project-beneficiaries (81%) were not sharing latrine in 2013, a few of the latrines were shared between the project beneficiaries among 2 – 4 (14.7%) and 5 – 7 families (4.3%). Only 19.1% of those families of 2 – 4 members of the non-project-beneficiaries were sharing latrine. The percentages that shared latrine were relatively the same in the year 2017. The individual sharing latrines were majorly tenants. Project beneficiaries without latrine were using that of their neighbours (3.1%). Even after the project, baby's faeces were thrown into latrine (98.2% and 92.9%) and buried (1.8% and 2.4%) by the project beneficiaries and non-project-beneficiaries respectively.

3.6.2 WASTES DISPOSAL AND HAND WASHING

Different wastes disposal methods were used by the project beneficiaries and non-project beneficiaries (Figure 3.12). The most commonly used disposal methods by project beneficiaries were the garbage pit and compositing system while the non-project-beneficiaries were mainly using the garbage pit.

Hands washing was highest before eating in 2013 and 2017 by both the project beneficiaries and non-beneficiaries (Table 3.10). The beneficiaries used water only (22.1%) and water with soap (84%) while the non-project-beneficiaries also used the same methods (16.7% and 81%) respectively. Although in 2013, 77.3% of the beneficiaries were not specific as to why they did not use soap for washing their hands, others agreed that hand washing with soap takes time (1.2%), soap is not a practice even before (6.1%), water alone cleanses the hand (3.6%), soap is expensive (9.2%) and 2.4% mentioned negligence/laziness in using soap. Majority (86.5%) of the project beneficiaries still said hands washing was not applicable to them. The reason for not washing hands with soap were similar as of the year 2013 but with declined percentages - hands washing with soap takes time (0.6%), soap is not a practice even before (3.6%), water alone cleanses the hand (1.8%), soap is expensive (6.7%) and 0.6% mentioned negligence/laziness in using soap. The non-beneficiaries also reported the same reasons but 83.3% said washing hands was not applicable to them before (2013) and after (2017) the project.

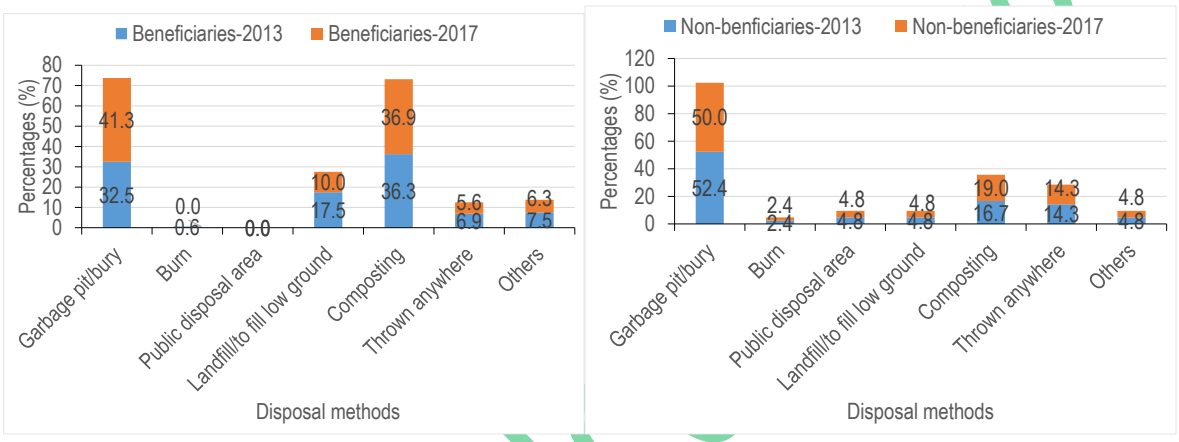


Figure 3.12: Waste disposal of the project and non-project beneficiaries.

Table 3.10: Hands washing practice of the HHs.

	2013		2017	
	Beneficiaries	**Non-beneficiaries**	**Beneficiaries**	**Non-beneficiaries**
Before eating	38.7	78.6	28.3	81.0
After latrine use	24.5	0.0	25.5	0.0
After handling baby's diaper/feces	2.5	0.0	4.3	0.0
After eating	2.5	0.0	6.7	0.0
Before feeding child	2.5	0.0	3.1	0.0
Before food preparation	17.8	0.0	16.6	0.0
After defecation	4.3	14.3	6.7	11.9
After handling rubbish	6.1	2.4	7.4	4.8
After handling animals	0.6	0.0	0.6	0.0

Of the project beneficiaries that had latrine, 35.6% of the HHs were not having hands washing facility in 2017. Only 34.4% had water and soap near or within the latrine. Others (4.9%) had water and soap in designated hands washing areas while 2.5% had only water in such areas. In 2017, 92.9% of the non-project-beneficiaries were not having hands washing facility and only 14.2% had water and soap near or within the latrine.

3.6.3 INFORMATION MANAGEMENT ASSOCIATED WITH WASH

The project beneficiaries (90.2%) and non-beneficiaries (100%) agreed that they heard hygiene/health messages within the last 3 months before the evaluation. The common messages received by non-

project-beneficiaries were on covering food, regular bathing and water treatment (Figure 3.13). The project beneficiaries had common messages on use of latrine for defecation, clean cover for water containers, proper garbage disposal, cleanliness around water points and hands washing.

The domain channel for the hygiene/health messages of the non-beneficiaries was radios and that for beneficiaries was mosque/church (Figure 3.14) and the preferred channels differed as well (Figure 3.15).

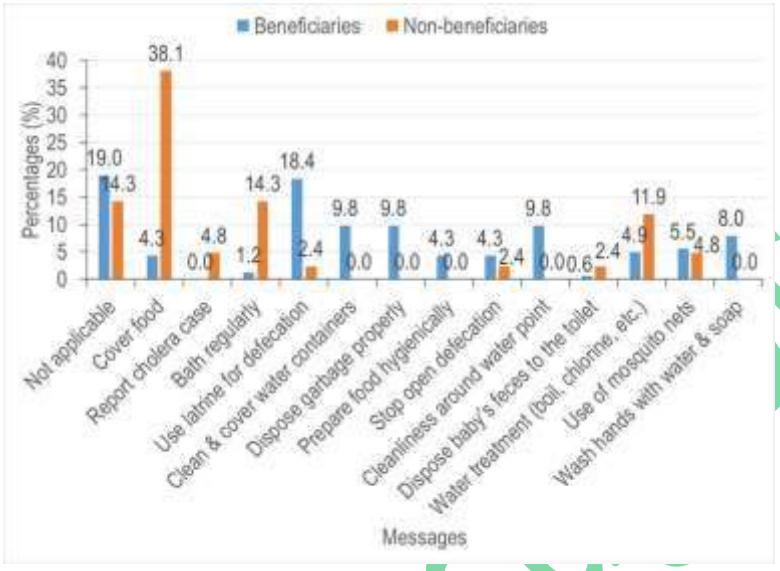


Figure 3.13: Different hygiene/health messages that were received by the HHs.

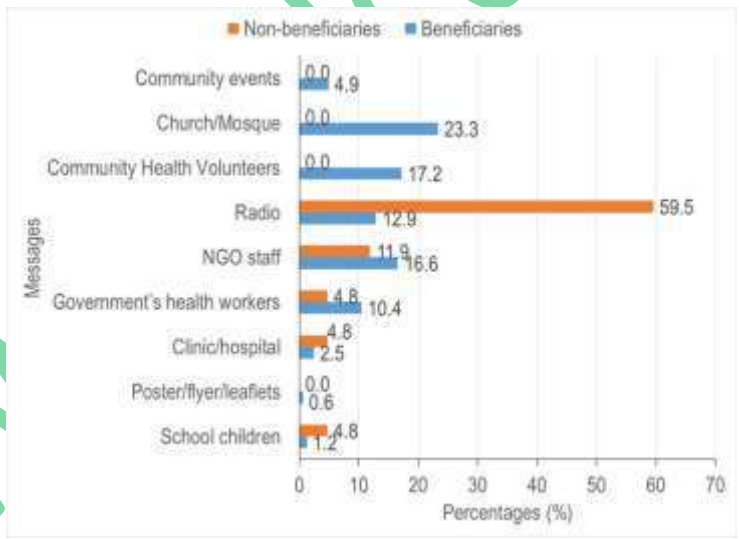


Figure 3.14: Channels of hygiene/health messages of beneficiaries and non-beneficiaries of the project.

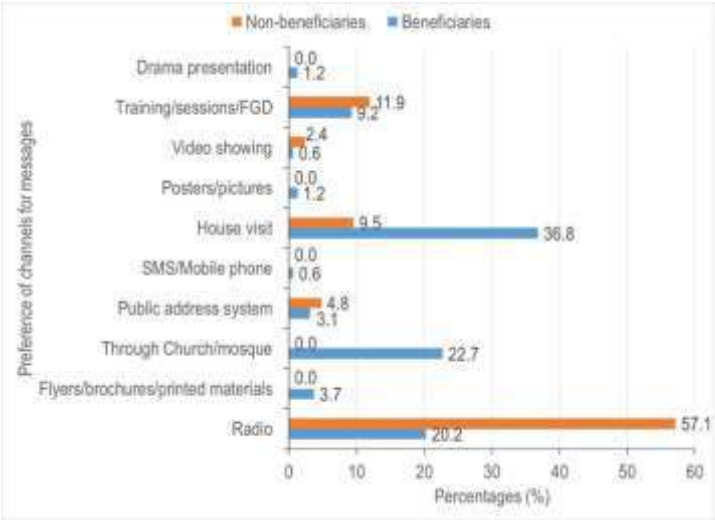


Figure 3.15: Preference of channels for communication to the HHs.

3.7 VULNERABILITY AND COPING MECHANISMS

3.7.1 DISEASE BURDEN

The diseases that were common in 2017 among the beneficiaries of the projects were diarrhoea (22.7%), malaria (81.6%), typhoid (27%), schistosomiasis (1.2%) and amoebiasis (1.2%) and the non-beneficiaries suffered from the same diseases - diarrhoea (19%), malaria (69%), typhoid (19%), schistosomiasis (0%) and amoebiasis (9.5%).

The beneficiaries (76.7%) and non-beneficiaries (81%) had no diarrhoea in the last 3 months before the evaluation. Project beneficiaries' children under 5 years (8.6%) were mostly affected with diarrhoea. The old persons, adult females and males, and children between 15 – 18 years had relatively the same number (2.6%) of diarrheal infection. Only 17.8% and 31% of beneficiaries and non-beneficiaries respectively had not experienced malaria. The highest malaria cases were in children under 5 years for the beneficiaries (22.1%) and non-beneficiaries (23.8%). The beneficiaries (49.1%) and non-beneficiaries (61.9%) reportedly never suffered from typhoid. However, adult females that were non-beneficiaries recorded more typhoid cases (16.7%). Over 90% of the beneficiaries and non-beneficiaries did not suffer from Schistosomiasis and Amoebiasis. Except for malaria (0.6%) that killed HH members within the last 3 months before this evaluatioon, the morbidity of other diseases were 100%.

The project beneficiaries related the causes of diarrhoea majorly to dirty food (20.9%), poor hygiene (25.8%) while 30.1% did not know the cause. The non-project-beneficiaries associated the disease majorly to dirty food (26.2%) while 40.5% did not know the cause. Although 23.2% and 81% of the project beneficiaries and non-project-beneficiaries did not know the causes of malaria, 26.4%, 18%, 16.4% and 8.2% of the beneficiaries associated it to germs, rain, poor hygiene and dirty food respectively. Only 11.9% of the non-project-beneficiaries reported rain as the cause of malaria. Germs, dirty food, poor hygiene, flies, dirty water and open defecation were reportedly the causes of typhoid among the project beneficiaries, majority (39.3%) did not know the cause and overwhelming number (78.6%) of non-project-beneficiaries were also unaware of the cause. Relatively, similar number of beneficiaries (65%) and non-beneficiaries (90.5%) of the project did not know the causes of schistosomiasis and amoebiasis. However, majority said poor hygiene and dirty water caused the diseases.

Safe water and food were reportedly the preventive methods for diarrhoea but higher number of the beneficiaries (19%) and non-beneficiaries (26.2%) were ignorant of diarrheal prevention. The percentage

of malaria and diarrheal prevention among the beneficiaries and non-beneficiaries were relatively the same. Higher percentage of beneficiaries (37.4%, 67.5% and 74.2%) and non-project-beneficiaries (61.9%, 69% and 78.8%) did not know how to treat typhoid, schistosomiasis and ameobiasis respectively.

3.7.2 FINANCIAL BURDEN

The financial vulnerability was calculated based on the monthly income and expenditure of the beneficiaries and non-beneficiaries of the project (Table 3.11). The monthly income of the project beneficiaries was higher than that of the non-beneficiaries. However, the monthly expenditure was more for the project beneficiaries than the non-project-beneficiaries but were all above their income. The average income for HHs were 113,668 and 89,083 for the beneficiaries and non-beneficiaries respectively and their expenditure were 76,876 and 51,064 respectively. This means the community were dependant on borrowing.

3.7.3 VULNERABILITY OF LADA

Although a new office block was constructed under the project and is now in use (Figure 2.1), this has only offset the burden on renting office space. The financial vulnerability of the organisation was fully discussed in section 3.3.1 which is the reflection of the general financial sustainability of the water and livelihood program.

Table 3.11: HHs' income and expenditure.

Income	**Beneficiaries**	**Non-beneficiaries**
Small scale crop farming	55,000 ± 15,546	100,833 ± 41,078
Livestock/poultry	132,500 ± 58,220	98,333 ± 23,154
Seasonal employment	180,714 ± 55,691	73,000 ± 28,831
Small enterprises/petty trade	86,458 ± 16,193	84,167 ± 31,263
Total	**454,672**	**356,333**
Expenditure		
Transport	42,765 ± 6,304	51,667 ± 1,6104
Water	21,558 ± 11,798	41,923 ± 6564
House rent	18,411 ± 5,869	8,690 ± 2,072
Food	60,340 ± 5,705	94,095 ± 16,747
Clothing	50,026 ± 6,958	25,714 ± 4,684
Communication	18,565 ± 3,210	16,441 ± 2,562
Paraffin	6,456 ± 636	17,800 ± 9,816
Medical treatment	50,895 ± 5,740	113,542 ± 69,387
Education	163,975 ± 26,767	116,900 ± 45,733
Social events	335,757 ± 95,087	23,864 ± 6,339
Total	**768,757**	**510,636**

3.8 QUALITY OF WATER SOURCES AND THEIR ENVIRONMENTAL CONDITIONS

The improved water sources included piped water, public taps, boreholes, protected well/springs and gravity flow schemes. Gravity flow were considered under the public taps. By 2015, the project reportedly raised and planted over 73,000 watershed and woodlot tree seedlings in water catchments, private lands of Water User Groups (WUGs) and in schools. The trees planted were *Leucaena, Calliandra, Albizia,*

Cattapa, Cordia africana, Grevellia and Terminaria. During tree distribution and exercises, community members were taken through land use training, with emphasis on riverbanks and catchment of the protected water sources. The environmental assessment and water quality analysis are summarised in Tables 3.12 and 3.13 respectively.

3.9 PROJECT CONTRIBUTION TO CROSS-CUTTING ISSUES

The progress reports of 2015 and 2016 were used for the synthesis of cross cutting issues on vulnerable families and the disadvantaged groups and how the project contributed to their live. In these reports, it was stated that the project participated in the World Water Day commemoration for Kanungu, Mitooma and Rukungiri Districts. This was an evidence of the rights of Persons Living with HIV/AIDs (PHA) Networks. In addition, the selection of water source committee took into consideration the inclusiveness of gender. Seven (7) members formed the committee, 4 were women and 3 men. However, in Kanungu district, Rugyeyo sub-county, Kayungwe parish, Kigarama village, the women;

Complained of men not participating in the cleaning of the surrounding of the water source. When asked as to whether the men would complain when their women provided them with dirty water. They said yes, but could not explain their lack of involvement in keeping the environment of the water source clean.

The shortage of labour particularly by men during the construction of some of the water sources further hindered the standard of water sources. During the FGDs;

Women at Bagdad, Southern division, Namanyenje village blamed the low yield of water in the constructed shallow well on the men who did not adequately participate in the sinking of the well, amidst the mobilisation by LADA. They said, the yield of the well is mostly in the morning hours and in the course of the day the well is dry. They attributed this to the inadequate depth of the well that affects the accumulation of water over night.

Overall, there was recognition of coordination and collaboration with the districts that reduced duplication of services. This lead to proper utilization of resources. LADA staff members were attending the District Water and Sanitation Co-ordination Committees (DWSCCs). LADA was involved in advocacy and governance of activities during the project implementation. The feedback meetings provided opportunities for engagement between government officials, service providers and the community members thereby promoting dialogue, good governance, accountability and transparency. They also provided opportunity for communities to advocate for their right to access clean and safe water.

3.10 CASE STUDIES/STORIES INVOLVING BENEFICIARIES, PARTNERS AND OTHER STAKEHOLDERS

3.10.1 BAGDAD-SOUTHERN DIVISION, NAMANYENJE VILLAGE

The community is having a shallow well that was constructed under the project in 2016. This provides the major domestic water source. The communities also reported harvesting rain water for drinking. The shallow well was reportedly having low yield in the morning hours and gets dried up in the course of each day. The women attributed this to the lack of cooperation of the men during the construction process thus affecting the depth of the well. When water is not flowing from the well, water is collected from a protected spring that is located about 1.5 km away. This spring was constructed by the local government. Other community members collect water that accumulate in the ponds formed by brick makers, however, this is also seasonal.

The communities said;

The shallow well has helped us but it serves many people and it is also free. Some of us used to collect water from the town at a rate of 1,000 shillings per jerry can.

The surrounding of the shallow well was slashed but there was no proper drainage. This results into contamination of the water during rainy season. In addition, the dirty funnel and also dirty water containers used for water collection disrupts the water safety chain. However, the water was also turbid and this was reportedly worse during heavy rainy season.

Table 3.12: Site description of the water sources.

S/N	Site name	Coordinates		Site description
		Northing	Eastings	
1	Kitungulu protected spring	814546	9917697	- Absence of fence around the source, hence animals could have access into the source. - Poorly constructed diversion ditch permits runoff which collects around the reservoir tank and some get into the tank. - There was siltation along the drainage system. - Surface water also collects uphill of the water source. - Common crops grown in the recommended 50 x 50 m^2 area included banana and maize, thus affecting the catchment size. - Most of the tree species planted around this source (mainly *Grevillea*) were uprooted/stolen by the locals.
2	Nyamiyaga protected spring	815312	9917823	- There was indication of some runoff getting into the reservoir tank and also collection uphill of the source. - Poorly constructed diversion ditch. - Spilt water flooded the water collection point. - Absence of a fence has resulted into poor catchment management. - Cultivation being done within the 50 x 50 m^2 catchment area.
3	Nyakatemba protected spring	808640	9937048	- The source has very low water yield that dries off during dry seasons. An indication of blockage of the main spring eye during pre-construction (opening up of the reservoir area) thus affecting the efficient flow of water into the reservoir tank. - Due to the low water fields, some community members resorted to the unprotected hand dug well for their drinking water. - Catchment management was poor due to termite destruction of all the trees that were planted around. However, there were a few of the trees that were growing. - The spring tap was broken and the masonry protecting the tap was faulty. - 50 x 50 m^2 catchment area not achieved.
4	Nyabugando protected spring	808978	9937759	- Diversion ditch above the spring was absent and there was siltation along the drainage channel. - The source has no fence, animal could easily access the source. - Very poor sanitation around the source. - Poor catchment management since most of the tree species were eaten by termites. - Land is an issues and therefore, the 50 x 50 m^2 cover area not achieved.
5	Rushaya protected spring	813809	9934926	- Water from this source was very turbid. - Not commonly used by the community since majority resorted to Rushaya stream for their domestic water needs. - No diversion ditch. - Located on government land, therefore, relatively fair watershed management system. - No fence, animal could easily access it.
6	Rugyera protected spring	814290	9933713	- Spilt water floods at the collection point. - The source has poor drainage system. About 3 metres from the source, the water that would have been channel easily through the trench meets the nearby stream. Thus causing back flow and flooding of the water collection point. - Source had high yield. - 50 x 50 m^2 catchment area not achieved.

S/N	Site name	Coordinates		Site description
		Northing	Eastings	
7	Ndorero Reservioir protected spring	823576	999092	- Poor hygiene. - Diversion ditch above the source was silted. - All the project trees had been stolen after transplanting. - Poor water shed management.
8	Bagdad shallow well	827014	991014	- Not fenced. - Spilt water collects around the apron. - Apron had cracks. - 50 x 50 m^2 catchment area not achieved.
9	Kabyoya shallow well	818991	993303	- Yield reduces during dry season. - Land owner had maintained proper water shed management. - 50 x 50 m^2 catchment area has been achieved because of the efforts of the land owner. - Water point had cracked apron. - Fence not there, so animals could easily access the source.
10	Kitariro Ordinary PS	803279	9902262	- Very low water yield. - Diversion ditch was present except runoff gets into the water collection area through the entrance stair case. - Wetland plant, *Cyperus papyrus* is growing uphill the source within the 10 x 10 m^2 area of the spring eye. - Watershed is poorly managed. - None of the project trees were existing in the area. All were stolen.
11	Nyanga shallow well	800409	9927093	- Very high yield. - Eroded apron area. - Poor sanitation around the source. - Water catchment management was fairly fulfilled coupled with the fact that this source was located along the buffer lines of Queen Elizabeth National park.
12	Rutoma ordinary protected spring	801308	9925386	- Very low water yields in the dry seasons. - No diversion channel. - Cracks on the embankment.
13	Kororo shallow well	99412	9922576	- Non-functioning water source (dried up) - Located on flat dry area.
14	Bukunga Gravitational flow scheme	816575	9897979	- Main reservoir tank which stores nearly 70% of the water before distribution to the different villages. - Main water source is Nyarugera which supplies Kigarama, Rwebale and Rwamazo villages. However, water supply is intermittent at Rwebale. - Nyamitumba missed out at the end of the project. - 15 taps were supposed to be installed, however, only 8 were operational.
15	Kashayo Reservoir spring	815537	9907527	- Spilt water collects at the water collection area. - Poor sanitation around the source. - Leakage on the spring tap.

S/N	Site name	Coordinates		Site description
		Northing	Eastings	
16	Bukiriro A protected Spring	828282	9934841	- Well maintained 50 x 50 m^2 catchment area. Good catchment conservation - Clean environment. - Construction of the source was perfectly done. - Well organised diversion ditch. - The reservoir tank top is raised above the ground level.
17	Bukiriro B protected Spring	827581	9934913	- Water catchment well maintained due to the clear delineation of the 50 x 50 m^2 catchment area. - Reservoir tank well raised above the ground level. - Diversion ditch was present although water still find its way to the sump
18	Ndurumu Protected spring	828752	9934593	- Water catchment management was okay. - 50 x 50 m^2 catchment area has been achieved.
19	Kiyanga shallow well	827269	9994660	- No fence. - Cracked apron. - Poor sanitation around the source. - Poor catchment management.

Table 3.13: Bacteriological tests results of the water sources.

S/N	Source name	District	County	Sub-county	Parish	Village	Northing	Eastings	Risk Scores	*E.Coli* (CFU/100ml)	Compliance	Overall comment
1	Kitungulu protected spring	Rukungiri	Rujubura	Bugangari	Kazindairo	Kitungulu	814546	9917697	5	57	Failed	Moderate risks, water needs to be boiled
2	Nyamiyaga protected spring		Rujubura	Bugangari	Kazindairo	Nyamiyaga	815312	9917823	6	132	Failed	High risk, boiling is mandatory
3	Nyakatemba protected spring		Rujubura	Bwambara	Kikara	Nyakatemba	808640	9937048	5	69	Failed	Moderate rosks, water needs to be boiled
4	Nyabugando		Rujubura	Bwambara	Kikara	Nyabugando	808978	9937759	4	74	Failed	Moderate rosks, water needs to be boiled
5	Rushaya protected spring		Rujubura	Bwambara	Kikara	Nyabugando	813809	9934926	8	TNTC	Failed	Investigate source of contamination, boiling is mandatory
6	Rugyera ordinary protected spring		Rujubura			Rugyera	814290	9933713	5	138	Failed	High risk, boiling is mandatory
7	Ndorero reservioir protected spring		Rujubura			Ndorero	823576	999092	3	36	Failed	Moderate rosks, water needs to be boiled
8	Bagidadi shallow well						827014	991014	2	38	Failed	Moderate rosks, water needs to be boiled
9	Kabyoya shallow well		Bujjubura	Bugangali	Kazindairo	Kabyaya	818991	993303	4	64	Failed	Moderate rosks, water needs to be boiled
10	Kitariro ordinary protected spring	Kanungu	Kirima	Kinkizi East	Rutugunda	Buhamba	803279	9902262	2	<1	Pass	Recommended for drinking and other domestic uses
11	Nyanga shallow well		Kirima	Kinkizi East	Rutugunda	Nyanga	800409	9927093	3	9	Failed	Low risk
12	Rutoma ordinary protected spring		Kinkizi West	kihihi	Rushoroza	Kibibiro	801308	9925386	5	215	Failed	High risk, boiling is mandatory
13	Kororo shallow well		Kinkizi West	kihihi	Rushoroza	Kororo	99412	9922576		……	…..	Dry well
14	Bukunga gravitational flow scheme		Kinkizi West	Rugyeyo	Kayongwe	Kigarama	816575	9897979	4	53	Failed	Moderate rosks, water needs to be boiled
15	Kashayo reservoir tank		Kinkizi East	Kabuga	Nyabutojo	Kashayo	815537	9907527	3	36	Failed	Moderate rosks, water needs to be boiled
16	Bukiriro A protected spring	Mitoma	Ruhinda	Kanyabwanga	Kasogelero	Rwenkeiruje	828282	9934841	3	2	Failed	Low risk
17	Bukiriro B protected spring		Ruhinda	Kanyabwanga	Kasogelero	Rwenkeiruje	827581	9934913	0	<1	Pass	Recommended for drinking and other domestic uses
18	Ndurumu protected spring		Ruhinda		Ruchenche	Rwenpungu	828752	9934593	0	<1	Pass	Recommended for drinking and other domestic uses
19	Kiyanga shallow well			Kiyanga		Kiyanga	827269	9994660	7	100	Failed	High risk, boiling is mandatory

The community members said nobody has ever visited the place to assess the water quality, although the chairman of the water user committee said he reported the low yield of the well to LADA. User fee of 1,000 shillings was paid by only 10 HHs and the money is kept by the treasurer. Those who do not pay were not allowed to fetch water - their jerry cans were always confiscated.

The committee members of the water source accepted to have been trained on the management issues. The qualification for the membership of the committee was based on the nearness to the water source. Although this eases the supervision of the water source, it deviates from the principle of inclusiveness of the committee membership.

The catchment area of the water source is reportedly reduced (less than the 50 x 50 m^2) and some of the planted trees were stolen while others were reportedly dried up.

Pit latrine was the common type but were mostly without slabs. The latrine floor were commonly made of timber off cuts. Community members were trained on the use of tip tap, although they were not common. They said;

It is important for hands washing. However, we commonly fill our tip taps and put them to use only when we are expecting visitors. Hand washing has also reduced the incidence of water borne diseases in our area.

The community recommended the following;

- Water source be reconstructed by increasing the depth so as to increase volume of water and also to capture the stream eye.
- They also suggested the construction of an alternative source in the nearby vicinity since there are many users of the existing water source.

3.10.2 RUGYEYO S/C, KAYUNGWE PARISH, KIGARAMA VILLAGE

The village has Gravity Flow System (GFS) that collects an underground stream source and conveys the water to feed the stand taps in the community. Although, the GFS was reportedly cleaner water source, there was complain of reduced flow down the water distribution chain. The furthest user of the installed stand taps was estimated to be at 1 km. Before the GFS, the community members were using the stream that flow within the community and had multiple users that included the animals.

The community acknowledged that there was reduced stomach problem, cough, malaria and flue when they started using water from the GFS. However, they said;

We commonly boil drinking water for infants. We the adults drink un-boiled water when not at home, particularly during gardening.

There was a passive functional user committee as some said the water tap belongs to the project. For that reason the disfigured tap was not replaced, although the said there was no money for buying new tap. However, the issue was reported to the Parish Chief. There was compliant that the water reservoir tanks could not be washed since they are always locked. The contrition of the water user fee was 200 shillings and only 17 HHs had contributed.

Drinking water was reportedly stored in jerry cans that are properly closed with leads. Hands washing practice was done after visiting toilets and garden work. A quick survey of those present during the FGD revealed only 3 out of the 14 individuals had functional tip taps at their homes. Pit latrine without slab was

the common type. The members present said they attribute the reduced incidence of water borne diseases to the awareness and less contamination of food stuff by houseflies.

There was a general consensus on the advantages of the GFS which included:

- Time saved for water collection thereby ample time for other activities.
- Increased frequency of bathing resulting into improved cleanliness.
- Reduced spending on sickness due to lower incidences of water born sickness.
- Children became aware of safe water source.
- Diverse use of the GFS that include irrigation of tomatoes in backyard gardens.

The community agreed to:

- Fence the surrounding of the water source in order to protect its.
- Lock the tap to regulate incidence of destruction.
- Elect an inclusive committee of 9 members, taking into consideration special interest groups.

3.10.3 KIHIHI CREDIT GROUP, OMWIRANGIZOTUKORE GROUP, KIRUMA VILLAGE, KIBIMRA PARISH, KIHIHI S/C

This is a self-help group that was initiated by the Integrated Rural Development (IRD) in 2009. It had 30 membership by then. The group was later linked to LADA in June, 2014 because the organization was looking for organized saving groups. It has been consistent as indicated by the records at the LADA VSLA. It comprises of 33 members of which majority (23) are women. The first burrowing by the group from LADA VSLA was 6 m. Because of their loyalty in payment, the group reported to have burrowed for the 7th cycle and their last burrowing was 4 m.

Zebikire Chogodina, Group chairperson, also LC 1 reported burrowing for payment of school fees and also for her small scale business that involved selling of food stuff such as beans, sweet potatoes, cassava and fish. Mr. Julius Rugume said, he used the burrowed money for buying goats that have since multiplied. All the members present during the FGD accepted that the savings has relive them from school fees burden. Treasurer of the group used the borrowed money for school fees payment, trading in a retail shop, buying household assets and also reinvested in farming. Kyensi Evelene, 60 yrs old, a widow with 4 children burrowed money to supplement her retail business and also invested in subsistence farming and school fees payment of one of the grandchildren. She reported that the total amount she burrowed increased over time.

The increment in the amount borrowed was evident for all the members as they could afford the repayment over time, an indication of change in their financial status. It was also reported that saving culture of the group had improved. The weekly saving rose from 2,000 to 5,000 and then to a maximum of 25,000 shillings with the help of LADA VSLA. Importantly, there was good record keeping as evident by the financial and visitors' record books. The chairperson of the group appreciated LADA for always taking visitors to their groups.

The financial records indicated an accumulated total saving of 4.4 m in cash in May 2017. The maximum weekly repayment was 200,000 shillings, at 5% interest rate per month. Of advantage is the involvement of their spouses in the identification of the family needs before any money is borrowed. This has reduced conflict of interest in the HHs.

The members of the group agreed that there was a big difference between them and non-members who are also eager to join. However, they are not willing to admit new members since the group dynamics is controlled by their constitution. For this reason, they have been labelled as 'Selfish' people. The group

membership was very particular to some selection criteria which include the social life of the person. Those who were notoriously known for drinking were disqualified for the fear that the burrowed money would end up being used for drinking.

The members associated the group advantage to:

- Training opportunity on financial literacy and acquisition of booster funding for their projects.
- Adequate support that is given to well organise groups. For example, they managed to buy a rice hauling machine under the Kibumbiri Rice Farmers Cooperative.

However, not all were full of roses, the challenges of the group were;

- Delay in loan acquisition
- The use of straight line method of the fixed interest rate of 2.5% per month by LADA. The group is advocating for interest on reducing balance.

3.10.4 PROJECT BENEFITS FROM WORKING WITH ALL STAKEHOLDERS

- Mr. Abdala Haziz, the Kinkizi Sub-county Water Officer in Kanungu District, reported that the construction of the GFS was based on the district design. The sub-county also procured the land where the reservoirs tanks have been constructed. LADA sponsored the project and the district council was in full supported of the initiative. The mobilization and the ground breaking was done by the district officials. The provision of the designed by the district reduced the cost of the project.
- The community members were also mobilised to plant trees, water user committees members were formed and trained. The recruitment of the plumbers to repair the water systems was done through an advertisement and the short listed individuals were interviewed. The technical guidance was given by the district office and the best of the candidates during the interview was given the job. This was good and minimised errors during work. In addition, plumbers are members of the water board and are paid 50% of the monthly collection of the water user fee.
- Quarterly coordination meetings were organised by the district to review water related issues. All NGOs were usually invited to attend. There was evidence of Mr. Bruno Ampurire, the Enterprise Development Officer/Conservationist of the water and livelihood project attending the meeting that was held on the on the 12th December, 2015. The meeting forms a platform for assessment of WASH progress and also acquaintance to the activities of NGOs in the district. This eliminates financial wastage due to duplication of activities within the district. It also provides for technical guidance by the district.
- A procedure was developed for new private connections. Applications were made through the board to the water officer. The board discusses the rate of private water connection.
- There was time saving in the identification of groups on the side of the project since the sub-counties had details of registered groups. This allowed for the improvement of the livelihoods of the experienced groups through the boaster funding. However, those who were not members of registered groups missed out.

3.11 PROJECT SITUATIONAL CONTEXT AND BARRIERS / CHALLENGES

The results chain of water and livelihoods program is presented in Figure 3.16. This was developed from the project objectives and the measurable indicators of the project. It shows the proposed activities of the programme that should have triggered different levels of changes that ultimately led to the development

impact (goals) of water poverty reduction and increased funding of local projects from own revenue and small holder investment.

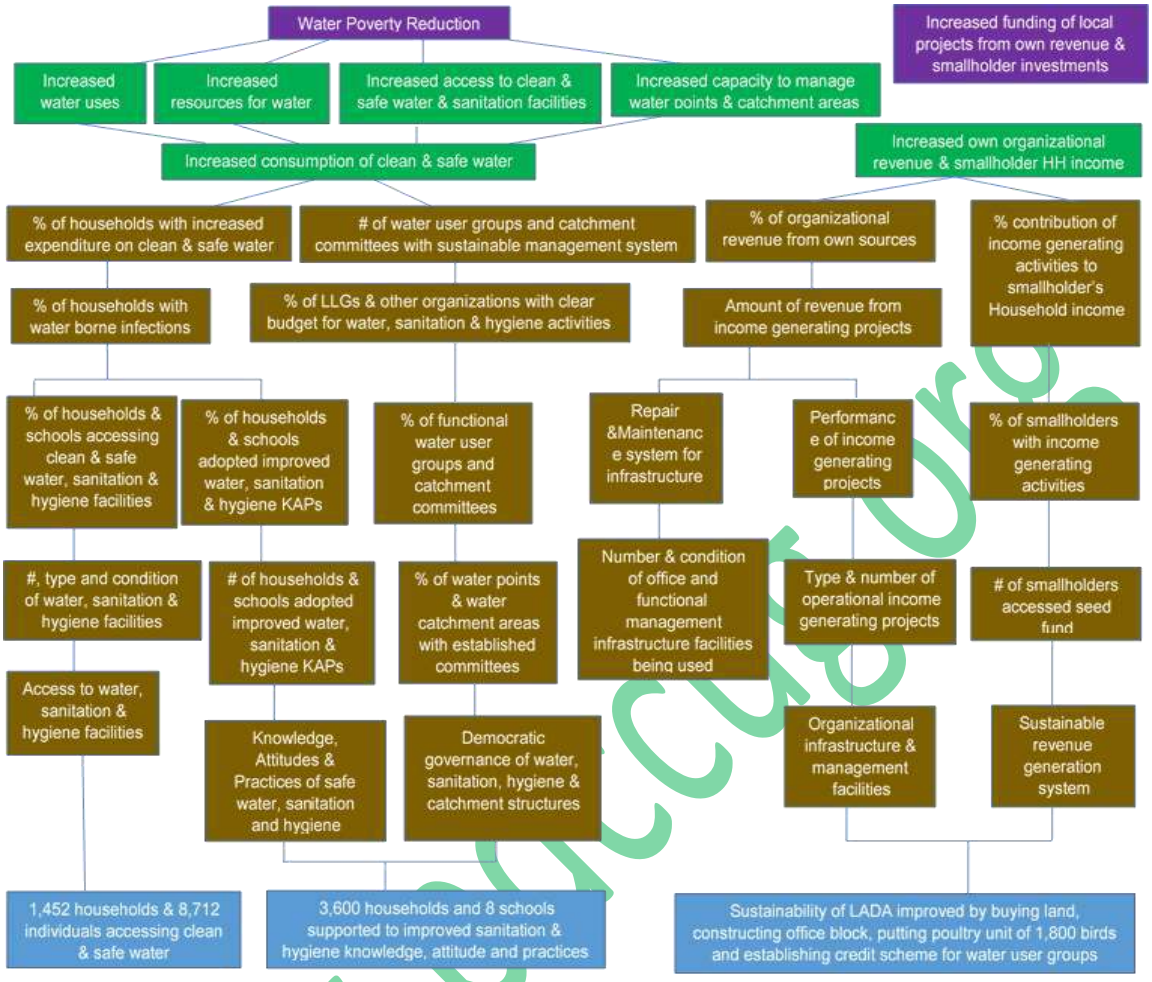


Figure 3.16: Results chain of the project.

The challenges of the outcomes occurred at the different levels of water access, livelihoods, social cohesion and political voice and were according to status, gender, disadvantaged groups, and location.

- The most basic is that of HHs access to the domestic water source. Some HHs (18.4%) are beyond 1 km from the water points and therefore spent more time travelling to fetch water. In addition, other HHs could not pay the user fees that is commonly meant for repair and payment of the mechanics. A deformed tap of GFS at one of village could not be replaced because of lack of user fee collection. In addition, approximately 50% still take 30 mins and above in collecting water at the different water sources.
- The water points are not user friendly to the disabled. The steeps that have been created makes their movement difficult. Ramp would have solved the problem.
- It is also notable that adult women (35.6%), boys (27%) and girls (25.2%) were the people who mainly collect water for domestic purposes. Although they constitute the membership of the water user committee, their concerns were ignored by men as evident by the blame they levied on men that caused poor yield in the shallow well at Bagdad village in Rukungiri district. Despite showing their significant roles in shaping the rules that are in practice and the social arrangements of water use and allocation, they are least likely to shape the formal water governance mechanisms through their presence or voice.

- The reduced flow downstream of GFS results into the use of the surface water (river) that flows within the village and also longer time is spent in search of clean water. In theory, changes in volumes will be linked to changes in water quality.
- Overall, most of the water sources were of poor quality. This could be a results of poor drainage system that leads to surface water entering the spring reservoir tanks.
- Most of the catchment areas were reduced to less than the 50 x 50 m^2 stretch of the initial agreed land size. Such outcomes are influenced by the compromise between social acceptability and management effectiveness, with the balance neither stable nor entirely predictable.
- The poor workmanship resulting into cracks and leakage, provision of wooden cover of tanks and the low level of the top of the tanks (Figure 3.17) allow surface runoff into the reservoir tanks. The top level of the tanks should have been at least 30 cm above the soil level.

Figure 3.17: Cracked wall and the wooden cover top of the reservoir tank of one of the spring water source.

- The district water officer at Kanungu reported that '*The water points were not commissioned after construction. Thereby, there is confusion as to whether the project is still responsible for supervision of the water sources or not.'* This has a direct negative potential on the sustainability of the project. It also implies that LADA is still in charge of the supervision and coordination of all activities at the water sources.
- The social interaction of these group members with their family, land owners that provided the catchment area, affected the project implementation and also has a future bearing on the management of the water sources.
- Lack of cooperation in management of the water sources. In Kanungu district, Rugyeyo sub-county, Kayungwe parish, Kigarama village, the women '*Complained of men not participating in the cleaning of the surrounding of the water source.'*
- Cultivation of the water catchment areas and uprooting / stealing of the transplanted tree seedlings affected the conservation of the catchment.
- Not all the members of the different groups had active participation during the FDG meetings. Others had passive participation by listening. Therefore, their voices are unheard off.
- The seepage in the wall of the tanks need to be fixed as growth of fungi and moss at such points will eventually weaken the area.
- Lack of proper monitoring as evidenced by some reports not being available.
- The low level of education constrains livelihoods, public participation, and choice of the access and coverage to improved water sources, and hygiene and sanitation.
- Ineffective human resources of water governance at the community in some cases. This is because of the perception of the community that the water sources belong to the project.
- Contrary practice of cultivating in the catchment area, land fragmentation and customary ownership are indications that the social and group resources, and rights and entitlements within the catchment were rather complex.

3.12 CONSISTENCY OF THE WATER AND LIVELIHOOD PROJECT

3.12.1 KEY ASPECTS OF SELF-HELP AFRICA APPROACH

GORTA Self Help Africa implements agriculture and rural development projects in Uganda through local community-based organizations, government agencies, international NGOs, private sector partners and emerging social enterprises. The networking is aimed at addressing hunger and poverty. The funding that was provided was to facilitate LADA to serve the needs of the underdeveloped rural communities. The prior needs assessment that was conducted by LADA with the help of the districts and the locations of the project are evidence to this fact. This approach therefore provides an effective, integrated and sustainable solutions to water and livelihood development of the rural communities in Rukungiri, Kanungu and Mitooma districts.

There was evidence of inadequate documentation of M&E activities of both Self Help Africa and LADA. However, important to note is that the Consultants recognize the designed forms for M&E for both organization that should have been used for recording project activities as stipulated in the project proposal and the log frame. The compliance to the approved project performance indicators for M&E could not be ascertained by the Consultants. The Consultants had to rely on the information from the respondents.

3.12.2 SELF HELP AFRICA UGANDA STRATEGIC PLAN AND / OR REGIONAL STRATEGY

The project links well with the national agricultural strategies of the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), and the Development strategies and the Investment Plan. The project to some extend minimized the district funding constraints. Groups have been strengthened and integrated into Village Saving and Lending Associations (VSLA). There was adequate engagement of women and youth in the implementation of the project for example they were members of the Water User Committees (WUCs). However, the disadvantaged groups were not part of the targeted for training as WUCs. Overall, the water and livelihood project mainstreamed gender, youth, environment and climate change, as well as food and nutrition security in its the activities.

The project also addressed the shortage of personnel in the Local government by developing and implementing an integrated recruitment process that involved engagement of full time Enterprise Development Officer/Conservationist and Child Development/Social Support Officer. There was also capacity building of the community in water source management and catchment conservation that was funded by the project.

The development of proposal with clearly set criteria for implementation and evaluations, and the vetting process for funding were within the Self Help Africa procedures. The final evaluation created by the project was to measure the project achievement. However, an effective internal evaluation systems would have acted as a backstopping process. All these are to strengthen the organisation, build capacity and improved on the cohesion and existence for the project. All notwithstanding, the final evaluation employed standardized tools, guidelines and formats for data collation and reporting.

There was a multi-sector wide approach involving the district local governments and other development partners associated with WASH. LADA spearheaded the project activities. There are all indications that the existing organisational (LADA) arrangements was strengthened and a dedicated WASH framework developed and operationalised by recruitment of new staff into the organisation.

3.13 THE LEVEL OF INTEGRATION OF THE ACTION INTO OTHER SELF HELP AFRICA INTERVENTIONS/PROJECTS

The interventions of Self Help Africa in Uganda in the field of agriculture and rural development has been in existence for two (2) decades. Through all these years, the organization has worked with local community-based organizations, government agencies, international NGOs, private sector partners and emerging social enterprise, all gearing at addressing hunger and poverty. Self Help Africa facilitates the partnership that brings all the actors to meet the needs of underdeveloped rural communities through effective integration and sustainable solution. These are tailored to the national agricultural strategies of the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) Development Strategy and Investment Plan.

In order to assess the integration of the action into other Self Help Africa interventions the consultant developed the results chain of the project activities (Figure 3.15). In addition, the evaluation process was also based on the Development Assistance Committee (DAC) guidelines for evaluating development programs. The 5 criteria of the OECD-DAC (2000) were used in a complimentary manner, along with several key questions that helped in the engagement and framing of the water and livelihood project evaluation (Section 1.6).

3.14 LESSONS LEARNT AND GOOD PRACTICES TO INFORM FUTURE PROGRAMMING

3.14.1 WATER QUALITY CONTROL

The potential sources of water contaminants that could result into water source pollution are soil erosion from surface runoff, faecal contamination due to open defecation and organic substances from the decaying matter in the surrounding gardens.

The best practice for water quality control in the project included methods of:

- Planting trees in the catchment
- Keeping the water source points clean
- Adequate drainage systems to minimize surface runoff getting into the reservoir tanks
- Boiling treatment
- Cloth filtration
- Regular sampling of water for laboratory testing (chemical, physical and biological quality)
- Although there are changes in WASH attitude in the community, the best performance were the elderly (> 60 yrs) and economically better placed people.
- Advocacy meetings have been conducted but the practice is still inadequate.

The district water officers were responsible for monitoring drinking water sources and report their finding / observations (changes) to the Ministry of Water and Environment.

3.14.2 CATCHMENT CONSERVATION

In some of the project sites, there was issues of land ownership, except for Rushaya protected spring and the GFS. Land owners were cultivating in the areas they had agreed to be used as water catchment. Therefore, land issues compromised the conservation of the catchment with serious effect on the catchment size and the location of the drainage channel and the water quality.

The trees that were planted in the catchment areas were also stolen. The catchment conservationist of the project, Mr. Bruni said that;

Some community members learnt that the trees when fully grown provide good quality timber. Therefore, they were removed and planted at some individual households. Others who did not know instead rejected them by replace them with the eucalyptus trees which is common in the region.

- Although the community provided labor during construction in some areas, their inadequate support affected the depth of the reservoir tanks and ultimately the water yield. For example in Bagdad-Southern Division, Namanyenje village where women attributed the poor yield on lack of cooperation of men during the digging of the hole. However, this could also be a result of missing the main eye of the string source.

3.14.3 FINANCIAL MANAGEMENT

The key lessons that have been learned with regard to the analysis of the financial records are as follows:

- The problem of mismatches in budget allocations and expenditures manifests itself in each budget year and differs from programme to programme as the factors are varied;
- Given the poor performance of the enterprises, full information for each concerned enterprise is required in order to meaningfully analyse the outcomes of comparisons between revenue and expenditures.
- Water and Livelihood projects responsive budgets have their greatest potential impact if they are on-going, rather than one-off and if they are driven by local groups rather than donors; and
- The revenues for financing Water and Livelihood projects should be derived principally from self-generating sources, if the program is to be self-sustaining.
- The efficiency of the organization which is assessed by measuring the organizations capability to serve as many people as possible with its resources at the lowest cost and good service is lacking in this case of LADA.

Therefore , the financial sustainability of LADA to provide her beneficiaries with long term support requires sufficient funds to function and service not just today but also in the future. On this note, a good financial management would include planning to foresee and predict, work as per the entire plan, monitor the activities to compare and match with the original plans and review performed activities.

3.14.4 VILLAGE SAVING AND LENDING GROUPS

The advantage is that the members are saving and burrowing for their investment. This has shaped water accessibility and sustainability, and repair of broken down water points. Such is a demonstration of the importance of widening of water management beyond the mere grouping for water issues and visible manifestations of the water source structures only, to incorporate the decision making and sustainability arrangements for the water sources.

3.15 INTERNAL MONITORING SYSTEM TO THE IMPLEMENTATION OF THE PROJECT AND ITS MONITORING AND EVALUATION

There was incomplete compliance to the source and means of verification of the project objectives and the new finacial system. This is an indication of weak internal monitoring system during the implementation of the project.

3.16 RECOMMENDATIONS

3.16.1 WATER AND SANITATION

- Building on what the community already know concerning sanitation and hygiene can be a good foundation and a gateway to promote good practices. The radio talk show should be considered in parallel with mobile phones and live drama presentation along with games and plays that should increase not only awareness but also practices. House visits, training, focus group discussions and sessions are also highly recommended.
- One challenge then is to ensure a fit between governance arrangements and the seasonal rhythms of livelihoods, possibly through the development of time-saving solutions. These result into high opportunity costs of participating in public decision-making and negotiation, and water source management.
- The water points are not user friendly to the disabled. The steeps that have been created makes their movement difficult. Ramp would have solved the problem.
- Water user committees should be inclusive.
- All water sources be properly fenced and have clear drainage system.
- The cracks and leakage be repaired, provision of concrete cover for the reservoir tanks be provided. The top of the tanks be raised to at least 30 cm above the soil level.
- The water points should be commissioned and handed over to the districts to avoid confusion of supervision.
- LADA should next time invest more time in designing more sustainable approaches. For example having discussions starting from the community level about how sustainable the water management plans of the communities are. The approach of having VSLA at the all the water points would critically enhance water user fee payment.
- The seepage in the wall of the tanks need to be fixed as growth of fungi and moss at such points will eventually weaken the area.
- Source and means of verifiable indicators should be strictly adhered to for backstopping the project implementation.
- The predisposing factors of diseases at the households should be dealt with during hygiene/health sensitization. The experiences of other interventions can become a source of guidance and inspirations on how to reinforce, upgrade and intensify public health promotion.
- Land for water catchment conservation be purchased to avoid contrary practice of cultivating in the catchment area.
- There is need to continue with the mobilization of the communities to adopt health and hygiene promoting behaviours. There should be other intervening factors beyond those facilities and practices. The Hygiene Promotion Guideline should be developed and translated into the local language, taking into consideration the educational level of the intended audience. This will solve, the disconnection between knowledge and practice for improving WASH in the communities.
- Engaging with the children either in school or at the community level should be meaningful as these children can be the agents of change and ambassadors of good hygiene practices. Child-to-Child Approach when properly carried out can make big changes in promoting good hygiene and sanitation practices. Their rights must be in the fore of all such engagements even if these conflict with traditions.
- There is need to advocate for sustainability of water and sanitation facilities which may require lobbying for support from duty bearers within the communities and at the district levels.
- Water quality showed presence of *E. coli*. Beyond the permissible number. Therefore, water should be boiled before drinking. We also recommend monthly sampling of the water points that should cover both wet and dry season in order to ascertain the trend.

- Households must be made to understand the connectivity of the various knots of safe water chain. Once the chain is broken, the effect is towards the end of the chain to avoid a high risk of contamination.

3.16.2 SELF HELP AFRICA / LADA

- Strengthen M&E department.
- Timely submission of progress reports by the partners.
- Adherence to designed plans and the deliverables of projects.
- Baseline survey should always be conducted before project implementation for clear evaluation of impacts.

3.17 BIBLIOGRAPHY

Directorate of Water Development (2001). Framework for Sector-Wide Approach to Planning (SWAP): Water Supply and Sanitation Sector. Draft Ministry of Lands, Water and Environment Issue Paper. Kampala: Government of Uganda.

Ekane, N., Weitz, N., Nykvist, B., Nordqvist, P. and Noel, S. (2016). Comparative assessment of sanitation and hygiene policies and institutional frameworks in Rwanda, Uganda and Tanzania. Stockholm Environment Institute, Sweden.

Government of Uganda, Ministry of Water and Environment. Water and Environment Sector Performance, Report 2014.

Kalyan, B., Rajiv, S., Srila, G., Jeyanthi, G., Bhim, B. H., Mary, B. J., Philip, M., Madhuri, E. S., Tryphena, S., Christina R. S., Verghese, A. T., Pethuru, D., Ranjit, K., David, S., Gagandeep, K., Vinohar, B. (2007). Water handling, sanitation and defecation practices in rural southern India: a knowledge, attitudes and practices study. Transactions of the Royal Society of Tropical Medicine and Hygiene 101: 1124—1130.

Ministry of Gender, Labour and Community Development (1997). National Gender Policy. Republic of Uganda.

Ministry of Water and Environment (2013). District implementation manual revised. Republic of Uganda.

Ministry of Water and Environment (2016). Water and Environment Sector Performance Report. Republic of Uganda.

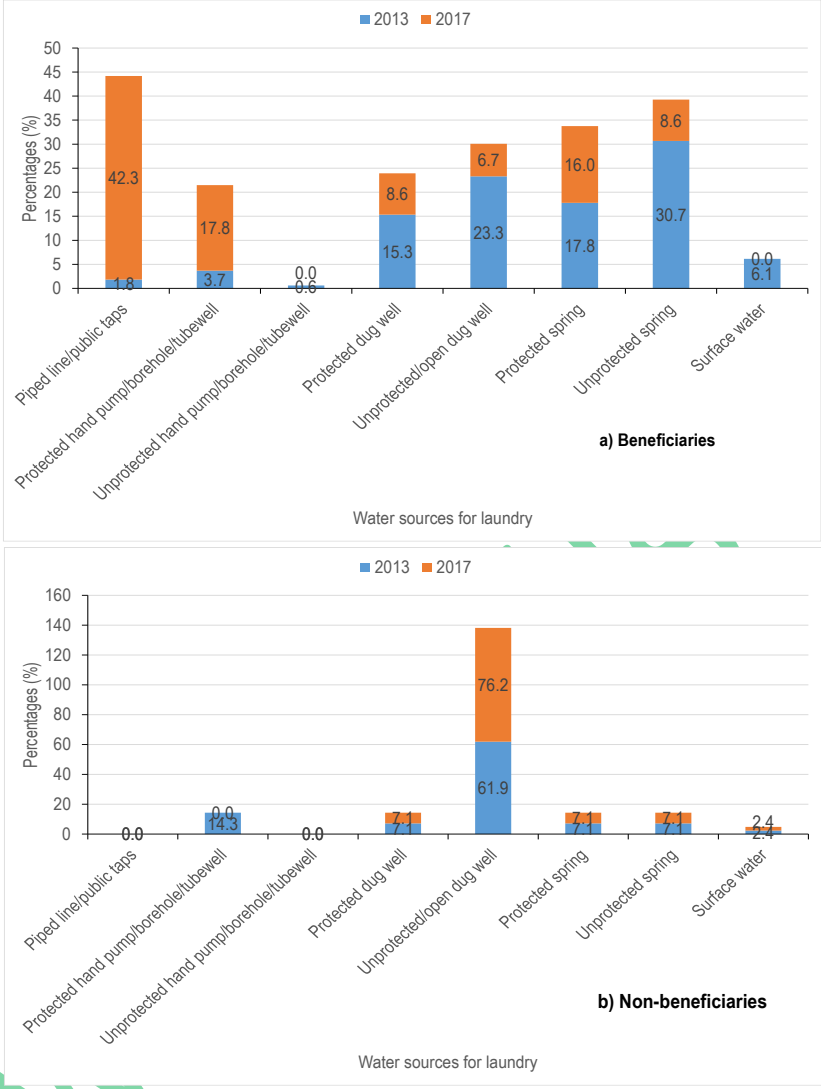
Ministry of Water and Environment. Water and sanitation sub-sector strategy (2010-2015). http://bit.ly/2f4AwyI

Uganda Vision, 2040: "A transformed Ugandan society from a peasant to a modern and prosperous country within 30 years" Republic of Uganda.

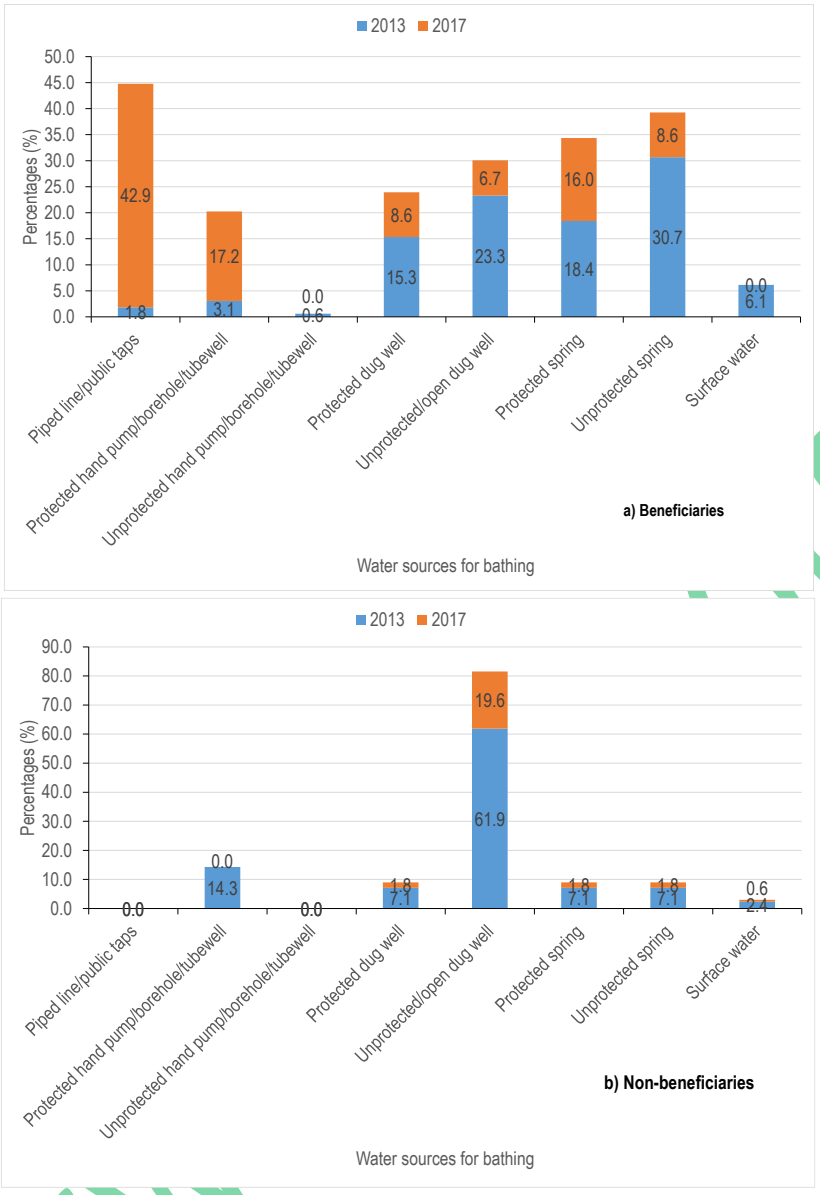
UNICEF (2016). Climate change and poor sanitation threaten water safety for millions. Press Release, New York, 21 March.

3.18 APPENDICES

3.18.1 DIFFERENT WATER SOURCES OF PROJECT BENEFICIARIES AND NON-PROJECT-BENEFICIARIES FOR LAUNDRY AND BATHING.



Water sources for laundry of the beneficiaries (a) and non-beneficiaries (b) of the project from 2013 to 2017.



Water sources for bathing of the beneficiaries (a) and non-beneficiaries (b) of the project from 2013 to 2017.