



*Joint Programme Accelerating Progress towards Rural
Women Economic Empowerment (JP RWEE) in Kirehe
District, 2022-2023*

END LINE SURVEY REPORT

By SAFE

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List of acronyms

%	Percentage
E.g.,	Example
FAO	Food and Agriculture Organization
Freq.	Frequencies
GALS	Gender Action Learning System
HH	Households
IFAD	International Funds for Agriculture Development
JP RWEE	Joint Program for Rural Women Economic Empowerment
m ²	Square meter
MCC	Milk Collection Center
MFIs	Microfinance Institutions
n	Sample size
NGO	Non-Government Organizations
SACCO	Saving and Credit Cooperatives
ToR	Terms of Reference
UN	United Nations
VSLAs	Village Saving and Loan Associations
WFP	World Food Program

Executive summary

The end line study intends to gather information on changes made from GALS beneficiaries on their economic condition, organizations' governance system, voice and decision-making capacity in the organizations and within the household, workloads, nutrition status of family members, and climate change and environment management. This information will be used to better understand the issues addressed for beneficiaries through the JP RWEE interventions. The end line focused on rural women's leadership, participation to community institutions in Kirehe district (Gahara and Mahama sectors) from women's cooperatives. The end line also gathered information on knowledge, attitude and practices among GALS and non-GALS beneficiaries and adapted activities to sustainably increase agriculture production and resilience.

Collected nutrition information from GALS beneficiaries helped to know the status on malnutrition and eating habits in the rural communities of Rwanda mainly in Kirehe district and the end line provided information on the thoughts of beneficiaries concerning malnutrition and eating habits. Data collected from the survey was analyzed using frequencies, mean and cross-tabulated tables for discussion, ensuring all variables related to the three outcomes and at the same time answering the three evaluation questions. Three research questions guided the study and were answered throughout the report as summarized below:

What is the level of women empowerment regarding the decision making and giving the opinion in the household and community organization?

The findings from the end line study clearly highlighted the enormous contribution of women for better livelihood of their families in general and the whole country as well, such as feeding & bathing children, preparing food stuff, caring family member when needed, cleaning the house and other household's activities. The study finds that the gap in decision making between men and women at household level is quite pronounced especially in decisions related to buying or selling goods or items, giving money to relatives, investment of surplus money, spending household earnings, and spending man's earnings. Female dominates male in belonging decision making committees of the farmer groups. The results of the study showed that there was the readiness of organization in equal acceptance of leadership and opinions of women and men. The results also showed the readiness of member to take a lead within organizations and the respondents dominated by female stated that they were ready.

What is the level of knowledge and impact of better nutrition habit in the households?

The study confirmed that land and land management is the main factor to ignite the welfare of rural households through contributing to the income generation and providing food. The respondents demonstrated high level of knowledge and impact of better nutrition habits in their households, and this is shown by results of the survey on nutrition sensitive agriculture and agricultural products consumption at households' levels. According to the end line survey, the overall proportion (63.4 percent of respondents) declared owning the land, others use land belongs to their relatives or

family members or the land of the other persons. A comparison of the gender, the female is dominant using their own land. The gathered data showed that the home garden which is helpful to the household's nutrition has been reported to be available in numerous households, growing vegetables, fruits trees in their lands and having livestock. In terms of practice, respondents admitted consuming the vegetables, roots and tubers, cereals more than 3 times in last 7 days. However, many respondents reported to not have consumed animal products in the previous seven days while others mentioned not consuming the fruits. The foods more consumed between 2-3 times in last 7 days are vegetables, cereals, roots and tubers. The findings demonstrated high proportion of respondents who reported eating undesirable food due to its relative affordability and others declared receiving entirely food aid in household but at low proportion. The results, in addition, showed that respondents observed a decrease in quantity of food for adults in favor of children, and a decrease in quantity and quality of food. Also, a big number of respondents reported a decrease of number of times they take a food per day and a low proportion reported passing a day without eating.

What is the level of understanding of the climate change and the adaptation to handle the climate change?

Respondents showed their level of understanding of climate change and their knowledge of climate mitigation practice. In addition, the study revealed that the dominant practices adopted by the respondents are the use of improved seed which was on 99 percent; proper use of organic manure was on 92 percent; construction of kitchen garden was on 94 percent; proper use of pesticides was on 63 percent; pests and diseases was on 61 percent; cropping techniques was on 70 percent; agricultural season was on 84 percent; composting was on 57 percent while proper use of inorganic was on 79 percent. Respondents claimed that the drought is a major threat experienced by respondents followed by erosion and flood. Also, respondents understand that consequences of climate change they face are low productivity and income, post-harvest losses and loss of jobs and shelter. Planting trees is selected as a likely measure to overcome climate change and is combined with other techniques such as erosion control measures, irrigation, agro-forestry, rainwater harvesting techniques and other unidentified methods which have been taken into account.

CHAPTER 1. INTRODUCTION

The Joint Programme on rural women economic empowerment (JP RWEE) is a joint initiative partnership between UN Women, FAO, IFAD and WFP to capitalize on each agency's mandate, comparative advantage and institutional strength to generate more lasting and wider scale improvements in the livelihoods and rights of rural women, including young women; implemented in Ethiopia, Guatemala, Kyrgyzstan, Liberia, Nepal, Niger and Rwanda. The JP RWEE works towards four outcomes: i) Improved food and nutrition security, ii) Increased incomes to sustain livelihoods; iii) Enhanced leadership and participation in decision-making; and iv) Gender-responsive policy environment. The Joint Programme has supported over 7,400 rural women farmers in different districts of Rwanda.

The Sustainable Agriculture for Food security and economic development (SAFE) was contracted by IFAD to contribute to the implementation of the Joint Programme "Accelerating progress towards rural women's empowerment" in Kirehe district with a scope to: (1) ensure GALS tools integrate joint visioning over the use/management of natural resources and the development of climate smart solutions and improved household nutrition practices; and (2) rolling out GALS+ among 96 selected beneficiaries of the JP RWEE in Rwanda in the district of Kirehe (80 Women and 16 Men) through cooperatives (as entry point) selected for phase II; and (3) the follow up of activities of phase I beneficiaries (120 direct champions trained in the District of Kirehe). This document presents the comparison of findings from end line and end line studies on the project of Gender Action Learning for nutrition and climate change in Kirehe district.

1.1. Background of GALS project

In Rwanda, the JP RWEE was designed to promote gender equality, rural women's leadership and economic empowerment through the Gender Action learning System (GALS) in Kayonza, Kirehe, Ngoma, Nyagatare, Nyaruguru, Kamonyi, Musanze and Rubavu districts. GALS is an innovative community-led empowerment methodology and it uses a set of pictorial tools that enable individuals and households to plan their lives and enterprises, identify and negotiate their needs and interests for sustainable and gender-equitable livelihoods improvement. Among GALS initiatives are: The Climate Resilient Post-harvest and Agribusiness Support Project (PASP), the Kirehe Community-based Watershed Management Project (KWAMP), the Project for Rural Income through Exports (PRICE), the Rwanda Dairy Development Project (RDDP), and the Kayonza Irrigation and Integrated Watershed Management Project (KIIWP).

Also, the GALS methodology has evolved to GALS+ by integrating the climate change and nutrition as new, additional features. On the one hand, the incorporation of the climate change is to promote adaptation activities to sustainably increase agriculture production and resilience. The climate change is at the base of environmental dreadful conditions that increase the threats affecting every phase of food production and decreasing agricultural yields. GALS tools also, on the other hand, integrates the nutrition aspects to help reducing the malnutrition and negative eating habits in the rural communities of Rwanda for the beneficiaries of the JP RWEE. The factors like family conflict, lack of knowledge on nutritious value of food, sales of produces without considering food consumption of families' members are mainly at the base of favoring the malnutrition issue in rural

households in Rwanda. Additionally, women's limited decision making on using money also influences the malnutrition issue in rural households in Rwanda.

1.2. End line: Purpose and objectives

As stated in the project's Terms of References, the objectives of GALs+ end line study in Kirehe district is to analyze the status, after intervention, of the beneficiaries' behaviors, knowledge and practices for sustainable livelihood strategies towards increased gender equality, improved nutrition and improved ability to adapt to climate change. The end line study was sought to provide the quantitative and qualitative data on gender, women empowerment, nutrition and climate change. Since GALs+ worked as a change accelerator by helping the beneficiaries in the process of decision-making empowerment over their own life, the end line study also covers aspects of women's leadership at community, group and household level. Conducted after GALs+ interventions (mainly training), the end line is designed to check the status of the beneficiaries in their households at the end of the intervention to gauge the impact or intermediate change.

CHAPTER 2. ENDLINE RESEARCH METHODOLOGY

2.1. Research Design

The GALs+ project planned to work with the cooperative's members operating in Kirehe district, the active members of JP RWEE in order to improve the livelihood of the households. For that, the research design was mostly quantitative method using observational data obtained through household survey. Primary data collected from the household survey was analyzed using descriptive statistics, mainly frequencies, means and cross-tabulated tables and the analysis was framed to address the following research questions:

- What is the level of women empowerment regarding the decision making and giving the opinion in the household and community organization?
- What is the level of knowledge and impact of better nutrition habit in the households?
- What is the level of understanding the climate change and the adaptation to handle the climate change?

2.2. Data collection process

The GALs+ end line survey process was prepared, planned and executed by SAFE team. The sampled population for survey was already known and the questionnaire was developed to facilitate the collection of data. The survey questionnaire was translated into Kinyarwanda and introduced in electronic data collection system programmed into Kobo Collect in order to ease the data collection using hand-held electronic devices. The advantages of using these devices (tablets) related to the need of data entry, saving time and reducing errors associated with paper data collection and manual data entry. The SAFE statistician supported the end line lead consultant in the survey design and training of the enumerators in the end line data collection using Kobo Collect platform.

The enumerators have been selected based on previous experience with survey work and it has been ensured that they are familiar with the key component of the project. The team is comprised of eight enumerators led by the team leader and a controller. The enumerators received the training held in Kigali on the 04th of August 2023 in order to reduce survey time and also progress in quality of data by ensuring uniformity of understanding of questions and method of interviewing. The training covered the overview of the GALs+ project, objectives of the end line, refresher on interviewing skills, the content of the survey tools, survey geography, ethical conduct, team selection and building, electronic data collection using Kobo collect platform. The data have been collected in all the planned sites in Kirehe district during consecutive 3 days to meet the availability of respondents.

2.3. Sampling

The sampled population as stated in terms of reference is 101 beneficiaries calculated from 766 people, using the Slovin’s formula and they have been randomly selected (60 GALs+ and 41 non-GALs+ beneficiaries) from different groups of farmers in Kirehe district. During calculations of sample size, the margin error was supposed to be at 10 percent. The survey sample distribution across the two sectors (in Gahara owning one site and Mahama having two sites) of interest of the JP RWEE. The end line study used the proportion of Kirehe district as follows:

Table 1: Sample distribution across GALs geographic area in Kirehe district

	Gender			
	Baseline		Endline	
	Female	Male	Female	Male
Gahara	15	9	16	9
Mahama	57	19	59	17
Total	72	28	75	26

2.4. Data analysis

A data collection has been done and recorded simultaneously by using the tablets through Kobo collect data entry platform. And the survey data was transferred on the cloud where the statistician gathered them in a dataset. After data quality and completeness checks, the file is observed and saved in SPSS file data (.sav). Eliminating the errors related to the duplicated identification numbers or typing was done after the accomplishment of fieldwork. A unique code for each champion and enumerator helps in duplication sort out and to clean out the errors in data collection during the interviews. The cleaned quantitative data was then analyzed using SPSS Version 25. Quantitative findings were disaggregated by district and sex of respondents where appropriate. The data was reported mainly through descriptive statistics. Primary data collected from the survey was analyzed using frequencies, mean and cross-tabulated tables for discussion, ensuring all variables related to the three outcomes and at the same time answering the three evaluation questions are sufficiently covered.

CHAPTER 3. RESEARCH FINDINGS

This chapter presents findings from GALs+ sampled 101 respondents in Kirehe district across Gahara and Mahama sectors. The results begin by presenting demographic characteristics of the sample. Apart from the demographic information, the findings are presented in outcomes. First, outcome one concerned with the improved foods and nutrition security, the second outcome focused on increased income of rural women to secure their livelihood, and the third outcome concentrated on the rural women for enhanced leadership and participation in their community, in rural institutions and shaping laws, policies and programs.

3.1. DEMOGRAPHIC CHARACTERISTICS

3.1.1. Gender of respondents

As mentioned in the objectives of the programme and during sampling, the female dominates the proportion of the respondents. The end line results demonstrate that the distribution between men and women showed that 74.3 percent are women while men represent 25.7 percent. In both sectors, Gahara and Mahama, the women dominate the proportion than men as shown by the following table.

Table 2: Gender of respondents

Sector	Baseline				Endline			
	Female		Male		Female		Male	
Gahara	15	62.5%	9	37.5%	16	64.0%	9	36.0%
Mahama	57	75.0%	19	25.0%	59	77.6%	17	22.4%
Total	72	72.0%	28	28.0%	75	74.3%	26	25.7%

3.1.2. Age of respondents

As demonstrated by the below table (3), the respondents participated in the end line survey are aged between 22 and 74 years. The findings confirmed that the majority (49.6 percent) of the respondents are aged between 31-40 years. The female aged between 31-40 years are dominantly in higher proportion with 49.3 percent. Also, 74.6 percent represent an aggregate of the females dominating the range of age of the young respondents between 21-40 years.

Table 3: Age of respondents

		21 - 30 years	31 - 40 years	41 - 50 years	51 - 60 years	> 60 years	
Baseline	Female	Frequency	21	34	12	4	1
		Percentage	29.2%	47.1%	16.7%	5.6%	1.4%
	Male	Frequency	5	14	6	1	2
		Percentage	17.5%	50.3%	21.1%	3.7%	7.4%
End line	Female	Frequency	19	37	12	6	1
		Percentage	25.3%	49.3%	16.0%	8.0%	1.3%
	Male	Frequency	1	13	7	2	3

		Percentage	3.8%	50.0%	26.9%	7.7%	11.5%
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The table 4 does illustrate the marital status by households' headship for beneficiaries participated in the end line survey and it shows that male heading the households are married with 91.1% while female heading the household is dominantly by the widowers at 45.5 percent followed by separated at 27.3 percent.

Table 4: Marital status by headship

Baseline	Female Headed households	Frequency	Married	Separated	Single	Widow/er		
		Percentage	3	3%	6	6%	4	9
Male headed households	Frequency	75	75%	0	0.0%	3	0	
	Percentage	75	75%	0	0.0%	3	0	
End line	Female Headed households	Frequency	3	13.6%	6	27.3%	3	10
		Percentage	3	13.6%	6	27.3%	3	10
	Male headed households	Frequency	72	91.1%	2	2.5%	4	1
		Percentage	72	91.1%	2	2.5%	4	1

3.1.3. School attendance level of respondent

In general, attending the school is a key factor determining the development of people especially the respondents who participated in this study. The findings from the end line survey reported that 15.8 percent of respondents don't have any formal education, 69.3 percent of respondents attended primary schools, and 14.9 percent of respondents attended secondary schools. For their empowerment, the female represents a large number that attended the school where 72.0 percent attended primary and 13.3 percent attended secondary. Alike, men's share is 61.5 percent and 19.2 percent attended primary and secondary in that order. Unfortunately, the female has a high proportion in no formal education with frequency of 11 while men's proportion is a frequency of 5.

Table 5: Proportion of education level of respondents by gender

			No formal education	Primary	Secondary
Baseline	Male	Frequency	4	18	6
		Percentage	4.0%	18.0%	6.0%
	Female	Frequency	8	54	10
		Percentage	8.0%	54.0%	10.0%
	Total	Frequency	12	72	16
		Percentage	12.0%	72.0%	16.0%
End line	Female	Frequency	11	54	10
		Percentage	14.7%	72.0%	13.3%

	Male	Frequency	5	16	5
		Percentage	19.2%	61.5%	19.2%
	Total	Frequency	16	70	15
		Percentage	15.8%	69.3%	14.9%

3.1.4. Household's characteristics of respondents

Among the reported characteristics of the households by the respondents during end line survey, include the number of the households' members. Between female and male, 35.6 percent reported having 2 male members in household and 34.7 percent reported being 2 females members in household. The households reported having 5, 6 and 7 female members are at two percent, three percent and one percent respectively. The proportion observed for the respondents reported having zero male in household is 6.9 percent while respondents reported having zero female in household are one percent. It is a like proportion of respondents reported having 7 female members in the household.

Table 6: Proportion of number of female and male in household

	Baseline				End line				
	Number of female in households		Number of male in households		Number of female in households		Number of male in households		
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	
Number of female and males in households	0	2	2.0%	6	6.0%	1	1.0%	7	6.9%
	1	24	24.0%	22	22.0%	23	22.8%	22	21.8%
	2	31	31.0%	41	41.0%	35	34.7%	36	35.6%
	3	26	26.0%	17	17.0%	24	23.8%	20	19.8%
	4	13	13.0%	11	11.0%	12	11.9%	12	11.9%
	5	3	3.0%	2	2.0%	2	2.0%	3	3.0%
	6	1	1.0%	1	1.0%	3	3.0%	1	1.0%
	7	2	2.0%	0	0.0%	1	1.0%	0	0.0%

Findings from end line survey presented in table n°7 show the proportions of the members with disabilities in household where results illustrates 9.9% confirming to have members in household with disability while 90.1 percent of respondents reported to not having a member with disability in their households.

Table 7: Proportion of respondents on disability in HHs

		Yes	No	Total
Baseline	Frequency	11	89	100
	Percentage	11%	89%	100.0%
Endline	Frequency	10	91	101
	Percentage	9.9%	90.1%	100.0%

Results of end line survey in Gahara and Mahama sectors of Kirehe District displayed in the table 8, presented the number of respondents reporting to have the members with disability in the HH, where 50 percent of respondents have members of physical disability, 20 percent of respondents have those in visual and mental disabilities respectively and 10 percent of respondents have disability of hearing. While in baseline survey results, it reveals that, with 54.6 percent of respondents reported physical disabilities as the most type of disability followed by hearing and mental disabilities with equally 27.27 percent of cases.

Table 8: Proportion of types of disability reported by the respondents (n=10)

			Physical	Visual	Hearing	Mental
Baseline	NO	Frequency	5	9	10	9
		Percentage	45.4%	81.81%	90.9%	81.81%
	YES	Frequency	6	2	1	2
		Percentage	54.6%	18.18%	9.09%	18.18%
End line	NO	Frequency	5	8	9	8
		Percentage	50.0%	80.0%	90.0%	80.0%
	YES	Frequency	5	2	1	2
		Percentage	50.0%	20.0%	10.0%	20.0%

3.2. OUTCOME 1: IMPROVED FOODS AND NUTRITION SECURITY

3.2.1. Food production

To measure the improvement in foods security and nutrition, the end line has looked at the food production and the accessibility of land.

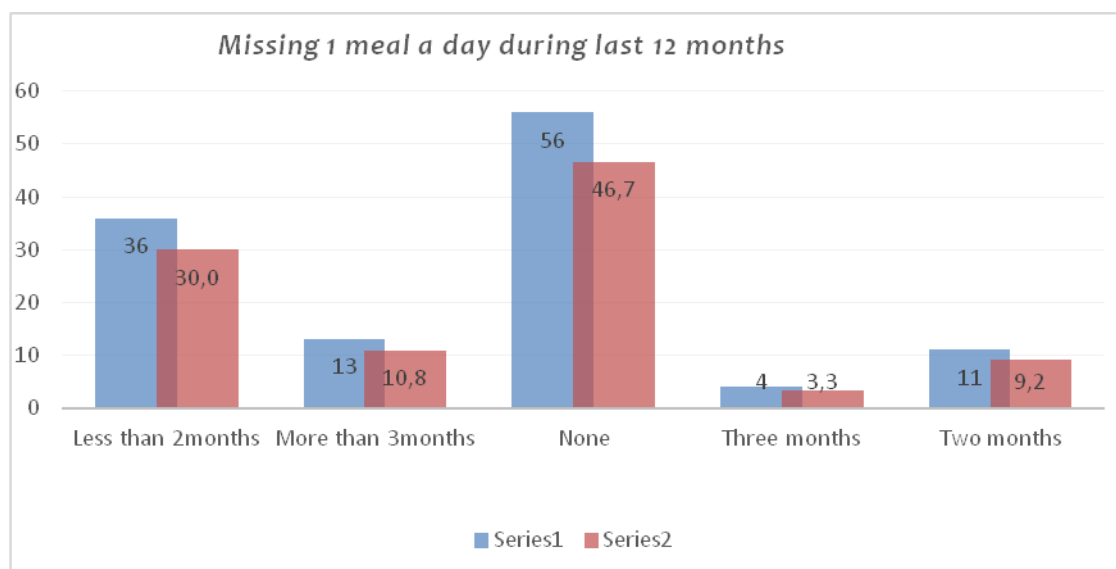
3.2.1.3 Nutrition Practice

Furthermore, end-line survey sought to show the proportion of respondents who grow vegetables and fruits and other crops to improve their nutrition status in Kirehe District.

Consumption pattern

Findings of end line survey showed that regardless of whether land is sufficient, and participants grow fruits and vegetables, this survey looked at the frequency of meal intake per day in last 12 months. Findings showed that after joining GALS, number of beneficiaries who missed meal per a day last 12 months were reduced comparing to before joining GALS. This is justified by 46.7% who are no wrong in range or category of people still missed meal for any day. They are able to get meal every day in last 12 months.

Figure 1: Proportion of respondents on missing at least 1 meal a day



Foods consumption in period of last 7 days

The end line survey findings revealed that the type of foods consumed in the HHs in last 7 days and their frequencies. There are different kinds of foods consumed such as cereals, roots and tubes, fruits, vegetables and animal products. The foods that mostly consumed in the households are vegetables consumed by 71.7% in more than three times a week, and 23.3% consumed it between 2-3times; that is followed by the roots and tubers consumed more than 3 times by 57.5%; and cereals consumption in more than 3 times by 47.5%. On the other hand, 16.7% of respondents reported consuming animal products in between 2-3times; while 26.7% consumed fruits. There is an increase of foods consumption in period of last 7 days of Cereals (maize, wheat etc.); Roots & Tubes; Fruits; Vegetables; and Animal products comparing to before joining GALS, when comparing data obtained from baseline survey which indicated low number of beneficiaries who were able to consume Cereals (maize, wheat etc.); Roots & Tubes; Fruits; Vegetables; and Animal products at least more than 3 times. This means with training, coaching and educating beneficiaries in GALS, they are able and change mind set in the use quality food in their daily life at Kirehe District.

Table 9: Proportion of respondents on foods consumption in period of last 7 days

		Baseline				End line			
		Between 2-3times	More than 3 times	None	Once	Between 2-3 times	More than 3 times	None	Once
Cereals (maize, wheat etc.)	Freq.	42	57	12	9	42	49	17	12
	%	35.0	47.5	10.0	7.5	35.0	40.8	14.2	10
Roots& Tubes	Freq.	39	69	4	8	39	66	6	9
	%	32.5	57.5	3.3	6.7	32.5	55	5	7.5
Fruits	Freq.	34	32	24	30	29	29	38	24
	%	28.3	26.7	20.0	25.0	24.2	24.2	31.7	20
Vegetables	Freq.	28	86	4	2	12	108	0	0
	%	23.3	71.7	3.3	1.7	10	90	0	0
Animal products	Freq.	20	15	59	26	22	8	75	15
	%	16.7	12.5	49.2	21.7	18.3	6.7	62.5	12.5

Consequences related to food shortage: copying strategies used

The results from end line survey showed that the copying strategies used most of the time when there is food shortage are eating undesirable food due to its relative affordability as confirmed by 82%; entirely food aid household confirmed by 8%; 53% reported that the decrease food quantity for adults in favor of children, decrease quantity of foods confirmed by 60% and decrease the number of meals per day (50%) while a day without eating confirmed by 10% from this survey. But most of beneficiaries in this survey, they confirmed that due knowledge obtained from GALS training, they are now able to satisfy themselves and HH in foods consumption.

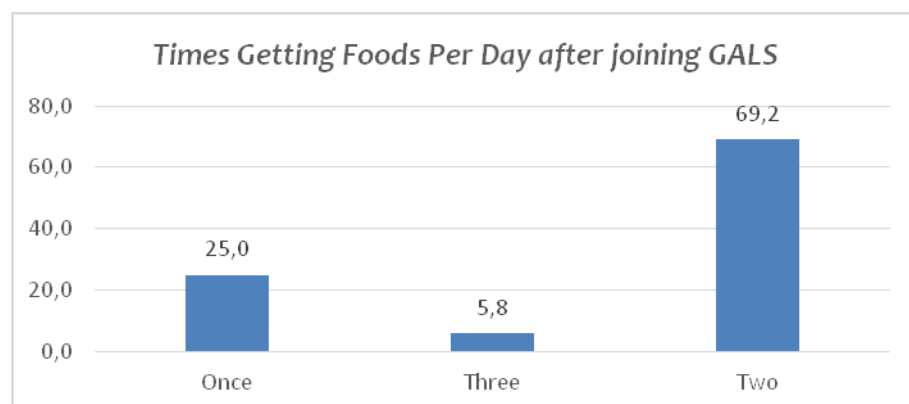
Table 10: Consequences of food shortage

		Baseline		End line	
		No	Yes	No	Yes
Eating undesired food due to its relative affordability	%	18	82	18	82
Entirely food aid household	%	88	13	93	8
Decrease food quantity for adults in favor of children	%	40	60	47	53
Decrease the quantity of food	%	32	68	40	60
Decrease the quality of food	%	27	73	42	58
Decrease the number of times you eat a day	%	36	64	50	50
A day without eating	%	79	21	90	10

Times Getting Foods Per Day

Figure 2 presented findings from survey on the proportion of respondents for the times they got the food per day and showed that beneficiaries after joining GALS, majority of 69.2% in the households eat twice per day and 5% eat three times per day and only 25% reported eating once per day. This indicated that GALS did great things to the beneficiaries because when comparing life before joining GALS for beneficiaries, majority of beneficiaries were confirmed that they ate once per day that moment.

Figure 2: Proportion of respondents on times getting foods per day

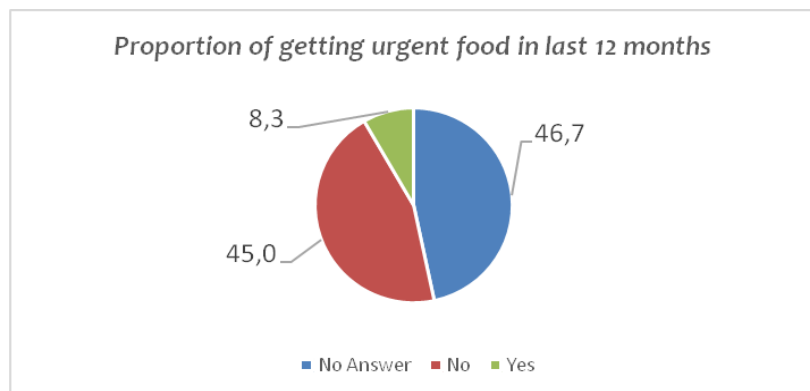


Getting urgent food in last 12 months

The figure 3 reported whether the respondents received an urgent food aid in a period of time of last 12 months. Because of beneficiaries have started to create their new opportunities in support of training and other from GALS, more than 45.0% of respondents declared that none of them have received urgent food aid in a period of time of last 12 months. Only 8.3% accepted that they have received food aid in a period of time of less than two months. It is great thing to see that most of beneficiaries are able to satisfy their needs in food consumption due to the assistance received while joining GALS and create their own capacity of satisfaction. The survey of end line shows data

that present an indication of vulnerable group reduction among beneficiaries of GALs in Kirehe District.

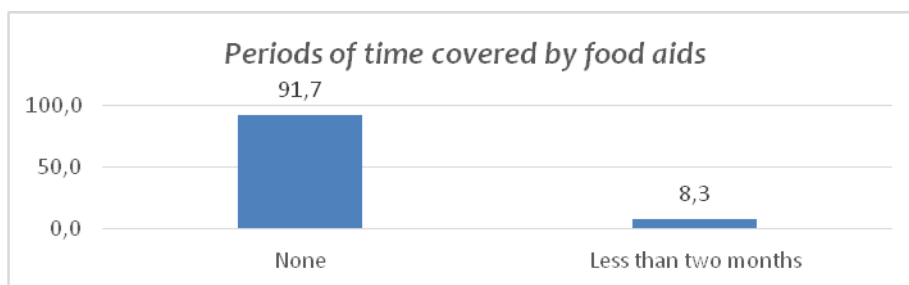
Figure 3: Proportion of respondents of getting urgent food in last 12 months



Periods of time covered by food aids

Findings from end line survey among 101 beneficiaries, confirmed that majority of 91.7% stated that there is no period of time covered by food aids, beneficiaries said that after joining GALs, they became able to explore the opportunities to satisfy themselves and their HH. Only 8.3% have received covered by food aids in the periods of time of less than two months.

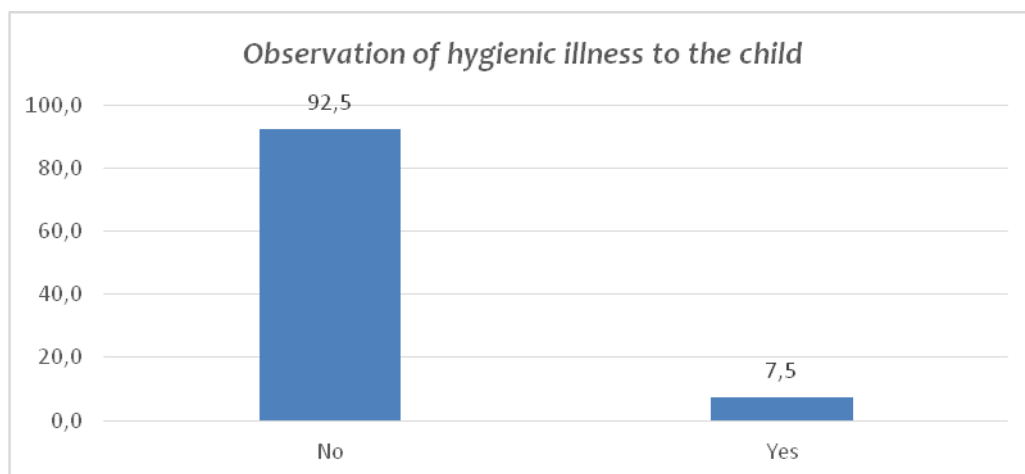
Figure 4: Proportion of respondents on periods of time covered by food aids



Diarrhea for child in the past two weeks as results of lack of hygienic

Diarrhea was used in the survey as a proxy indication of poor food intake. Data from end line survey stated that 92.5% said that they have improved in hygienic where there is no observed hygienic illness to the child in HH due to training received related to behavior and conduct for hygienic in HH. Only 7.5% still have hygienic illness to the child in last periods of time. When comparing data from baseline survey with those obtained in End line survey show that there is great improvement of hygienic among beneficiaries in their HH to protect their children from Diarrhea the past period caused by lack of hygienic.

Figure 5: Observation of hygienic illness to the child



3.2.1.4 Knowledge and Attitude of households in nutrition practices

In end-line survey, it was very important to know the behaviours of nutritious food in the households. The consumption behaviour determines whether the food taken in HH is balanced or not. For children, breastfeeding practices have been observed also in this survey.

Child nutrition in surveyed households

To understand different knowledge, behaviors and practices of participating households in child nutrition, the end line survey collected data on presence of children, food groups consumed, and breastfeeding practices. Findings showed the proportion of the respondents on the number of children aged under 6 months to 23 – 59 months in the HH headed by female and male. In total, large proportions mentioned that there is no child under 6 months, 6 –23 months and 23 –59 months (95.8%, 80.8% and 100%) in the HH headed by female and male. However, at 4.2%, 19.2% and 61.6% of respondents reported having one child aged under 6months, 6–23 months and 23–59 months; also 35% have two children under 23–59 months in HH; with 1.6% has three Children under 23–59 months in HH.

Table 11: Presence of children in age of babies in HH

	Number of children in HH	Baseline						End line			
		Female headed		Male headed		Child headed	Female headed		Male headed		
		Freq.	%	Freq.	%		Freq.	%	Freq.	%	
Child under 6 months in HH	0	14	11.7	97	80.8	1	21	18.3	93	81	
	1	0	0	8	6.7	0	0	0.0	5	100	
	6	0	0	1	0.8	1	21	17.5	98	82	

Child under 6 – 23 months in HH	0	12	10	88	73.3	1	17	17.5	79	81
	1	2	1.7	18	15	0	4	17.4	19	83
Child under 23 – 59 months in HH	0	12	10	50	41.7	1	21	17.5	98	82
	1	1	0.8	44	36.7	0	17	23.0	57	77
	2	1	0.8	11	9.2	1	4	9.5	37	88
	3	0	0	1	0.8	0	0	0.0	2	100
	0	0	0	0	0	0	0	0.0	1	100
	0	0	0	0	0	0	0	0.0	1	100

Food groups fed to children in the last week

It is imperious to focus on the training for nutrition to increase the knowledge of participants on healthful foods and the kinds of those foods with nutritive role. Findings presented the food groups that were fed to children in last week. The data from end line survey show that the majority of households fed their children with legumes & nuts (97.5%), second round comes grains, tubes, roots (95.8%); Vitamin A, fruits and vegetables and any other vegetables are on round three as confirmed by 64.2%; level of consumption of dairy products are in fourth round as stated by 27.5% while eggs are on last round as confirmed by 25.8% respondents. Food groups fed to children in the last week were improved for beneficiaries of GALs comparing to data obtained in baseline that showing that dairy products, flesh foods and eggs which are the foods containing the important vitamins for growth, metabolism but are consumed less at 16.7%, 19.2% and 20% respectively.

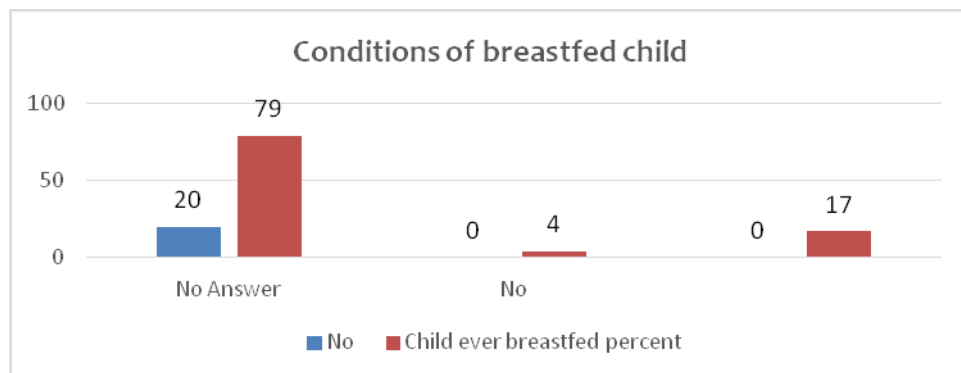
Table 12: Food groups fed to children in the last week

	Baseline				End line			
	Yes		No		Yes		No	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
G1: Grains, tubes, roots	104	86.7	16	13.3	115	95.8	5	4.2
G2: Legumes & nuts	111	92.5	9	7.5	117	97.5	3	2.5
G3: Dairy products	20	16.7	100	83.3	33	27.5	87	72.5
G4: Flesh foods	23	19.2	97	80.8	21	17.5	99	82.5
G5: Eggs	24	20	96	80	31	25.8	89	74.2
G6: Vitamin A, fruits and vegetables	60	50	60	50	77	64.2	43	35.8
G7: Any other vegetables	74	61.7	46	38.3	77	64.2	43	35.8

Breastfeeding a baby

Results from end line survey explored the level of knowledge and attitudes on breastfeeding practices in the surveyed households. Figure 6 presents the proportion of respondents on the ever breastfeeding a child and breastfeeding a child. The proportions showed that 79% of sampled people reported ever breastfed the child; 17% reported to breastfeed a child the day before during a day or at night. However, 20% did not answer the question about breastfeeding a child during a day or night.

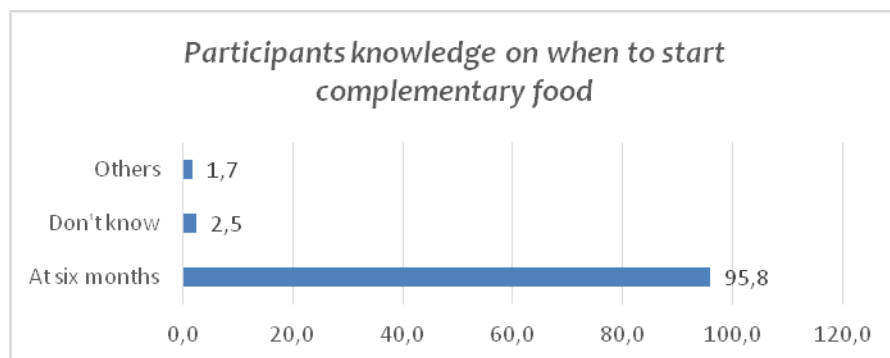
Figure 6: Conditions of breastfed child



Knowledge on when to start complementary food

During the end line survey, on breast milk, the respondents were asked about the age to which complementary food should be given to children. Around 95.8% correctly answered complementary feeding start at six months, 1.7% reported other time than six months, and 2.5% confessed to know, that means they did not know when to start complementary food. This results show that now respondents or beneficiaries of GALS follow well the programs related to caretaking of children for better growth of baby comparing to before joining GALS where the results from baseline survey showed that the respondents did not follow the programs related to caretaking of children for better growth of baby in previous years before come in GALS.

Figure 7: Participants knowledge on when to start complementary food



Benefits from breastfeeding a baby

Findings show end line survey, breastfeed a child gives a child a better condition of life and to protect from diseases. The survey asked the respondents their knowledge on benefits of breastfeeding a baby. The results in the following table show that although 92.5% of respondents know that growing healthily is the general benefit of exclusive breastfeeding, some of the

respondents indicated protection from infectious diseases (50.8%). Remarkably, 13.32% declared Protection against obesity while 8.3% do others any benefits. 3.3% respondents don't know benefits from breastfeeding a baby. These results imply high level of knowledge of benefits of exclusive breastfeeding and justifies strong proportions of mother breastfed their children. It is clear that beneficiaries have improved knowledge about benefits of exclusive breastfeeding compared to data we had before from baseline survey.

Table 13: Participants knowledge about benefits of exclusive breastfeeding

		Baseline		End line	
		No	Yes	No	Yes
Growing healthily	%	10.8	89.2	7.5	92.5
Protection from infectious diseases	%	67.5	32.5	49.2	50.8
Protection against obesity	%	99.2	0.8	86.6	13.3
Others	%	85.8	14.2	91.7	8.3
Don't know	%	92.5	7.5	96.7	3.3

3.2.1.5 Perception of participants on the final use of harvested nutritious food

Data from end line survey on the final use of harvested nutritious food, findings confirmed that Fruit tree produced were mainly own consumption as confirmed by 71.4% and only 28.6% confirmed that Fruit tree production used in both own consumption and other for sale. Livestock were mainly used in own consumption and for sale as stated by 62.2% respondents while growing vegetables were mainly own consumption as confirmed by majority of 74.3% respondents. Comparing to data from baseline survey about the main use of vegetables, fruits, and livestock they had produced, either as own consumption, for sale or both. The findings showed that a large proportion of respondents (88.1% and 66.7%) reported that the vegetable produces and fruits are mainly for consumption. Livestock assets are mainly for sale as declared by 42.2% of respondents. In addition, a significant proportion also use Fruits (30.8%) and livestock (34.4%) for both sale and for own consumption. Generally, after joining GALS beneficiaries were able to use the harvested nutritious food in their HH and also another quantities are sold to market to generate income.

Table 14: Proportion of respondents for the main use of the HH produces

	Baseline						End line					
	Fruit tree		Livestock		Growing vegetable		Fruit tree		Livestock		Growing vegetables	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Mainly own consumption	80	66.7	21	23.3	104	88.1	5	71.4	14	15.6	84	74.3

Mainly for sale	3	2.5	38	42.2	1	0.8	0	0.0	20	22.2	1	0.9
Both	37	30.8	31	34.4	13	11	2	28.6	56	62.2	28	24.8

3.2.1.6 Knowledge on nutritional deficiencies

The end line asked about the knowledge on nutritional deficiencies such as iron (anemia), vitamin A and Iodine, and their cause and potential solution. Findings from end line survey show the proportions of 55.8%; 50.0%; and 49.2% confirmed that beneficiaries heard about Iron deficiency – Anemia; know the cause and its solution. The 54.2%; 50.0% and 49.2% of respondents stated that they heard about Vitamin A deficiency; know the cause; and its solution. The proportion of respondents who reported hearing about anemia mentioned that they know the causes and solutions of nutrition issues, where 25.8%; 25.0% and 24.2% reported knowing the cause of Iodine deficiency. Data from end line survey clear explain how beneficiaries after joining GALs are able to hear about the deficiencies in high proportion. While in baseline survey, the respondents did not yet hear about the deficiencies have a high proportion. It is about 8.2% did not hear about iron deficiency (anemia), 39.3% for vitamin A deficiency and 67.2% are for iodine deficiency.

Table 15: Proportion of respondents on knowledge of nutrition issues (issue, cause, solution)

	Baseline			End line	
Iron deficiency - Anemia					
		Freq.	%	Freq.	%
Heard about	Yes	56	46.7	67	55.8
	No	64	53.3	53	44.2
I know the cause	Yes	42	75	60	50.0
	No	14	25	7	5.8
I know solution	Yes	43	76.8	59	49.2
	No	13	23.2	8	6.7
Vitamin A deficiency					
Heard about	Yes	37	30.8	65	54.2
	No	83	69.2	55	45.8
I know the cause	Yes	29	78.4	60	50.0
	No	8	21.6	5	4.2
I know solution	Yes	25	67.6	59	49.2
	No	12	32.4	6	5.0
Iodine deficiency					
Heard about	Yes	20	16.7	31	25.8
	No	100	83.3	89	74.2

I know the cause	Yes	10	50	30	25.0
	No	10	50	1	0.8
I know solution	Yes	9	45	29	24.2
	No	11	55	2	1.7
None of them					
Heard about	Yes	59	49.2	83	0.7
	No	61	50.8	37	0.3

3.2.1.1. Agricultural production and accessing land in household.

The accessibility of the land is a crucial indicator in agricultural production for rural people with low capacity of using technology in agriculture and it has been assessed during the end line study. Respondents asked to determine if they had their ownership on land by confirming that they use their own land, family member's land, renting the land of other persons and/or do not access land. As shown in table 16, during the baseline, the overall proportion shows that 54.0 percent declared owning the land, 8.0 percent said to use land that belongs to their relatives or family members, and only 1.0 percent use the land of the other persons. A comparison of the gender, the female is dominant with the proportion of 54.2 percent using their own land against 53.6 percent of male while 1.4 percent of female have confirmed using the land of other persons. Contrarily, a good proportion of male around 10.7 percent of respondents use the land of family member against 6.9 percent of female. 37% of overall respondents reported to not have access to land for agricultural production and this can be the root cause of low agricultural production. In end-line survey done in GALS, findings show that the proportion represented by 42.7 percent of respondents' females and 65.4 percent of respondents' males declared to owning the land. 10.7 percent of females and 3.8 percent of males use land of family members. 8 percent of respondent's females use the land of other persons in Gahara and Mahama sectors of Kirehe District.

Table 16: Proportion of access to land for agriculture production

	Baseline						Endline					
	Overall		Female		Male		Overall		Female		Male	
	Frequen cy	Percent age	Freque ncy	Percent age	Freque ncy	Percent age	Freque ncy	Percent age	Freque ncy	Percent age	Freque ncy	Percent age
I am the landowner	54	54%	39	54.2%	15	53.6%	49	48.5%	32	42.7%	17	65.4%
I can use land of family member	8	8%	5	6.9%	3	10.7%	9	8.9%	8	10.7%	1	3.8%
I can use the land of other persons	1	1%	1	1.4%	0	0.0%	6	5.9%	6	8.0%	0	0.0%
No. I don't have access to land	37	37%	27	37.5%	10	35.7%	37	36.6%	29	38.7%	8	30.8%

3.2.1.2. Size of accessed land

For increasing the agricultural production, land size is important factor for getting an important yield. Table 17 shows the size of land accessed by the respondents through being owned the land or using the land of others or family. The land size is arranged in 3 groups as shown in table measured in hectare (ha). The baseline findings showed that 53.96 percent of female used the land sized below 0.4 ha, 12.69 percent of female used around 0.5 ha, and 3.17 percent used land sized above 0.5 ha. Men, on other side, have a small proportion of land used in production of food where 25.39 percent of male respondents used the land sized below 0.4 ha, 3.17 percent of male used around 0.5 ha, and 1.58 percent used land sized above 0.5 ha. Findings from End-line survey showed that there is an increase of the production due to addition other techniques, and land size which are important factors to rise agricultural productivity for the beneficiaries. The findings showed that the majority of 71.4 percent of respondents were females in households who have access to land sized above 0.5 ha while male were 28.6 percent of respondents. On the other hand, a range of land sized at 0.5 ha and below 0.4 increased, either owned by male or female as shown in the table 10.

Table 17: size of land accessed by the respondents by gender

Range of land size (in ha)	Baseline				End line			
	Female		Male		Female		Male	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Below 0.4ha	34	53.96%	16	25.39%	16	66.7%	8	33.3%
0.5ha	8	12.69%	2	3.17%	11	61.1%	7	38.9%
Above 0.5ha	2	3.17%	1	1.58%	5	71.4%	2	28.6%

3.3. OUTCOME 2: INCREASED INCOME OF RURAL WOMEN TO SECURE THEIR LIVELIHOOD

Rural women in many rural areas suffer from not getting income to support and secure their livelihood's welfare. We are going to discuss the finding related to the women empowerment for welfare of the households.

3.3.1 Women empowerment in income generating activities

Empowering women in terms of economic and financial means is imperatively important to secure the welfare of households. In the activities generating income, women have to participate in those activities. The end line results displayed in table 18 describes the respondents who reported having the sources of income. The proportions showed that 97 percent have the source of income in which 73.5 percent are female and 26.5 percent are men. The table continues to show that in general, three percent of respondents don't have any source of income where the proportion of respondents composed solely by female. While comparing to data from baseline survey only 74 percent of respondents out 100 percent were able to generate income.

Table 18: Source of income

	Baseline				Endline			
	Yes		No		Yes		No	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Female	55	55%	18	18%	72	73.5%	3	100.0%
Male	19	19%	8	8%	26	26.5%	0	0.0%

Table 19, besides the table of sources of income, describes the proportions of respondents for the kinds of sources of income by gender. The sample size is 98 respondents due to the respondents reported not having source of income in the previous table. Also, the table 12 presents the types of source of income like the agricultural production, agri-business, off-farm activities and other activities generating income. In this table demonstrating the end line results, 76.4 percent reported generating income from agricultural production, 33.3 percent mentioned wages in agriculture as source of income, 17.6 percent reported that they earn income from other activities not listed in the questionnaire, while 13.7 percent and 17.6 percent earn the income from agribusiness and off-farm activities.

The comparison with the baseline results shows the increase in all sources of income and in the number of beneficiaries earning income. During the baseline, 54.02 percent reported generating income from agricultural production, 26.5 percent mentioned wages in agriculture as source of income and 54.05 percent reported that they earn income from other activities not listed in the questionnaire, while 5.41 percent and 12.16 percent earn the income from agribusiness and off-farm activities. Diversifying the activities' source of income could play a vital role in increasing the income. But, in rural area the agricultural production is a dominant activity. This is why agricultural production and wages in agriculture are likely dominant in proportion as mentioned in above paragraph. Female has a high proportion with 80.6 percent in agricultural production and 36.1 percent in wages in agriculture. During the end line research, no one reported to earn income from financial support.

Table 19: Kinds of sources of income by gender (n=98)

	Baseline				End line					
	Female		Male		Female		Male		Overall	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Agriculture production	30	40.54%	10	13.5%	58	80.6%	20	76.9%	78	76.4
Agribusiness	3	4.5%	1	1.35%	11	15.3%	3	11.5%	14	13.7
Off-farm activities	7	9.45%	2	2.7%	12	16.7%	3	11.5%	15	14.7
Wage in agriculture	22	29.7%	7	9.45%	26	36.1%	8	30.8%	34	33.3
Wage in other services	16	21.6%	5	6.7%	13	18.1%	5	19.2%	18	17.6
Financial support	55	74.32%	19	25.6%	72	100.0%	26	100.0%	98	96.0

Capacity building

To empower women for a support to increase welfare of household, the women received trainings in different sectors of activities. Table 20 expressed the capacity building that participants of the study have attended to increase their knowledge. The trainings' subjects were about agricultural production, animal husbandry, entrepreneurship, marketing, GBV (definition, prevention and response), cooperative management, environmental protection and nutrition.

Table 20: Proportion of respondents on capacity building received by gender attendance

Capacity building received	Baseline						End line					
	Overall		Female		Male		Female		Male		Overall	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Agriculture production	40	40.0%	28	28%	12	12%	42	56.0%	13	50.0%	55	55.6%
Marketing and sales	9	9.0%	9	9.0%	0	0.0%	13	17.3%	4	15.4%	17	17.2%
Entrepreneurship skills	34	34%	23	23.3%	11	11%	27	36.0%	11	42.3%	38	38.4%
Animal husbandry	11	11.0%	7	7.0%	4	4%	14	18.7%	5	19.2%	19	19.2%
Cooperative management	16	16.0%	10	10.0%	6	16.0%	9	12.0%	4	15.4%	13	13.1%
GAP	11	11.0%	5	5.0%	6	6.0%	22	29.3%	8	30.8%	30	30.3%
Environmental protection	8	8.0%	5	5.0%	3	3.0%	47	62.7%	14	53.8%	61	61.6%
Nutrition	42	42.0%	31	31.0%	11	11.1%	68	90.7%	16	61.5%	84	84.8%
GBV	42	42.0%	27	27.0%	15	15.0%	62	82.7%	18	69.2%	80	80.8%
None of them	40	40.0%	28	28%	12	12%	4	5.3%	3	11.5%	7	7.1%

From the end line findings, the proportion of respondents showed that capacity building in agriculture production was received by 55.6 percent respondents including 56 percent females and 50 percent male respondents; marketing and sales was got by 17.2 percent of respondents constituted by 17.3 percent females and 15.4 percent males. Entrepreneurship skills received by 38.4 percent of respondents; Animal husbandry was attended by 19.2 percent of respondents; capacity building in cooperative management received by 13.1 percent of respondents; 30.3 percent of respondents have received capacity building in GAP; 61.6 percent of respondents received environmental protection capacity building; 84.8 percent of respondents were trained in nutrition and 80.8 percent of respondents have received capacity buildings in GBV. The results from end line show that GALS did a great to give capacity building in Agriculture production; Marketing and sales; Entrepreneurship skills; Animal husbandry; Cooperative management; GAP; Environmental

protection; Nutrition; GBV and Others for beneficiaries of GALs that increased their skills and knowledge in different sectors catering to before joining this project.

3.3.1.1. Accessing market to sell the production.

Market

After gaining income from different activities, accessing the market is also a major power to women securing the livelihood. In order to meet the needs, the bargaining of the price is practically applied on the market. The findings from end line survey indicated in table 21 shows the proportion of the female and male accessing the market and negotiate the prices. The findings from baseline survey showed the large disparity between female and male in negotiation of the prices on the market. The end line discovers in overall that 65.3 percent of respondents reported negotiating completely the price, 10.9 percent of respondents negotiate the price very often and 21.8 percent of respondents reported that sometimes negotiate the prices. In the same table, 64% female completely negotiate the prices ; at 22.7 percent female sometimes negotiate the prices and 12 percent reported negotiating very often the prices while the male reported in that order negotiating the price at 19.2 percent and 7.7 percent of respondents respectively.

Table 21: Negotiation of the price of some household needs

			Not at all	Yes, completely	Yes, sometimes	Yes, very often
Baseline	Female	Frequency	2	49	15	7
		Percentage	6.7%	49.0%	15.0%	7.0%
	Male	Frequency	1	12	7	7
		Percentage	0.8%	12.0%	7.0%	7.0%
End line	Female	Frequency	1	48	17	9
		Percentage	1.3%	64.0%	22.7%	12.0%
	Male	Frequency	1	18	5	2
		Percentage	3.8%	69.2%	19.2%	7.7%
Overall		Frequency	2	66	22	11
		Percentage	2.0	65.3%	21.8%	10.9%

The table 22 illustrates the potential buyers of the production, and the survey proposed different buyers that the respondents could consider. The proposed potential buyers are the individual aggregators, cooperatives, industry like Inyange and institutions. The end line findings showed that 98.6 percent are female reported dealing with individual aggregators as potential buyers; 1.4 percent reported considering cooperative as potential buyers. On the side of the male, 21.4 percent mentioned individual aggregators as potential buyers. In overall, the individual aggregators are dominantly the potential buyers at 92.7 percent because their availability is easy mainly in rural areas.

Table 22: Proportion of respondents by gender with their potential buyers

		Institution buyers		Private larger buyers (E.g.: Inyange)		Cooperative (E.g.: MCC)		Individual aggregators (E.g.: Intermediary buyers)	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Baseline	Female	0	0%	1	1%	2	2%	66	66%
	Male	0	0%	0	0%	0	0%	24	24%
	Total	0	0%	1	1%	2	2%	90	90%
End line	Female	1	1.40%	1	1.40%	1	1.40%	70	98.60%
	Male	0	0.00%	0	0.00%	1	4.30%	23	21.40%
	Total	1	1.40%	1	1.40%	2	5.70%	93	92.70%

Income amount

The table 23 shows the proportion of respondents on income generation and saving. The end line explored the level of monthly income generation and found that a large proportion is always remarkable between women and men. In addition, the large proportion of respondents earns and saves less than 30,000 Frw. In overall, 74.3 percent reported earning the income less than 30,000 Frw and 96 percent make saving less than 30,000 Frw. The proportions of female's earning and saving at the range of less than 30,000 Frw are at 79.2 percent and 74.2 percent respectively. Male, on the other hands, makes earning and saving at less proportion of 20.8 percent and 25.8 percent. The observations show that the proportions of saving for both genders are high than the earnings.

Another ranges of income generation show that the income generation range between 30,001 – 50,000 Frw is dominantly for women with 57 percent against 42.9 percent of male. During the baseline, a range of 50,001 – 100,000 Frw and 100,001 – 200,000 Frw didn't have any proportion either for women or men and in end line, 5 percent and four percent of respondents reported to be in a range of 50,001 – 100,000 Frw and 100,001 – 200,000 Frw respectively for income generation. Therefore, the income that the population generates increased triggered by the increase in activities generating income.

Table 23: Proportion of respondents on income generation and savings by gender

		Baseline						End line					
		FEMALE		MALE		OVERALL		FEMALE		MALE		OVERALL	
		Income generation	Savings	Income generation	Savings	Income generation	Savings	Income generation	Savings	Income generation	Savings	Income generation	Savings
100,001 - 200,000	Freq.	0	0	0	0	0	0	3	0	1	0	4	0
	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	75,00%	0.0%	25,00%	0.0%	4.0%	0.0%
50,001 - 100,000	Freq.	0	0	0	0	0	0	2	0	3	0	5	0
	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	40,00%	0.0%	60,00%	0.0%	5.0%	0.0%
30,001 - 50,000	Freq.	4	1	3	0	7	1	8	3	6	1	14	4
	%	4.0%	1.0%	3.0%	0.0%	7.0%	7.0%	57,10%	75,0%	42,90%	25,0%	13,9%	4.0%

Less than 30,000	Freq.	57	72	20	27	77	99	57	72	15	25	75	97
	%	57.0%	72.0%	20.0%	27.0%	77.0%	99.0%	79,20%	74,2%	20,80%	25,8%	74,3%	96%

The change in household assets or income is an important information to analyze the livelihood status. During the end line survey, the enumerators asked the participants to identify the change made during last 12 months. The data collected focused more on showing five sections of change such as decrease, increase, nothing changed and not applicable. The data also showed the items that have considered in change analysis. The livestock, agricultural production, loan, saving and plot of cultivation have been discussed in end line survey to see the change happened. Table 18 shows the proportion of all items considered in analysis and found out a large dissimilarity between the 4 sections of change (decrease, increase, nothing changed, non-applicable). During the baseline study, a decrease has been reported at high proportion on livestock and savings (19% respectively). The agricultural production is reported at 8 percent in increase. Moreover, the end line survey demonstrated the increase on livestock (52.5 percent), agricultural production (18.8 percent), loans (47.5 percent), savings (78.2 percent) and plots of cultivation. This means that GALs did more on the livelihoods of its beneficiaries throughout its activities.

Table 24 : Proportion of respondents on changes in last 12 months

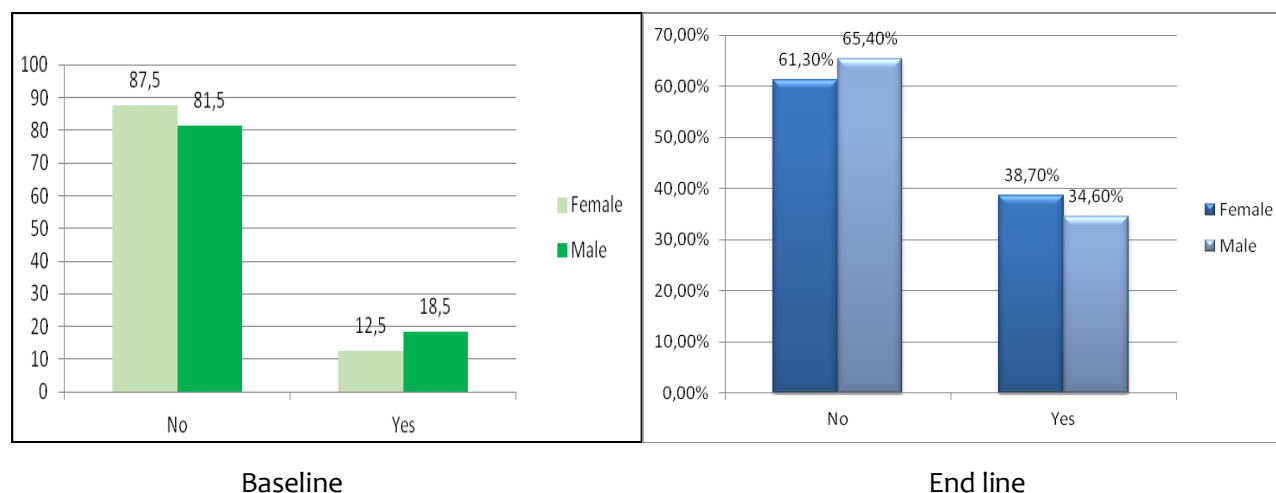
		Decrease (1)		Increase (2)		Nothing changed. (3)		Not applicable (4)	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%
Baseline	Livestock	19	19.0%	18	18.0%	19	19.0%	44	44.0%
	Agriculture production	10	10.0%	8	8.0%	6	6.0%	76	76.00%
	Loans	8	8.0%	15	15.0%	36	36.0%	41	41.0%
	Savings	19	19.0%	39	39.0%	40	40%	2	2.0%
	Plots of cultivation	8	8.0%	5	5.0%	40	40%	47	47%
End line	Livestock	17	16.8%	53	52.5%	9	8.9%	22	21.8%
	Agriculture production	1	1.0%	19	18.8%	1	1.0%	80	79.2%
	Loans	7	6.9%	48	47.5%	14	13.9%	32	31.7%
	Savings	6	5.9%	79	78.2%	12	11.9%	4	4.0%
	Plots of cultivation	6	5.9%	21	20.8%	44	43.6%	30	29.7%

Support

The support of economic activities for the self-employment, the respondents have been asked whether they received a support to strengthen the existing business supporting the livelihood. Figure 8 shows a large discrepancy between YES and NO as confirmation answer. The findings of baseline survey showed that men (18.5 percent) and women (12.5 percent) reported receiving the support to strengthen the self-employment activities while the findings from end line survey illustrated the reversed situation and more females (38.7 percent) reported receiving the support to strengthen the self-employment activities than men (34.6 percent) to support livelihood. This

increment is due to the activities of GALs such capacity building which supported in mindset changing and improvement of livelihood.

Figure 8: Proportion of respondents on support to strengthen self-employment activities to support livelihood.



3.3.1.2. Accessing loans and use of financial institutions for savings

It is imperative to access and use the financial institutions. The end line questionnaire asked about the access to the financial institution services and the use of formal and informal financial institutions for saving. The data collected about commercial banks, SACCO, microfinance institutions (MFIs) to know where the respondents have the habits to access the financial services. Also, the gathered information showed the proportion of the use of financial institutions for saving. The respondents have been asked to choose between home, VSLAs, telecommunication companies, saving in assets, relatives, investment of income, government and church as a model used to get saving services. The results from tables 18 and 19 showed the proportions related to the access to the financial institutions and use of the financial services for saving. According to the end line results presented in the table 19, the proportion of 57.4 percent of respondents reported using SACCO services and 41.6 percent did not use any financial services. On the other hand, the commercial banks and MFIs did not have many clients (1 percent) respectively among the respondents.

Table 25: Proportion of respondents on accessing the financial institutions.

		NO	YES	TOTAL
Baseline	Commercial bank	99 (99.0%)	1 (1.0%)	100 (100%)
	SACCO	38 (38.0%)	62 (62.0%)	100 (100%)
	MFIs	100 (100%)	0 (0%)	100 (100%)
	None	57 (57.0%)	43 (43.0%)	100 (100%)
End line	Commercial bank	100 (99.0%)	1 (1.0%)	100 (100%)
	SACCO	43 (42.6%)	58 (57.4%)	100 (100%)
	MFIs	100 (99.0%)	1 (1.0%)	100 (100%)

	None	59 (58.4%)	42 (41.6%)	100 (100%)
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The findings from end line survey displayed in table 26 showed the VSLAs as a dominant mean of the respondents to make saving (52.4 percent) followed by the telecommunication companies – MTN, TIGO and AIRTEL (45.2 percent). It is important to indicate that the habit of keeping money at home as saving modality continues to be available in population and the proportion is about 11.9 percent among the participants of the end line survey. A small proportion of 2.4 percent of respondents is reported for those using saving in purchasing the assets, as well as other unidentified means of savings (4.8 percent).

Table 26: Proportion of respondents of the use of financial institutions for saving (n=42)

		Yes		No	
		Frequency	Percentage	Frequency	Percentage
Baseline	At home	4	4.0	39.0	39.0
	VSLAs	19	19.0	24	24.0
	MTN, TIGO, AIRTEL	17	17.0	26	26.0
	Saving in purchasing assets	6	6.0	37	37.0
	Relatives	3	3.0	40	40.0
	Others	2	2.0	41	41.0
End line	At home	5	11.9	37	88.1
	VSLAs	22	52.4	20	47.6
	MTN, TIGO, AIRTEL	19	45.2	23	54.8
	Saving in purchasing assets	1	2.4	41	97.6
	Relatives	0	0.0	42	100.0
	Others	2	4.8	40	95.2

3.3.2. Spending earnings for household's welfare

Household expenditures

The end line findings determine on how the household spending has been made in the sampled population. Table 27 shows the proportion of female and male responding on the household spending in education, health, production, food and other expenses. Across the table, large proportions of spending are in the range of less than 10,000 Frw. In addition to this range, the 73.3 percent of women reported that household spending are in education followed by production (56 percent), other household expenses (52 percent respectively), and buying food (45.3 percent). For male, a large spending in household goes in education (88.3 percent) and other expenses (50 percent of respondents). The proportion of 44 percent of women reported spending for health and 41.3 percent for buying food in range of 10,001 – 20,000 frw. Spending in education and other expenses has been reported at 16 percent and 32 percent respectively. The proportion of 26.7 percent of women reported spending in the range of 20,001 – 50,000 Frw for production while men are at 38.5 percent. Other ranges of spending have slight proportions reported either by men or women.

Table 27: Proportion of respondents on HH expenses

Amounts of HH spending in:	Baseline		End line	
	% of Female respondents	% of Male respondents	% of Female respondents	% of Male respondents
Education				
Less than 10,000	68	24	73.3	88.5
10,001 – 20,000	2	2	16.0	11.5
20,001 – 50,000	3	1	4.0	0.0
50, 000 and more	0.0	0.0	2.7	0.0
Health				
Less than 10,000	60	23	41.3	46.2
10,001 – 20,000	12	4	44.0	53.8
20,001 – 50,000	1	0.0	10.7	0.0
50, 000 and more	0.0	0.0	0.0	0.0
Production				
Less than 10,000	56	19	56.0	46.2
10,001 – 20,000	12	6	0.0	3.8
20,001 – 50,000	4	1	26.7	38.5
50, 000 and more	1	1	13.3	11.5
Buying food for HH				
Less than 10,000	51	14	45.3	46.2
10,001 – 20,000	16	11	41.3	42.3
20,001 – 50,000	6	2	9.3	11.5
50, 000 and more	0.0	0.0	0.0	0.0
Other HH expenses				
Less than 10,000	60	24	52.0	50.0
10,001 – 20,000	12	3	32.0	42.3
20,001 – 50,000	1	0.0	12.0	7.7
50, 000 and more	0.0	0.0	0.0	0.0

The questionnaire required to know the frequent items that the household purchases and those products not easily found in household. The data gathered in the table 28 showed the sampled respondents' feedback on the multiple-choice answers for selected main items frequently purchased in household and selected products not easily found in household. The foodstuffs are dominantly the items frequently purchased in household. During the baseline, water and electricity as important infrastructure playing the role in development and welfare of the population are reported to be not easily found in the household at 6 percent and 30 percent as infrastructure needed in household, but they have not been reported in the end line. The end line findings showed that proportions are dominated by the percentages of beans and rice (25.7 and 24.8 percent of

respondents) as selected main items frequently purchased in HH, while proportions are dominated by the percentages of rice and oil (29.7 and 15.8 percent of respondents) as products not easily found in household.

Table 28: Proportion of main products frequently purchased and/or not easily found in household

	Baseline		End line	
	Selected main items frequently purchased in HH	Selected products not easily found in HH	Selected main items frequently purchased in HH	Selected products not easily found in HH
	%	%	%	%
Beans	39	9	25.7	5.0
Maize flour	11	-	5.0	1.0
Rice	14	40	24.8	29.7
Oil	6	26	5.0	15.8
Vegetables	1	5	4.0	2.0
Salt	6	-	8.9	2.0
Clothes	2	70	1.0	6.9
Shoes	1	53	5.0	14.9
Maize	13	-	1.0	-
Cassava flour	7	-	1.0	2.0
Irish potatoes	20	24	1.0	4.0
Sweet potatoes	41	4	7.9	-
Banana	33	17	8.9	4.0
Peanuts	23	6	-	-
Fruits	28	9	5.0	3.0
Cassava	27	-	-	-
Meat	29	65	-	-
Dried fishes	30	-	-	-
Water	-	6	-	-
Eggs	-	23	-	-
Electricity	-	30	-	-
Milk	-	31	-	-
Others	26	20	-	-

3.4. OUTCOME 3: RURAL WOMEN FOR ENHANCED LEADERSHIP AND PARTICIPATION IN THEIR COMMUNITY, IN RURAL INSTITUTIONS, AND IN SHAPING LAWS, POLICIES AND PROGRAMS

3.4.1. Decision- making of women in governance system

It is apparent that men are dominant than women in decision making. The end line asked the respondents about the participation in the decision-making committee, governance system in place with elected members and organization of regular general meeting. Moreover, the end line also focused on organization of regular general meeting, giving opinion on any issue in the organization,

and if the opinion is being considered by the public and level of confidence in providing opinion in public. Through the table 29, the findings showed a difference in proportion between women and men. In overall, the findings indicated in large proportion that the participants in different aspects of organizational governance. Being a member of decision-making committee in overall has been reported by all men and almost of women (above 80 percent of all women participated in the end line survey). 96 percent female respondents revealed that they participate in the organization regular general meeting, 93.3 percent shared to be confident in giving their opinion in public, 94.7 percent reported that their opinions are considered by the public, 92 percent stated that they give their opinions on any issue in the organization and 81.3 percent participate in the governance system. On the other hand, 96.2 percent men respondents confirmed that they participate in the organization regular general meeting whereas, all men respondents (100 percent) reported to give opinions on any issue in the organization, their opinions are considered by the public, shared to be confident in giving their opinion in public, participate in the governance system in place and they are members of decision-making committee.

Table 29: Proportion of respondents on different aspects in organizational governance

		Baseline		End line	
		% of Female respondents	% of Male respondents	% of Female respondents	% of Male respondents
Member of decision-making committee					
	No	65	21	0	0
	Yes	8	6	100	100
Governance system in place with elected members					
	No	25	6	13.3	0
	Yes	48	21	81.3	100
Organization of regular general meeting					
	No	9	0	1.8	3.8
	Yes	64	27	96.0	96.2
Give your opinion on any issue in the organization					
	No	18	0	8.0	0
	Yes	55	27	92.0	100
Opinion being considered by public					
	No answer	1	0	0	0
	No	16	0	5.3	0
	Yes	56	27	94.7	100
Confident in giving your opinion in public					
	No	16	1	6.7	0
	Yes	57	26	93.3	100

Readiness of women to participate in leadership of organization

It is also better to be ready as participating in decision making might request to fulfill the specific requirements. Table 30 indicates the findings on the women readiness to participate in the organization leadership and the organization readiness to accept equally the opinions and leadership of the women and men. The data collected showed the opinions on the question answered using the scale. The end line findings revealed that 47.5 percent respondents confirmed the organization readiness and 51.5 percent of respondents reported acceptance of leadership and opinions of women and men at a scale 5. 23.8 percent and 16.8 percent respondents at scale 3 and 4 as respondents estimated the member readiness to lead organization respectively while 21.8 and 12.9 percent respondents shared that they are ready at a scale 3 and 4. According to the end line findings, the GALS' beneficiaries changed the mindset in members' readiness to lead the organization and acceptance of leadership and/or opinion from woman and men equally.

Table 30: Proportion of respondents on readiness in organizational leadership

			Scale				
			1	2	3	4	5
Baseline	Members readiness to lead the organization	%	13	12	40	13	22
	Organizational readiness to accept leadership and/or opinion from woman and men equally		15	12	40	11	22
End line	Members readiness to lead the organization	%	1.0	10.9	23.8	16.8	47.5
	Organizational readiness to accept leadership and/or opinion from woman and men equally		2.0	11.9	21.8	12.9	51.5

Members in committees

In decision making committees, the end line looked at the participation of women into committees. As shown in table 24, the committees are advisory committee, audit committee, conflict resolution committee and all headed by board of directors. The figures showed that members in cooperative belonging in board of directors women are 41.3 percent as compared to men with 26.9 percent among the participants of the survey. The women are also dominant in all decision-making committees except in audit committee and advisory committee which have been dominated by men with 15.4 percent and 30.8 percent respondents respectively. The findings from end line survey show the increase of proportion of participating in decision making committees by sex.

Table 31: Proportion of participating in decision making committees by sex (n=101)

	Baseline				End line			
	Female		Male		Female		Male	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Advisory committee	36	36.0%	12	12.0%	15	20.0	8	30.8
Audit committee	3	3.0%	3	3.0%	7	9.3	4	15.4
Board of Directors	8	8.0%	6	6.0%	31	41.3	7	26.9

Conflict resolution committee	24	24.0%	6	6.0%	21	28.0	7	26.9
Others	2	2.0%	0	0.0%	1	1.3	0	0.0

Group membership

The findings of end line survey illustrated in the table 32 describe the types of groups or cooperatives available in community. It also shows the proportion of respondents about the existence of groups and the status of members in different activities of the group or cooperative. All respondents (100 percent) declared the existence of cooperatives or group in the community and 31.7 percent mentioned the agricultural/livestock cooperative existence, 86.1 percent confirmed the existence of micro-credit group (VSLAs) in the community, 97 percent reported the existence of mutual help or insurance in the community while 42.6 percent indicated the charitable group or other groups. The respondents also reported to be active members at respectively at 97 percent, 86.2 percent, 42.5 percent and 31.7 percent in mutual help or insurance help, micro credit groups (VSLAs) and in any other group or charitable group and agricultural /livestock cooperative respectively.

Table 32: Proportion of respondents on cooperative and/or groups in community

	Agricultural /livestock cooperative		Micro-credit groups (VSLAs)		Mutual help or insurance group		Any other group or charitable group	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Presence of the cooperative or group in community								
No	69	68.3%	14	13.9%	3	3.0%	58	57.4%
Yes	32	31.7%	87	86.1%	98	97.0%	43	42.6%
Total	101	100.0%	101	100.0%	101	100.0%	101	100.0%
Active member								
No	14	13.9%	24	23.8%	12	11.9%	6	5.9%
Yes	18	17.8%	63	62.4%	86	85.1%	37	36.6%
Total	32	31.7%	87	86.2%	98	97.0%	43	42.5%

3.4.1.1. Access to information in the organization

As frequently said, accessing information regularly facilitates the progress in organization. According to table 33, the respondents reported accessing information from the organization through different channels of information. It is also important to mention the frequency (sometimes, often, very often) of getting the information. According to the end line findings, all respondents reported receiving information about organization. However, 17.8 percent of respondents mentioned that the information is often shared, 5.5 percent reported sometimes and 76.7 percent said to receive information very often through the organization leadership, 64.7 percent said that very often they receive information through peer members and 81.5 percent

received information very often through collaborators, while 25 percent of the respondents received information very often and often respectively through other sources.

Table 33: Proportion of the respondents on sharing information from organization

		Often	Sometimes	Very often
Baseline	Through leadership of your organization	35%	16%	31%
	Through peer members	40%	16%	31%
	Through collaborators	26%	35%	19%
	Through other sources	17%	28%	19%
	Never receive information about my organization	4%	9%	16%
End line	Through leadership of your organization	17.8%	5.5%	76.7%
	Through peer members	26.5%	8.8%	64.7%
	Through collaborators	18.5%	0.0%	81.5%
	Through other sources	25.0%	50.0%	25.0%

3.4.2. Consideration of women’s opinions in household levels

According to the Rwandan culture, the gap is quite big between decisions of men and women on how to decide on different issues and the proportions of men are in general higher than of women except family planning and food preparation at home as demonstrated by the following table 27 illustrating the results of end line survey. In addition, the decision making regarding both sides has reported at high proportion (above 80 percent of respondents participated in the end line survey). The results show that men and women have the same understanding on food preparation at home at a proportion of 56.4 percent while 90.1 percent decide together on savings & loan utilization.

Table 34: Proportion of respondents on usual decision making at HH level

	Only man	Only woman	Both
	%	%	%
Spending HH earnings	9.9	7.9	82.2
Spending woman earnings	5.0	9.9	84.2
Spending man earnings	8.9	5.9	85.1
Decision for buying or selling goods or items	13.9	4.0	82.2
Spending for home improvement	13.9	5.0	81.2
Decision on giving money for relatives	9.9	4.0	86.1
Investment of surplus money	6.9	4.0	89.1
Family planning (# of children to have)	4.0	11.9	84.2
Health insurance	6.9	5.0	88.1
Preparation of food at home	1.0	42.6	56.4

Children's needs & schooling	4.0	15.8	80.2
Saving & loan utilization	4.0	5.9	90.1
Use of land, agro-inputs and buying the agro-equipment	6.9	5.0	88.1
Run business	5.0	5.9	88.1

In decision making process in household, man and woman decide to have any items utilizable for the improvement of household welfare. The findings of end line survey presented in the table 28 which indicates the ownership and decision making on the households assets by showing the proportion of the respondents who reported the presence of items in household, ownership and decision making. According to table 35, decision making on items expresses the proportion of the respondents on decisions that have taken in HH to get an asset or item. The findings from end line survey showed that 62.4% percent and 64.4% percent of respondents reported that decisions are jointly taken and owned respectively by the HH members for off-farm income generating activity.

Furthermore, joint decisions are taken to get large livestock at 37.8 percent and the decision regarding other lands not used for agricultural purpose is taken jointly at 44.4 percent. The end line study also looked at ownership of the items or assets present in the household. The results showed that mechanized farm equipment is jointly owned at 60.2 percent and the decisions are taken jointly at 67.8 percent for the farm equipment. The cell phone that is solely owned at high proportions either by women (71.6 percent) or by men (63.0 percent) and the decisions on this item are highly taken solely taken by the owners (65.9 percent of women and 53.7 percent of men). The joint ownership is observed on land (40.9 percent), small livestock (49.5 percent), poultry and other small animals (40.9 percent) and farm equipment (60.2 percent).

Table 35: Proportion of the respondents on the ownership and decision-making for the assets of the HH

		Ownership of item						Decision making on item					
		Women own solely the item		Men own solely the item		Women and Men own jointly the item		Women decide solely on the item		Men decide solely on the item		Women and Men decide jointly on the item	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Farmland	No	84	88.4%	83	90.2%	55	59.1%	77	87.5%	72	87.8%	50	55.6%
	Yes	11	11.6%	9	9.8%	38	40.9%	11	12.5%	10	12.2%	40	44.4%
Large livestock	No	88	92.6%	85	92.4%	63	67.7%	79	89.8%	71	86.6%	56	62.2%
	Yes	7	7.4%	7	7.6%	30	32.3%	9	10.2%	11	13.4%	34	37.8%
Small livestock	No	73	76.8%	81	88.0%	47	50.5%	72	81.8%	71	86.6%	45	50.0%
	Yes	22	23.2%	11	12.0%	46	49.5%	16	18.2%	11	13.4%	45	50.0%
Poultry and other small animals	No	81	85.3%	82	89.1%	55	59.1%	73	83.0%	73	89.0%	50	55.6%
	Yes	14	14.7%	10	10.9%	38	40.9%	15	17.0%	9	11.0%	40	44.4%
Farm equipment	No	73	76.8%	78	84.8%	37	39.8%	65	73.9%	71	86.6%	29	32.2%
	Yes	22	23.2%	14	15.2%	56	60.2%	23	26.1%	11	13.4%	61	67.8%

Radio	No	82	86.3%	73	79.3%	48	51.6%	73	83.0%	67	81.7%	48	53.3%
	Yes	13	13.7%	19	20.7%	45	48.4%	15	17.0%	15	18.3%	42	46.7%
Cell phone	No	27	28.4%	34	37.0%	69	74.2%	30	34.1%	38	46.3%	64	71.1%
	Yes	68	71.6%	58	63.0%	24	25.8%	58	65.9%	44	53.7%	26	28.9%
Bicycle/motorcycle	No	91	95.8%	79	85.9%	67	72.0%	86	97.7%	67	81.7%	62	68.9%
	Yes	4	4.2%	13	14.1%	26	28.0%	2	2.3%	15	18.3%	28	31.1%
Off farm Income generating activity	No	66	69.5%	61	66.3%	35	37.6%	58	65.9%	46	56.1%	32	35.6%
	Yes	29	30.5%	31	33.7%	58	62.4%	30	34.1%	36	43.9%	58	64.4%

The table 36 presents the proportion of sharing power in household. The data gathered on women disagreement to the final say of her husband to express her opinion, father's final say in household, man's power as person in charge, spending free time for man not woman and sharing power between man and woman. The figures from end line survey show that 93.1 percent women disagree with husbands to express opinion and 93.1 percent mentioned that men and women have to share the power in the household while in the baseline they were at 89 percent mentioned that men and women have to share the power in the household. 80.2 percent of respondents mentioned that it not acceptable spending free time for man but not a woman, 78.2 percent declared that man cannot show the power as a person in charge of the household, and 76.2 percent disagree with the statement that father has a final say in household but not mother.

Table 36: Proportion of respondents in sharing power in HHs

	Baseline		End line	
	NO	YES	NO	YES
Woman disagreement with husband to express her opinion	23.0%	77.0%	5.9%	93.1%
Father's final says in HH, not the mother	79.0%	21%	76.2%	22.8%
Man, to show power as person in charge	67%	33%	78.2%	20.8%
Spending free time for man, not for woman	71%	29%	80.2%	18.8%
A husband and woman can share power	11%	89%	5.0%	93.1%

3.4.2.1. Final say of women in using the household assets and other household decisions

As indicated by the findings from end line survey on the use of the assets of household, the women seem to have less say than men in final decision in use of the household assets. The table 37 indicates the last deciders between men and women in decision regarding the use of the assets and items. According to table 37, there is a large difference in the final say between man and woman in using the household assets. The data describe only man, only woman and both in decision making and final say. The findings showed that in calculated average of 77.9 percent of respondents support that the decisions are taken by both for the use of household assets and items. Across the table, the dominant results suggest the proportion of 85.1 percent for the use of cell phone; low proportion of 71.1 percent reported that both took the final decision on the use of mechanized

equipment. Also, 74.3 percent and 82.2 percent mentioned the large and small consumer durables respectively.

Besides, the end line results showed that woman and man have a final say in the other lands that do not use agricultural purpose at 82.2 percent; the final decision taken by both for the use of the non-mechanized farm equipment and poultry and other small animals have been reported at 76.2 percent respectively. The proportion of 78.2 percent of respondents reported that the final decision of use of means of transportation comes from both. However, the dominant decisions belong to only women are at low proportion of 11.9 percent for poultry and small livestock.

Table 37: Proportion of respondents to final say of the use of assets and items

	Baseline			End line		
	Only man	Only woman	Both	Only man	Only woman	Both
	%	%	%	%	%	%
Livestock	18	6	74	17.8	5.0	77.2
Small livestock	19	6	73	11.9	9.9	77.2
Poultry and other small animals	17	6	77	9.9	11.9	76.2
Non mechanized farm equipment	22	4	73	16.8	5.9	76.2
Mechanized equipment	20	5	75	19.8	5.0	71.3
Non-farm business equipment	28	4	67	14.9	5.0	76.2
House or building	21	4	72	15.8	5.9	78.2
Large consumer durables (TV, refrigerator, sofa)	24	4	72	17.8	5.0	74.3
Small consumer durables (radio, cook wave)	10	5	80	11.9	5.9	82.2
Cell phone	18	4	77	7.9	6.9	85.1
Other lands not used for agricultural purpose	23	3	70	11.9	5.0	82.2
Means of transportation (car, bicycle, motorcycle)	18	6	74	15.8	5.0	78.2

3.4.2.2. Responsibilities of women in household and farm activities

Household activities

The responsibilities in household dominantly require more efforts of women than men. The end line asked the respondents about the responsibilities between men and women towards the workload in households and farms. The data in table 31 reported that there is a large difference in results concerning the responsibilities of woman and man in domestic works in household. The proportion of responsibilities shared by both together in household is unlikely important with average of 60.2 percent. The proportion showed that 66.3 percent of respondents reported that both have the responsibilities to help children in studies at home and looking after ill person respectively.

Also, the results responded at high proportion to express that women have more responsibilities in household such as cooking foods and cleaning a house (45.5 percent and 51.5 percent), feeding and bathing the children (45.5 percent), fetching water (25.7 percent). At low proportion of 9.9 percent for helping children in studies at home, 2.0 percent for fetching water at home and 1 percent for looking after ill person, men don't take any other responsibilities at household such as looking, cooking food, cleaning house, and feeding and bathing children as shown by the results of the end line. It is needed to continue sensitize the men in changing the mindset and behaviors regarding the responsibilities of domestic activities in household like fetching water and cleaning house.

Table 38: Proportion of respondents on responsibility between gender in HH

	Baseline			End line		
	Only man	Only woman	Both	Only man	Only woman	Both
	%	%	%	%	%	%
Fetching water at home	0.0	50	50	2.00	25.70	72.30
Cooking food at home	0.0	72	28	0.0	45.50	54.50
Cleaning house	0.0	83	17	0.0	51.50	48.50
Feeding and bathing children	0.0	68	32	0.0	46.50	53.50
Help children in studies at home	12	31	57	9.90	23.80	66.30
Looking after ill person	0.0	26	74	1.00	32.70	66.30

Farm activities

For the farm activities proposed in the table 39, the survey looked at the responsibilities of women and men or both in the farm activities till the production reaches the market. The proportions reported above average of 42.3 percent in many activities that both, men and women participate in the farm activities. According to the findings of the end line survey, at high proportion, the results for farm work responsibilities between gender taken upon both men and women are dominated by weeding (89.1 percent), planting (86.1 percent), and storing (85.1 percent). The likely farm activities for women are leading by drying (32.7 percent), keeping the money for harvest (16.8 percent), take care of small livestock, harvesting and winnowing (14.9 percent respectively) and while for men the likely farm activities are threshing and caring of large livestock (13.9 percent respectively), looking for the market and selling the harvest (9.9 percent respectively) and pricing the harvest (6.9 percent).

Table 39: Proportion of respondents for farm work responsibilities between gender

	Only man	Only woman	Both	Only man	Only woman	Both
	%	%	%	%	%	%
Take care for small livestock	9	18	73	3.0	14.9	82.2
Caring of large livestock	10	17	73	13.9	5.9	80.2
Planting	3.0	27	70	2.0	11.9	86.1
Weeding	1.0	34	65	2.0	8.9	89.1
Harvesting	1.0	23	76	1.0	14.9	84.2
Threshing	41	23	36	13.9	10.9	75.2
Drying	25	13	62.0	1.0	32.7	66.3

Storing	6	12	82.0	1.0	13.9	85.1
Winnowing	2	85	13	2.0	14.9	83.2
Processing for sale	9.0	8	83.0	5.9	10.9	83.2
Pricing the harvest	14.0	8	79	6.9	8.9	84.2
Looking for market	18.0	8	74	9.9	7.9	82.2
Selling the harvest	15	10.0	75	9.9	7.9	82.2
Keeping the money for harvest	12.0	26.0	62.0	7.9	16.8	75.2

For getting a good productivity, the time spent in the productive work could help in analysis. The end line survey, as shown in table 40, looked on time spent on productive work, non-productive work for family and personal non-productive work. The results suggest in overall, 92.5 percent of respondents spent time of 5 - 8 hours in productive activities, in which 38.7 percent are women, as compared to 53.8 percent of men while 98.3 percent of respondents declared to spend 3-5 hours on productive work in general. Also, 90.3 percent reported spending between 3 – 5 hours in non-productive work for family while 99.2 percent spend time between 0 - 1 hour in personal non-productive work. The table also presented the discrepancy between time working between men and women. It seems that the time spent in non-productive work is high as the proportions of respondents in the ranges of time are high.

Table 40: Proportion of respondents on spending time in productive activities

	Range of time	Baseline			End line		
		of female in spending time	% of Male in spending time	Total	% of female in spending time	% of Male in spending time	Total
Productive work							
	0 – 1 hour	1.0	1.0	2.0	1.3	0.0	1.3
	1 – 3 hours	2.0	0.0	2.0	2.7	3.8	6.5
	3 – 5 hours	28	15	43	56.0	42.3	98.3
	5 – 8 hours	41.0	11	52.0	38.7	53.8	92.5
	≥ 8 hours	1.0	0.0	1.0	1.3	0.0	1.3
Non-productive work for the family							
	0 – 1 hour	5	9	14.0	16.0	19.2	35.2
	1 – 3 hours	40	14	54.0	48.0	42.3	90.3
	3 – 5 hours	26.0	3.0	29.0	25.3	38.5	63.8
	5 – 8 hours	2.0	1.0	3.0	9.3	0.0	9.3

My personal non-productive work							
	0 – 1 hour	19	10	29	53.3	46.2	99.2
	1 – 3 hours	50	14.0	64.0	36.0	38.5	74.5
	3 – 5 hours	4.0	3.0	7.0	8.0	11.5	19.5

Domestic violence

The respondents also expressed their opinions on the statements regarding the reasons justifying husband to hit his wife. Table 41 shows a large difference in results where those supporting the behaviors are at low proportion. The findings showed that 90 percent mentioned that the woman cannot be beaten for burning foods, 80 percent reported that the woman cannot be beaten for refusal of having sexual with husband and 83 percent declared that woman cannot be beaten if she argues to husband or if she goes out without telling him. In addition, 82 percent of respondents reported that woman cannot be beaten when she neglects the children.

Table 41: Proportion of respondents to give opinions on the husband justification for hitting the woman.

	Baseline			End line		
	Don't know	No	Yes	Don't know	No	Yes
If she goes out without telling him	2.0%	83%	15.0%	3.0%	73.3%	23.8%
If she neglects the children	0.0%	82.0%	18.0%	4.0%	73.3%	22.8%
If she argues with him	3.0%	85.0%	12.0%	3.0%	77.2%	19.8%
If she refuses to have sex with him	3.0%	80.0%	17.0%	2.0%	84.2%	13.9%
If she burns the food	1.0%	90.0%	9.0%	4.0%	83.2%	12.9%

3.4.3. Practices and engagement for climate change and environmental management

Findings from end line survey indicated that climate change and environmental management are affected by productive activities. The practices and engagement of sampled population help in improving the environment. The end line survey explored the climate change issues and the practices used, where use of improved seed was on 99percent; proper use of organic manure was on 92percent; construction of Kitchen garden was on 94percent; Proper use of pesticides was on 63percent; Pests and diseases was on 61percent; cropping techniques was on 70percent; agricultural season was on 84percent; composting was on 57percent while proper use of inorganic was on 79percent. While data from baseline survey show the agricultural practices used to improve the environmental management such as improved seeds, proper use of pesticides, pest and disease control. Across the table, the dominant practices as identified by the respondents result in high proportion such as proper use of organic manure (97.5percent), use of improved seeds (93.3percent), construction of kitchen garden (89.2percent), proper use of inorganic fertilizer (88.3percent) and agricultural season planning (78.3percent).

Table 42: Proportion of respondents on agricultural practices engagement

	No	Yes	Yes	No
Use of improved seeds	24.0%	76.0%	99.2	0.8
Proper use of organic manure	17.0%	83.0%	91.7	8.3
Construction of Kitchen garden	36.0%	64.0%	94.2	5.8
Proper use of pesticides	78%	22%	62.5	37.5
Pests and diseases control	83%	17.0%	60.8	39.2
Cropping Techniques	75%	25%	70.0	30.0
Agricultural season planning	74.0%	26.0%	84.2	15.8
Composting	72.0%	28.0%	56.7	43.3
Proper use of Inorganic Fertilizers	26%	74.0%	79.2	20.8

For the threats that occurred in last 12 months due to the climate change, the end line found out that flood, drought, erosion, and other threats have been experienced by the sampled population. The frequencies show that drought is a major threat experienced by 28.3 percent of the respondents; 26.7 percent select experiencing erosion, followed by the flood at 12.5percent.

Table 43: Natural threats experienced by the respondents in last 12 months

		Flood		Drought		Erosion		Others	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Baseline	No	70	70.0%	33	33.0%	55	55.0%	79	79.0%
	Yes	30	30.0%	67	67.0%	45	45.0%	21	21.0%
End line	No	88	87.5%	72	71.7%	74	73.3%	91	90.0%
	Yes	13	12.5%	29	28.3%	27	26.7%	10	10.0%

Consequences on households

The consequences from proposed natural threats (low productivity, famine, post harvest losses, low income, loss of shelter, loss of jobs and other unspecified natural threats) should be important for the household. Table 44 presents the proportion of likely consequences on the household experienced after the natural threats. The survey proposed the low productivity, famine, post-harvest loss, low income, loss of shelter, loss of job and others as the consequences that the participants responded to meet. So, all proposed consequences have been faced by respondents where post-harvest losses confirmed on 45.0 percent; low income stated on 40.8 percent; loss of

shelter confirmed on 5.0 percent; loss of job agreed on 8.3 percent and other unidentified consequences stated on 6.7 percent as data from end line survey indicated. While in baseline survey, the proportion of likely consequences on the HH experienced after the natural threats faced by the respondents is that 87 percent met famine, 71 percent faced low productivity, 54 percent experienced low income while 45 percent faced post-harvest losses and 18 percent lose jobs followed by loss of shelter at 3 percent.

Table 44: Consequences following natural threats experienced in livelihoods

		Low productivity		Famine		Post-harvest losses		Low income		Loss of shelter		Loss of job		Others	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Baseline	No	29	29.0	13	13.0	55	55.0	46	46.0	97	97.0	82	82.0	87	94.2
	Yes	71	71.0	87	87	45	45.0	54	54	3	3.0	18	18.0	13	5.8
End line	No	0	0.0	0	0.0	56	55.0	60	59.2	96	95.0	92	91.7	94	93.3
	Yes	0	0.0	0	0.0	45	45.0	41	40.8	5	5.0	9	8.3	7	6.7

3.4.3.1. The factors contributing on global climate change

The global climate change is a result of different factors that have been contributed into that change. Those factors could more in contribution due to the human activities in production and consumption. Table 45 and figure 2 indicate the enumerated factors contributing to global climate change and describes burning fuel, transportation, land cleaning, agriculture, industry and other factors like deforestation. During data collection, the questionnaire proposed to the respondents to think about what contribute more from burning fuel, transportation, land cleaning, agriculture, industry and other factors.

Table 45: Proportion of respondents for factors contributing to global climate change

		Burning fuel	Transportation	Land cleaning	Agriculture	Industry	Others
		%	%	%	%	%	%
Baseline	No	17.0	55.0	49.0	77.0	41.0	85.0
	Yes	83.0	45.0	51.0	23.0	59.0	15.0
End line	No	64.2	78.3	72.5	95.8	63.3	74.2
	Yes	35.8	21.7	27.5	4.2	36.7	25.8

The end line survey results (in table 45) revealed that burning fuels has confirmed on 35.8 percent; transportation stated on 21.7 percent; land clearing confirmed on 27.5 percent; agriculture confirmed on 4.2 percent; industry stated on 36.7 percent; and others confirmed on 25.8 percent while the baseline study findings showed that the respondents consider burning fuel (83 percent) as a dominant factor contributing to global climate change followed by the industry (59 percent). Transportation, agriculture, land cleaning and other factors are in addition the contributors to

global climate change at proportion of 45 percent, 23 percent, 51 percent and 15 percent respectively.

3.4.3.2. Overcoming challenges on climate change and environmental management

The challenges on climate change and environmental management have to be overcome. The end line asked the respondents about management policies that the respondents have applied or adopted to overcome the challenges of climate change. The participants responded from the list covering the irrigation; water harvesting techniques, erosion control, planting trees, agro-forestry. The results from end line survey showed that irrigation is strategy managements for overcoming the challenges by the respondents as confirmed by 22.5%; water harvesting technologies confirmed on 14.2%; erosion control stated on 30.0%; a high percentage of 33.0% confirmed strategy of planting trees while 19.2% confirmed the agro-forestry and 13.3% stated other strategies managements for overcoming the challenges by the respondents. During the baseline survey, planting trees were selected as a likely measure to overcome climate change at 57 percent, erosion control at 45 percent, irrigation and agro-forestry at 28 percent, water harvesting techniques at 24 percent and finally other methods at 5 percent. This indicated improvement of knowledge for beneficiaries about strategy managements for Overcoming challenges on climate change and environmental management after joining GALs.

Table 46: Strategy managements for overcoming the challenges by the respondents

		Irrigation		Water harvesting technologies		Erosion control		Planting trees		Agro forestry		Other		None	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Baseline	No	72	72.0	76	76.0	55	55.0	43	43.0	72	72.0	95	95.0	66	66.0
	Yes	28	28.0	24	24.0	45	45.0	57	57.0	28	28.0	5	5.0	34	34.0
End line	No	78	77.5	86	85.8	71	70.0	67	66.7	81	80.8	87	86.7	0	0.0
	Yes	23	22.5	15	14.2	30	30.0	34	33.3	20	19.2	14	13.3	0	0.0

The table 47 shows the mitigation measures to adapt to the climate change and such measures like planting trees, terracing, water harvesting, ridging, agro-forestry, etc. The findings from end lines survey indicated that the results represent the adopted practices with planting trees confirmed by 74.2%; agro-forestry confirmed by 50.8 and ridging stated on 54.2%. Compared with the baseline survey results where the adopted practices occurrences from respondents at level of 31 percent who practice ridging; 71 percent use planting trees; 14 percent use land terracing; 34 percent of respondents use water harvesting; 43 percent of respondents practice agro-forestry, 12 percent make the storage, 25 percent of respondents use contour marking and 23 percent were doing non-farm business, and in general, there is greater improvement in mitigation measures or practices adapted on climate change.

Table 47: Proportion of respondents on mitigation to adapt on climate change

	Baseline		End line	
	No	Yes	No	Yes
Planting trees	29%	71%	25.8%	74.2%
Agro-forestry	57%	43%	49.2%	50.8%
Water harvesting	66%	34%	60.0%	40.0%
Storage	88%	12%	79.2%	20.8%
Terracing	86%	14%	56.7%	43.3%
Ridging	69%	31%	45.8%	54.2%
Contour marking	75%	25%	86.7%	13.3%
Diversifying production system	96%	4%	80.8%	19.2%
Drought resistant seeds	93%	7%	79.2%	20.8%
Non-farm business	77%	23%	95.8%	4.2%

Findings in end line survey show scale of 1 to 5, the respondents asked about their concern over climate change and confident to be resilient to climate change and environmental management. Table 48 shows the scale in which the respondents report on their concern for climate change and environmental management. The high proportions of concern climate change issues and confidence for climate change resilience and environmental management were reported on scale 4 with 38.3 percent and 33.3 percent. Scale 3 counts 32.5 percent and 36.7 percent of respondents on climate change concern and confidence for resilience for environmental management respectively.

Table 48: Scale level of respondents on climate change and environmental management

		Scale					
		1	2	3	4	5	Total
Baseline	My concern over climate change issues	14	35	42	8	1	100.0
	My confident to be resilient to climate change and environmental management	11	31	47	10	1	100.0
End line	My concern over climate change issues	2.5	6.7	32.5	33.3	25.0	100.0
	My confident to be resilient to climate change and environmental management	3.3	11.7	36.7	38.3	10.0	100.0

3.4.4. Self-confident and self-efficacy of respondents' perception

The end line survey asked the respondents about their capabilities to execute the tasks. The questionnaire used the Likert methodology about disagreement and agreement on the different

asking questions. The enumerators read the questions to the respondent and the respondent answered using the Likert method of “agree or disagree”, “strongly agree or strongly disagree” and “neither agree or disagree”. As presented in table 49, there is a large discrepancy between “agree” perception and other perceptions. Findings of the end line survey indicated that 75.8percent respondents and 15.8percent respondents agreed and strongly agreed that they will be able to achieve most of the goals that they have set for themselves; when facing difficult tasks, they are certain that they will accomplish them, confirmed by 75.0percent respondents and 10.8percent respondents agreed and strongly agreed.

In general, they think that they can obtain outcomes that are important to them, as agreed by 75.0percent respondents and strongly agreed by 15.8percent respondents; they believe they can succeed at most any endeavour to which they set my mind agreed by 70.8percent and strongly agreed by 15.0percent respondents; they will be able to successfully overcome many challenges, agreed by 75.8percent and strongly agreed by 13.3percent respondents; they are confident that they can perform effectively on many different tasks, agreed by 74.2percent and strongly agreed by 14.2percent respondents; Compared to other people, they can do most tasks very well, agreed by 75.8percent and strongly agreed by 11.7percent respondents; and even when things are tough, they can perform quite well, agreed by 73.3percent and strongly agreed by 10.8percent respondents.

Table 49: Perception of respondents on capabilities of task execution

End line	Agree	Disagree	Neither agree nor disagree	Strongly agree	Strongly disagree	Total
	%	%	%	%	%	%
I will be able to achieve most of the goals that I have set for myself	75.8	1.7	5.8	15.8	0.8	100.0
When facing difficult tasks, I am certain that I will accomplish them.	75.0	1.7	12.5	10.8	0.0	100.0
In general, I think that I can obtain outcomes that are important to me.	75.0	0	8.3	15.8	0.8	100.0
I believe I can succeed at most any endeavor to which I set my mind	70.8	0	13.3	15.0	0.8	100.0
I will be able to successfully overcome many challenges	75.8	0	10.8	13.3	0.0	100.0
I am confident that I can perform effectively on many different tasks.	74.2	0	11.7	14.2	0.0	100.0
Compared to other people, I can do most tasks very well.	75.8	0.0	12.5	11.7	0.0	100.0
Even when things are tough, I can perform quite well.	73.3	0.8	15.0	10.8	0.0	100.0

3.4.4.1. Life satisfaction

Even though it is not easy to perceive life satisfaction, the end line study covered the perception of respondents on the evolution of their life satisfaction. Findings point out the perceptions of life satisfaction between women and men on how they view life today, in the last five years and the

next five years. Using the Likert method, the respondents responded whether they are dissatisfied, neither dissatisfied, satisfied, very satisfied, nor very unhappy. The findings reported that the respondents toward life these days, five years ago and five years from today, 44.2% including 47.9% females and 29.2% males. The perception also showed that 10.0% reported being satisfied in the last five years, and 6.3% see their life being very satisfied in 5 years from today.

The end line findings showed that 64.6% respondents including females and males are satisfied these days while 88.5% respondents said that they are very satisfied by life expected to feel 5 years from today. The figures from baseline survey showed that 4 percent of female are neither satisfied nor dissatisfied in these days while men are at 1 percent. In last 5 years, the females reported at 59 percent being dissatisfied as compared to 19 percent for men. The results also showed that in 5 years to come 27 percent of females reported to be satisfied and 14 percent of men reported to be satisfied in that period of time.

Table 50: Perception of respondents by gender on life satisfaction

	End line			Baseline			
		% of Female	% of Male	Total	% of Female	% of Male	Total
Overall, how satisfied are you with life as a whole these days?	Dissatisfied	16.7%	25.0%	18.3%	59%	19%	78%
	Neither satisfied nor dissatisfied	32.3%	41.7%	34.2%	4%	1%	5%
	Satisfied	47.9%	29.2%	44.2%	6%	5%	11%
	Very dissatisfied	1.0%	0.0%	0.8%	4%	0%	4%
	Very satisfied	2.1%	4.2%	2.5%	0%	0%	0%
Overall, how satisfied with your life were you 5 years ago?	Dissatisfied	44.8%	45.8%	45.0%	59%	19%	78%
	Neither satisfied nor dissatisfied	28.1%	25.0%	27.5%	3%	1%	4%
	Satisfied	9.4%	12.5%	10.0%	7%	4%	11%
	Very dissatisfied	15.6%	12.5%	15.0%	3%	3%	6%
	Very satisfied	2.1%	4.2%	6.3%	0%	1%	1%
As your best guess, overall how satisfied with your life do you expect to feel 5 years from today?	Dissatisfied	4.2%	8.3%	5.0%	2%	4%	6%
	Neither satisfied nor dissatisfied	17.7%	16.7%	17.5%	44%	8%	52%
	Satisfied	27.1%	37.5%	64.6%	27%	14%	41%
	Very satisfied	51.0%	37.5%	88.5%	0%	0%	0%

The level of life dissatisfaction implies a self-assessment of the individual capacity to thrive in the socio-economic context of the community, especially in the livelihood's prospects. GALS approach was therefore relevant to assist households set their visions for the future and understand their weakness and opportunities to improve their future. However, GALS alone was not sufficient to create a mindset shift if not complemented by economic empowerment initiatives.

CONCLUSION

The main objective of GALs+ end line survey was to establish the changes made on conditions/status (e.g. initial behaviors, knowledge, attitude and practice, income and participation in community) among beneficiaries located in Kirehe district, Gahara and Mahama sectors. The end line provided the quantitative information and data on gender, women empowerment, nutrition, and climate change. According to the findings from the end line, the distribution between men and women showed that 74.3 percent are the women while men represent 25.7 percent of respondents. The land is the important factor to ignite the welfare of rural households. According to the end line survey, the overall proportion shows that 63.4 percent declared owning the land whereas 36.6 percent of respondents didn't have access to land including 42.7 percent of respondents' females and 65.4 percent of respondents' males declared to owning the land. 10.7 percent of females and 3.8 percent of males use land of family members. The findings showed that the majority of 71.4 percent of respondents were females in households who have access to land sized above 0.5 ha while male were 28.6 percent of respondents. On the other hand, a range of land sized at 0.5 ha and below 0.4 increased, either owned by male or female comparatively to the baseline survey results.

For households' nutrition, the findings showed that after joining GALs, the number of beneficiaries who missed meal per day last 12 months was reduced compared to before joining GALs. There are different kinds of foods consumed such as cereals, roots and tubers, fruits, vegetables and animal products. The foods that mostly consumed in the households are vegetables consumed by 71.7percent in more than three times a week, and 23.3percent consumed it between 2-3times; that is followed by the roots and tubers consumed more than 3 times by 57.5percent; and cereals consumption in more than 3 times by 47.5percent. 16.7percent of respondents reported the consuming animal products in between 2-3times; while 26.7percent consumed fruits. Findings showed the proportion of respondents for the times they got the food per day and showed that beneficiaries after joining GALs, majority of 69.2percent in the households eat twice per day and 5percent eat three times per day and only 25percent reported eating once per day. Findings showed the proportion of the respondents on the number of children aged under 6 months to 23–59 months in the HH headed by female and male. In total, large proportions mentioned that there is no child under 6 months, 6 –23 months and 23–59 months (95.8percent, 80.8percent and 100percent) in the HH headed by female and male.

Findings presented the food groups that were fed to children in the last week. The data show that the majority of households fed their children with Legumes & nuts (97.5percent), second round comes grains, tubers and roots (95.8percent). The proportion of respondents on the ever breastfeeding a child and breastfeeding a child. The proportions showed that 79percent of sampled people reported ever breastfed the child; 17percent reported to breastfeed a child the day before during a day or at night. Around 95.8percent correctly answered complementary feeding start at six months, 1.7percent reported other time than six months, and 2.5percent confessed to know, that means they did not know when to start complementary food. The findings confirmed that Fruit tree produced were mainly own consumption as confirmed by 71.4percent and only 28.6percent confirmed that Fruit tree production used in both own consumption and other for sale. Livestock were mainly used in own consumption and for sale as stated by 62.2percent respondents while

growing vegetables were mainly own consumption as confirmed by majority of 74.3 percent respondents. Findings of end line survey showed that regardless of whether land is sufficient, and participants grow fruits and vegetables, this survey looked at the frequency of meal intake per day in last 12 months. Findings showed that after joining GALS, number of beneficiaries who missed meal per a day last 12 months were reduced comparing to before joining GALS. This is justified by 46.7 percent who are no longer in range or category of people still missed meal for any day. They are able to get meal every day in last 12 months.

The proportions showed that 97 percent have the source of income in which 73.5 percent are female and 26.5 percent are men. The end line survey results continue to show that in general, 3.0 percent of respondents don't have any source of income where the proportion of respondents composed solely by female. According to the end line results, 76.4 percent reported generating income from agricultural production, 33.3 percent mentioned wages in agriculture as source of income, 17.6 percent reported that they earn income from other activities not listed in the questionnaire, while 13.7 percent and 17.6 percent earn the income from agribusiness and off-farm activities respectively. Diversifying the activities' source of income could play a vital role in increasing the income. But, in rural area the agricultural production is a dominant activity. This is why agricultural production and wages in agriculture are likely dominant in proportion. Female has a high proportion with 80.6 percent in agricultural production and 36.1 percent in wages in agriculture.

From the end line findings, the proportion of respondents showed that capacity building in agriculture production was received by 55.6 percent respondents and marketing and sales was got by 17.2 percent of respondents. Training on entrepreneurship skills received by 38.4 percent of respondents; animal husbandry training was attended by 19.2 percent of respondents; capacity building in cooperative management received by 13.1 percent of respondents; 30.3 percent of respondents have received capacity building in GAP; 61.6 percent of respondents received environmental protection capacity building; 84.8 percent of respondents were trained in nutrition and 80.8 percent of respondents have received capacity buildings in GBV.

The end line explored the level of monthly income generation. In overall, 74.3 percent reported earning the income less than 30,000 Frw and 96 percent make saving less than 30,000 Frw. The proportions of female's earning and saving at the range of less than 30,000 Frw are at 79.2 percent and 74.2 percent respectively. Male, on the other hands, makes earning and saving at less proportion of 20.8 percent and 25.8 percent. The observations show that the proportions of saving for both genders are high than the earnings. Another ranges of income generation show that the income generation range between 30,001 – 50,000 Frw is dominantly for women with 57.1 percent against 42.9 percent of male. The findings from end line survey illustrated that more females (38.7 percent) reported receiving the support to strengthen the self-employment activities than men (34.6 percent) to support livelihood. According to the end line results, the proportion of 57.4 percent of respondents reported using SACCO services and 41.6 percent did not use any financial institution services. The findings from end line survey showed the VSLAs as a dominant mean of the respondents to make saving (52.4 percent) followed by the telecommunication companies – MTN, TIGO and AIRTEL (45.2 percent). It is important to indicate that the habit of keeping money at home

as saving modality continues to be available in population and the proportion is about 11.9 percent among the participants of the end line survey. A small proportion of 2.4 percent of respondents is reported for those using saving in purchasing the assets, as well as other unidentified means of savings (4.8 percent).

Being a member of decision-making committee in overall has been reported by all men and almost of women (above 80 percent of all women participated in the end line survey). 96 percent female respondents revealed that they participate in the organization regular general meeting, 93.3 percent shared to be confident in giving their opinion in public, 94.7 percent reported that their opinions are considered by the public, 92 percent stated that they give their opinions on any issue in the organization and 81.3 percent participate in the governance system. On the other hand, 96.2 percent men respondents confirmed that they participate in the organization regular general meeting whereas, all men respondents (100 percent) reported to give opinions on any issue in the organization, their opinions are considered by the public, shared to be confident in giving their opinion in public, participate in the governance system in place and they are members of decision-making committee. The end line findings revealed that 47.5 percent respondents confirmed the organization readiness and 51.5 percent of respondents reported acceptance of leadership and opinions of women and men at a scale 5. 23.8 percent and 16.8 percent respondents at scale 3 and 4 as respondents estimated the member readiness to lead organization respectively while 21.8 and 12.9 percent respondents shared that they are ready at a scale 3 and 4 respectively.

The decision making regarding both sides has reported at high proportion (above 80 percent of respondents participated in the end line survey). The results show that men and women have the same understanding on food preparation at home at a proportion of 56.4 percent while 90.1 percent decide together on savings & loan utilization. The findings from end line survey showed that 62.4% percent and 64.4% percent of respondents reported that decisions are jointly taken and owned respectively by the HH members for off-farm income generating activity. Furthermore, joint decisions are taken to get large livestock at 37.8 percent and the decision regarding other lands not used for agricultural purpose is taken jointly at 44.4 percent. The end line study also looked at ownership of the items or assets present in the household. The results showed that mechanized farm equipment is jointly owned at 60.2 percent and the decisions are taken jointly at 67.8 percent for the farm equipment. The cell phone that is solely owned at high proportions either by women (71.6 percent) or by men (63.0 percent) and the decisions on this item are highly taken solely taken by the owners (65.9 percent of women and 53.7 percent of men). The joint ownership is observed on land (40.9 percent), small livestock (49.5 percent), poultry and other small animals (40.9 percent) and farm equipment (60.2 percent).

For environment management and climate change, findings indicated that climate change and environmental management are affected by productive activities. The end line survey explored the climate change issues and the practices used, where use of improved seed was on 99%; proper use of organic manure was on 92%; construction of kitchen garden was on 94%; proper use of pesticides was on 63%; pests and diseases was on 61%; cropping techniques was on 70%; agricultural season was on 84%; composting was on 57% while proper use of inorganic was on 79%.

Findings of the end line survey indicated that 75.8percent of respondents and 15.8percent respondents agreed and strongly agreed respectively that they will be able to achieve most of the goals that they have set for themselves; when facing difficult tasks, they are certain that they will accomplish them, confirmed by 75.0percent respondents and 10.8percent respondents agreed and strongly agreed. In general, they think that they can obtain outcomes that are important to them, as agreed by 75.0percent respondents and strongly agreed by 15.8percent respondents; they believe they can succeed at most any endeavour to which they set my mind agreed by 70.8percent and strongly agreed by 15.0percent respondents; they will be able to successfully overcome many challenges, agreed by 75.8percent and strongly agreed by 13.3percent respondents; they are confident that they can perform effectively on many different tasks, agreed by 74.2percent and strongly agreed by 14.2percent respondents; Compared to other people, they can do most tasks very well, agreed by 75.8percent and strongly agreed by 11.7percent respondents; and even when things are tough, they can perform quite well, agreed by 73.3percent and strongly agreed by 10.8percent respondents.

The findings reported that the respondents toward life these days, five years ago and five years from today, 44.2% including 47.9% females and 29.2% males. The perception also showed that 10.0% reported being satisfied in the last five years, and 6.3% see their life being very satisfied in 5 years from today. The end line findings showed that 64.6% respondents including females and males are satisfied these days while 88.5% respondents said that they are very satisfied by life expected to feel 5 years from today.

Therefore, empowering women is important to secure the welfare of households mainly in the activities generating income with focus on agricultural production, agri-business, off-farm activities and other activities generating income and capacitating them to work with financial institutions so that they can access money to invest in economic activities. The findings from the end line study clearly highlighted the enormous contribution of women for better livelihood of their families in general such as feeding & bathing children, preparing food stuff, caring family member when needed, cleaning the house and other household's activities; and for the whole country as well. Also, the end line findings showed that some measures should be taken to facilitate and promote gender equality in different sectors of dairy activities because there is a great discrepancy between men and women in different results of the survey. Most of them are home based activities.

Consequently, strategic measures should continue to be taken through specific programs/projects aimed at promoting women in agriculture, health and nutrition in order to help them gradually shift from subsistence farming to a market-oriented agriculture and good health and nutrition on behalf of the whole family. In addition, strengthening the capacity and enhance the skills of women as the key actors in all sectors like economic activities to ensure that gender mainstreaming within the economic sectors are well integrated. To increase the people's life satisfaction, GALS has been useful to understand opportunities that lie ahead and capacity gaps household should fill to fully benefit them. There also a need to increase investment in the capacity building on life skills, campaign for behavior change, and provision of financial support for income generation activities with focus to women as focal persons in the households, as a complement to GALS activities.