

**FINAL  
EVALUATION  
OF  
MLFM  
FOOD SECURITY & MCH  
SUPPORT PROJECT  
2016-2019**

**Sector of Buyoga,  
District of Rulindo, Rwanda**



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## Acronyms and Definitions

ANC	Antenatal care
BCC	Behavior Change Communication
CBNP	Community Based Nutrition Program
CFO	Community Fountain Organization
CHW	Community Health Worker
DHS	Demographic health survey
FE	Final Evaluation
FFS	Farmer Field School
FGD	Focus Group Discussions
FY	Fiscal Year
EOP	End of Project
GMP	Growth Monitoring and Promotion
GNS	Good nutritional status (“green” zone on Road to Health cards)
HC	Health Center
IYCF	Infant and Young Child Feeding
KII	Key Informant Interview
KPC	Knowledge Practice Coverage
MLFM	Movement for the Fight against Hunger
MNCH	Maternal Newborn and Child Health
MOH	Ministry of Health
NGO	Non-Governmental Organization
POU	Point of Use (water treatment)
Sector	Geographic unit with approximately five cells
SOW	Scope of Work
TOT	Training of trainers
TT	Tetanus toxoid (immunization)
UNICEF	United Nations Children's Fund
VSF	Vétérinaires Sans Frontières
WHO	World Health Organization

Map of Rulindo District.



## Executive Summary

The Food Security and Maternal Child Health Support Project was implemented from July 2016 to October 2019 in Buyoga Sector, Rulindo District, Northern Province of Rwanda. It was designed to contribute to the improvement of the life condition of vulnerable population of Rulindo District, Rwanda. The specific objective of the project was to improve food security and health of mothers and children and increase prenatal care in Buyoga Sector. The project brought MLFM, the lead, with Vétérinaires Sans Frontières (VSF) and Imbaraga together. It covered the catchment area of Muyange Health Center.

### Project Expected results

- Result 1:** Improving knowledge of beneficiary community on nutritional necessities and good hygiene practices;
- Result 2:** Food security of small farmer's families is strengthened by the improvement and multiplication of the farming products;
- Result 3:** Improved diagnosis and treatment of malnourished children and pregnant women at Muyanza Health Centre and at community as well.

The project's main interventions, outputs and outcomes are summarized in Table 1 below.

**Table 1: Summary of Inputs, Activities, and Outputs that Contributed to Key Outcomes**

<b>Result 1: Improving knowledge of beneficiary community on nutritional Necessities and good hygiene practices</b>			
<b>Project Inputs</b>	<b>Activities</b>	<b>Outputs</b>	<b>Outcomes</b>
<i>Health District partners Trainers Training Materials</i>	Train 13 HC trainers (7 nurses; 1 data manager, 1 pharmacist, 3 support staff, 1 nutrition staff in charge on maternal infant and young child nutrition)	Trained HC staff in management of malnutrition of and nutrition reporting tools	<i>Increased percentage of children breastfed within 1h of birth, reduced acute malnutrition cases</i>
<i>HC Trainers Food for cooking demonstration Training materials</i>	Educate pregnancy women on the importance of breastfeeding, nutrition needs during pregnancy, Balanced diet, appropriate and feeding practices, delivery plan (to prepare for the clothes for baby and mother, money to be used in case there is a problem or for emergency case, health insurance), emergency signs during the pregnancy period which must push a woman to go at once/ right away to the hospital or HC	Educated pregnancy women in breastfeeding, nutrition sign of complicated pregnancy, delivery plan	<i>Increased knowledge on nutrition and danger sign of pregnancy Increased mutuelle membership</i>
<i>MOH partners Trainers Training Material</i>	Train 75 community health workers on nutrition needs during pregnancy and breast feeding and feeding practices	<i>75 CHWs Trained in breastfeeding and nutrition as TOT</i>	<i>Increased percentage of children breastfed within 1h of birth; Increased percentage of households reporting effective water treatment and hand washing and soap at handwashing</i>
<i>Trainers CHWs Rural Facilitators Training Material</i>	Establish 7 cooking demonstration sites established in 6 cell and monitored by CHWs And Rural facilitator where lactating mothers and pregnant women attending, and growth monitoring took place. Cooking demonstration organized by program/project, train mothers on kitchen garden Support mothers to build kitchen garden	<i>Established 7 cooking demonstration sites 324 mothers attended Cooking demonstration sites %% Kitchen garden built by the project</i>	<i>Increased knowledge on nutrition Increased percentage of households having kitchen garden Increased vegetable use</i>
<b>Result 2: Food security of small farmer's families is strengthened by the improvement and multiplication of the farming products</b>			

Project Inputs	Activities	Outputs	Outcomes
<i>Rural Facilitators Training resources Livestock</i>	Select ten rural facilitators (5 males, 5 females including 5 CHWs and 5 facilitators to facilitate the implementation of the project activities. Train rural facilitator on nutrition. Adapt the training module in Kinyarwanda Print sixty-two booklets of goat production and distribute them to 10 rural facilitators as well as to 50 beneficiaries, 2 booklets kept at the office for reference). Train facilitators in basic principles of small livestock farming. Adapt and distribute the booklets including many images and useful for even illiterate beneficiaries. Distribute livestock to the most vulnerable families	<i>Trained Rural Facilitators in basic principles of small livestock</i> sixty-two booklets of goat production distributed 88 goats distributed and 40 returned	<i>Increased participation in FFS groups</i> <i>Increased number of households reporting small animals at home</i> <i>Increased sheds of animals</i>
<i>Rural Facilitators Training resources Reporting tools</i>	The 10 rural facilitators were retrained in small livestock husbandry and monitoring activities, livestock distribution, and close follow up of farmers	<i>FFS groups and households trained and monitored</i> <i>Activities are reported by Rural Facilitators</i>	<i>Increased number of FFS groups</i> <i>Improved quality of data and reports</i>
<i>FFS trainers FFS Groups Demo plots</i>	29 Farmer groups were created, each composed with 25-30 members in 6 intervention cells. 39 Demo plots of different crops and vegetables were established in 6 working cells. 903 farmers (696 women and 207 male) learned through Farmer Field School how to improve their agricultural system, the improved technique of Agriculture for different crops and legume. 124 farmers participated on GAP (Good Agricultural Practices) to be applied on different crops (74 women and 50 male) and at household levels. C, farmers adopted agriculture techniques at household. The FFS has been model in the community, supporting farmers for Season A & B by distributing seeds, organic fertilizer and other materials to each group and particularly to vulnerable families. The project has also provided technical assistance to farmer through agronomist and Rural facilitators.	29 Farmer groups created, each composed with 25-30 members in 6 intervention cells 39 Demo plots of different crops and vegetables established in 6 working cells. 903 farmers (696 women and 207 male) learned through Farmer Field School	<i>Improved knowledge in modern farming techniques</i> <i>Improved harvest</i>
<i>Trainers of Food processing Training resources</i>	Building Capacity of Farmers group representative, 95 Group Leaders of Cooking Demonstration sites, 10 rural Facilitators and 2 private persons on Food Processing. trained in food processing technology. The topics covered by the training included: Processing of orange flesh sweet potatoes to “amandazi” (doughnuts), Processing of orange flesh sweet potatoes to “bread”. The training module has been adapted to the project expected results. booklets of processing of OFSP into donuts (in local language, Kinyarwanda) were printed. They were distributed to all participants (with 1 kept for reference). Conduct in good way cooking demonstration activities and avoid loss of food.	107 people trained in food processing  Cooking demonstration	<i>Increased food value chain</i> <i>Increased food security</i> <i>Peer-education: Beneficiaries pass on the knowledge to their peer</i>
<i>Trainers Training materials Masons:</i>	Training on construction, maintenance and cultivation of Kitchen Gardens. The project offered 400 bricks for each household (which were locally sourced from local brick-making factories in Buyoga); ii. The project paid for masons’ labour; each beneficiary contributed, by serving as the mason’s assistant during construction. Support 62 vulnerable families by constructing 62 kitchen gardens for them and build one kitchen garden for demonstration at HC.	<i>62 kitchen gardens built</i>	<i>Increased consumption of iron rich food</i> <i>Decrease in acute malnutrition</i> <i>Peer-education: Beneficiaries pass on the knowledge to their peer</i>
<i>Trainers Training materials Seeds goats Masons:</i>	Trained and refresh training in goat farming system, the training is continuing during follow-up by the rural facilitators using the ‘learning-by-doing’ approach, The training main topics: goat shed; nutrition and feeding; reproduction (mating, labour management and control of inbreeding); hygiene and diseases control, the systematic deworming done every 3 months, identification of the general symptoms of goat diseases which require the assistance of the local veterinary for treatment. Goat sheds were constructed with participatory approach, where each beneficiary made 400-500 mudbricks as his/her contribution. Goats were distributed to 88 vulnerable households and 40 goats distributed after multiplication to the beneficiaries. Each goat received the following veterinary care before distribution: Identification by numbered ear tag; Deworming; Multi-vitamins	50 households were trained and refreshed in goat farming system 38 goat sheds were constructed 88 goats were distributed to 88 vulnerable households and 40 goats distributed after multiplication to the beneficiaries	<i>Decreased child malnutrition</i> <i>Increased hygiene at household</i> <i>Increased food security</i> <i>Improved family income</i> <i>Improved nutritional status of animals and better growth.</i> <i>Decreased animal diseases</i>
<i>Trainers Training materials</i>	One private local veterinary has been selected and trained in surgery (laparotomy) with purpose to build his technical capacity in order to provide good health services to farmers’ livestock. He has	One private local veterinary trained Surgery equipment purchased and distributed	<i>Increased food security</i> <i>Improved family income</i>

<i>Surgery equipment</i>	also been trained in in veterinary pharmacy management by the project veterinary and has been equipped with financial management tools (e.g. sheets for recording sales and income) and with veterinary kit (drugs, zootechnical and surgical tools).		<i>Improved health status of animals and better growth. Decreased animal mortality rate</i>
<i>Trainers Supervisors Revolving fund Guarantee</i>	The revolving fund has been created and is well managed. An official agreement (convention) has been established between implementing partners (IMBARAGA and SACCO - Buyoga), discussed, agreed and signed. Beneficiaries were sensitized and mobilized to join Micro-finance institutions with purpose to raise awareness on loan and saving culture. Sixteen groups composed of 30 households each (total = 480) have started working with the local SACCO by opening group accounts. The guarantee fund was established in SACCO-Buyoga and 16 groups of beneficiaries are supported through their accounts and are implementing goats or pig farming, income generating activities. Ten management tool kits have been distributed to assist 10 farmers' groups in their management.	<i>Revolving fund and the guarantee fund were deposited in SACCO Signed agreement with SACCO Sixteen microcredits groups have been established</i>	<i>Improved interaction with banks Improved family income Improved food security Poverty alleviation</i>

**Result 3: Improved diagnosis and treatment of malnourished children and pregnant women at Muyanza HC and at community as well**

<b>Project Inputs</b>	<b>Activities</b>	<b>Outputs</b>	<b>Outcomes</b>
<i>Trainers Training Materials NW training Curriculum development Cooking demonstration equipment</i>	HC staff have been trained and updated on preventing, screening and treating malnutrition in children and pregnant women. Have been also trained on anemia screening, and nutritional monitoring. Trained HC's staffs were sent to field to provide technical support to CHWs implementing cooking demonstration sessions and growth monitoring.	75 CHWs have been trained on maternal and child nutrition, 1000 days and anthropometry Cooking demonstration and growth monitoring sites established and supported	<i>Increased percentage of children reporting minimal minimum dietary diversity, consumption of iron rich foods. Decreased prevalence of underweight and wasting</i>
<i>Ultrasound machine Trainers: Specialist Doctors</i>	The HC is equipped with ultrasound machine, 1 autoclave, 2 weight – height scale and other technical health equipment purchased by the project. Five nurses and one midwife of Muyanza HC have been trained by specialized doctors from Italy on using ultrasound machine. The training was organized in a participatory way, where the trainers made the theory and practice on using ultrasound machine (Obstetrics and gynecology) learned how to analyze the data and to interpret the results. During ANC sessions, pregnant women have been mobilized on the importance of the diagnosis using ultrasound exam. At the end of the 2nd years ,466 expected mothers were scanned by using ultrasound. That service has been delivered by Muyange HC's trained nurses.	<i>Trained nurses and midwives to perform Ultrasound exams Mobilized mothers on first ANC and ultrasound exams.</i>	<i>Increased percentage of mothers reporting ANC in 1<sup>st</sup> Trimester, Increased timely referral to District Hospital Decrease in neonate distress</i>

The project's interventions primarily brought together:

- Training and Equipping ten Rural Facilitators to carry out Farmer Field Schools (FFS) activities.
- Organization of farmers into FFS groups, microcredit groups, cooking demonstration sessions. These Groups had the primary mission of improving household income and food security and organizing health promotion efforts, through outreach and home visits
- Support of behavior change communication through the production of visual aids, the training of trainers and the training of CHWs and Rural Facilitators.
- Monitoring the community-based distribution of livestock, monitoring the return system and the credit reimbursement to SACCO
- Strengthening health service delivery, though supplies and drug procurement and support ANC services, notably by using ultrasound machine providing rapid diagnose and timely referrals to the District Hospital for obstetrical emergencies
- This was supported by a considerable effort in training, carried out with the MOH at District level and with the Specialist Doctors from Italy. More than 200 persons attended the project trainings.



## Key Findings/Results

### **Improved knowledge of beneficiary community on nutritional Necessities and good hygiene practices:**

The KPC survey data showed improvement in the following indicators:

- Cooking Demonstration sessions is the main source of the nutrition information – Attendance rate: 86%
- Very notable results have been achieved in the minimum dietary diversity increased from 8% (DHS 2014/15 Value) to 48% (Final Evaluation Value).
- The Food Diversity Score passed from 2.02 (figures from baseline survey, 20th December 2016) to 4.82 (2018).
- Percentage of 6-59 months old children given Micronutrients Product packets (84%)
- Percentage of 6-59 month
- Proportion of mothers with children from 0-59 months who know or use appropriate method to treat drinking water (66%)
- Percentage of households that kept the domestic animals in the separate shed from the main house.
- Percentage of mothers who know at least on the four critical times for Hand Washing (61%);
- Percentage of Household with soap for hand washing at the time of the survey (89%).

### **Food security of small farmer's families is strengthened by the improvement and multiplication of the farming products**

Remarkable achievements in food security have been noticed:

- Proportion of mothers with children 0-59 months who own a kitchen garden (54%)
- Proportion of mothers or any HH member who went to sleep at night hungry because there was not enough food in the past 30 days (6%);
- Proportion of mothers or any HH member who was there ever no food at all in the HH because there were no resources in the past 30 days (1%).
- Proportion of mothers who have been worried that the HH would not have enough food in the past 30 days old children (13%)
- Proportion of mothers or any HH member who were not able to eat the kinds of preferred foods because of a lack of resources in the past 30 days (14%)
- Proportion of mothers or any HH member who have to eat a limited variety of foods due to a lack of resources in the past 30 days (8%)
- % of respondents raising small animals at home (55%)
- % of beneficiaries with livestock receiving deworming treatment, multivitamin or any other treatment provided by the trained veterinary (93%)
- Percentage of respondents have gotten loan from SACCO (76%)

### **Improved diagnosis and treatment of malnourished children and pregnant women at Muyanza HC and at community as well**

- Percentage of pregnant women who received the first ANC in the first three months (75%). This is an impressive result
- Percentage of mothers informed of signs of pregnancy complications (96%)
- Percentage of mothers receiving iron tablets during the last pregnancy (85%)
- Percentage of mothers who got abdomen exam with ultrasound machine during the last pregnancy (51%)
- Prevalence of global acute malnutrition (2.5%)
- Prevalence of underweight (8.7%).
- Proportion of mothers with children 6-59 months who have received a Vitamin A dose within the last six months (95%)
- Proportion of mothers with children 12-59 months who have taken any drug for intestinal worms in the past six months (94%)

These mostly impressive results were achieved by the project in good part by building the capacity of rural Facilitators and making them trainers of the farmers. During focus group discussions most participants confirmed the capacity and performance of the rural facilitators and appealed to increase more trainings for them in order to more supported. .

The project implemented a set of interventions with the aim of improve the life condition in Buyoga Sector. Beyond procurement of nutrition and farming supplies, it provided coaching and facilitation of communication between the

lower levels of the community and helped improve timely response to the most vulnerable.

## 1. Overview of the Project

### 1.1. Project background

The Food Security and Maternal and Child Health Support Project is implemented in Buyoga Sector, Rulindo District, Northern Province of Rwanda. The project aimed to contribute to the improvement of the life condition of vulnerable population of Rulindo District, Rwanda. The specific objective of the project was to improve food security and health of mothers and children and increase prenatal care in Buyoga Sector. The project was designed to respond to the needs of the most vulnerable families, particularly pregnant women, lactating mothers and the children under 5 years old. Small farmers and families suffering from food insecurity were also targeted and should get benefit from the project.

#### Project Expected results

- Result 1:* Improving knowledge of beneficiary community on nutritional necessities and good hygiene practices;
- Result 2:* Food security of small farmer's families is strengthened by the improvement and multiplication of the farming products;
- Result 3:* Improved diagnosis and treatment of malnourished children and pregnant women at Muyanza Health Centre and at community as well.

Project area population: The project is taking place in the catchment area of Muyanza Health Center and covered 6 out of 7 cells of Buyoga Sector including Busoro, Butare, Gahororo, Gitumba, Karama and Ndarage Cells. The population entirely lives in rural areas and comprises 13,410 people including 3,366 women in reproductive age and 1,958 children under five years old.

#### Project targeted beneficiaries

- 500 expectant mothers and mothers of children between 0 and 5 years. They should benefit from awareness activities (Result 1), productive training (Result 2), malnutrition identification and treatment (Result 3) and, indirectly, from activities that will increase their health and nutrition.
- 1000 children between 0 and 5 years. They should benefit from malnutrition identification and treatment (Result 3) and, indirectly, from activities that will increase their health and nutrition.
- 1500 vulnerable families: 500 families will receive direct help from activities of the project and 1000 will benefit from the exchange of good practices.
- 8 specialized nurses, 1 midwife, 3 health care assistant, 2 laboratory technician, 3 hygiene responsible of Muyanza Health Centre. They will benefit from specific trainings and will receive technical equipment (Result 3).
- 74 community health workers, working in the area of Muyanza Health Centre.
- 1 veterinary of the Sector will benefit from the professional training (Result 2), improving its knowledge and experience.
- 500 breeders, not included in the project will benefit, indirectly, from the veterinary training (Result 2), having a better veterinary care (i.e. Artificial insemination).

Implementing partners: Initiated in 2017, The three-year project funded by the CONFERENZA EPISCOPALE ITALIANA, was implemented by a consortium of three agencies, Movement for the Fight against Hunger (MLFM), Vétérinaires Sans Frontières (VSF), Imbaraga, with MLFM as the lead and the Congregation of Piccole Figlie di S. Giuseppe as the co-promoter of the project. The Sisters of that congregation are managing Muyanza Health facility. Each of these

organizations had previously implemented elements of the program separately in limited areas. The project brought the three organizations together to help advance Rwanda’s national strategy to tackle stunting.

*The project management:* The Muyange Health Center catchment area is a very supportive community and Field coordinator office is located on the same compound as the Health Center, so it was relatively easy for the health system partners to communicate. The project employed two field staff only. The evaluation team found that joint planning was very collaborative, and all partners were involved in the program implementation. The training process was continual, with training for each new technical intervention taking place. During key informants’ interviews with staff, they were very enthusiastic about the training they had received and felt that the project had provided them with excellent skills to perform their duties. They learned from the volunteers themselves that when they saw the changes in the communities and their behaviors, volunteers’ motivation was also reinforced. Staff stated that the training prepared them well for the work that they needed to do. The only complaint the staff had was that they only had one motorbike, whereas more motorbikes would have helped more of them to cover long distances within the project area. Essential personnel policies were in place and very low turnover was noticed during the project life. There was very high morale and good working relationships within the consortium. Financial systems at project, country office and headquarters levels have supported implementation of a highly successful project. The project area is mountainous, and the roads are poor, especially in the rainy season. Health Center staff cited lack of transport as the major constraint on sustaining work with communities. The project’s system of collecting data from each community group was simple, effective, but need to be improved for sustainability.

*Project input:* The consortium received a grant of €200,00 over 3 years from the CONFERENZA EPISCOPALE ITALIANA. There was no required match. There is no doubt that the flexibility of the project—highly praised by the partners—and its ability to “do more with less”—strongly recognized by the local leaders—were made possible through this very substantial financial effort. This was explained by the most senior staff not only of the project, but the NGO country teams as simply a reflection of the commitment of the lead agency and its partners to reach the most vulnerable people.

## 1.2. Rwanda – National context

According to World Bank report, 2018<sup>1</sup>, Rwanda has outperformed other countries in the region on many fronts. It has met or exceeded most Millennium Development Goal targets. It has been at the forefront of critical health reforms, such as its flagship community-based health insurance scheme, the innovative performance-based financing program in the health sector, and its distinguished community health worker program, which all serve as models for other countries. However, although chronic malnutrition or stunting (Kugwingira), which signals that children are growing too slowly, has declined from about 50 percent (2005) to 38 percent (2014/15)<sup>2</sup> of children under 5, it remains a major outlier.

The same report stipulates that food-insecure rural households depend on low-income agriculture, reinforcing the centrality of agricultural production for household food security. These households have less livestock, less agricultural land, grow fewer crops, are less likely to have a vegetable garden, have lower stocks of food and consume more of their own production. They have less diversified diets, contributing to micronutrient deficiencies. Inadequate dietary intake of iron is among the most common causes of anemia in the country. Rwanda has had success with biofortification (a process by which crops are bred to increase their nutritional value) which is an important strategy for addressing micronutrient deficiencies<sup>3</sup>.

Most household food items are market-sourced, and although food is generally available in the markets, 50 percent of households have difficulties in accessing food. The most common access issues are seasonal difficulties.

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<sup>1</sup> World Bank (2018): Rwanda Economic Update. Tackling Stunting: An Unfinished Agenda, June 2018

<sup>2</sup> Rwanda Demographic Health Survey, 2014/15

<sup>3</sup> World Bank (2018): Rwanda Economic Update. Tackling Stunting: An Unfinished Agenda, June 2018

Households dependent on markets for food and those with low purchasing power are particularly vulnerable to higher food prices. In addition to seasonal and chronic obstacles in accessing food, 27 percent of all households regularly experience one or more climatic shocks (e.g., drought, irregular rains, prolonged dry spells) that affects their ability to access food.

In the past 15 years, there have been encouraging trends in many of the underlying causes of malnutrition among Rwandese children (e.g., care practices, environmental health, and food adequacy). Yet some indicators are still low (e.g., 42 percent four or more antenatal care visits; only 3 percent of women taking iron folic acid tablets for at least 90 days during pregnancy; and only 50 percent of children with fever and 55 percent with an acute respiratory infection being taken for advice or treatment to a health facility).

Rwanda’s government has placed stunting high on its priority list, to be addressed under the Sustainable Development Goals, and is taking measures to turn the tide on stunting by involving key stakeholders. Food security, nutrition and early childhood development are prioritized as foundational issues in the National Strategy for Transformation and Prosperity (2017-2024). The government has set a bold target for all districts to reach a 19% stunting rate by 2024, in line with the country’s 2018-2024 Health Strategic Plan<sup>4</sup>.

### 1.3. Project Results Framework

**Table 2: Project Results Framework**

<b>Project Specific Aim: To improve food security and health of mothers and children and to increase prenatal care in Buyoga Sector</b>		
<b>Result 1: Improving knowledge of beneficiary community on nutritional Necessities and good hygiene practices.</b>	<b>Result 2: Food security of small farmer’s families is strengthened by the improvement and multiplication of the farming products</b>	<b>Result 3: Improved diagnosis and treatment of malnourished children and pregnant women at Muyanza HC and at community as well</b>
<b>Activities:</b>	<b>Activities:</b>	<b>Activities:</b>

<sup>4</sup> Rwanda Ministry of Health: Fourth Health Sector Strategic Plan, July 2018 – June 2024

- |  |  |  |
|--|--|--|
| 1) Build the capacity of 8 nurses of Muyanza HC, as TOT trainers of CHWs, trained by Facilitators from Rulindo District.   | 1) Select and train 10 local facilitators for 10 days at the beginning of the project on kitchen garden, project monitoring, reporting, and microcredit  | 1) Equip Muyanza HC with a portable ultrasound, a hematological analyzer, an autoclave, medicines and other medical supplies                         |
| 2) Conduct 8 meetings of awareness on breastfeeding and nutrition for pregnant women   | 2) Hold 7-day refresher trainings for local facilitators in Year 2 and 3.  | 2) Train HC nurse, midwives, lab technicians, health assistants and hygienist on how to use related new equipment, how to read and value the reports |
| 3) Hold 10 awareness meetings per year on complementary feeding for mothers of children aged of 6 months to 2 years  | 3) Organize 8 annual courses using FFLS approach facilitated by qualified agronomists and experts assisted by rural facilitators covering farming techniques, microbusiness, conflict resolution and microloans system | 3) Train and update HC staff on preventing, screening and treating malnutrition in children and pregnant women.                                      |
| 4) Organize yearly 7 day-sessions dedicated to Nutrition education, cooking techniques and kitchen garden building.  | 4) Hold 8 courses on maintenance, cultivation and building kitchen garden  | 4) Train HC staff on anemia screening, and nutritional monitoring  |
| 5) Hold yearly 10 meetings to discuss with mothers and pregnant women the importance of the diagnosis including ultra sound exam, anemia screening, nutritional monitoring, and regular checkups . | 5) Building 50 kitchen garden for vulnerable families  | 5) Train 74 CHWs on prevention, identification and treatment of malnutrition   |
|  | 6) 2-day training on small/medium size breeding animals  |  |
|  | 7) Distribution of 100 small/medium size animals   |  |
|  | 8) Identify, select, train and equip the local veterinary in order to sustain the small animal breeding in the sector  |  |
|  | 9) Monitoring all program activities by each stakeholder   |  |
|  | 10) Create rotational fund and conduct workshop on microloans and microbusiness for the interested beneficiaries   |  |
|  | 11) Launch and manage appropriately the rotational fund  |  |

**Crosscut monitoring and evaluation:** *Each partner should develop the periodical reports; conduct 2 evaluation visits together with partners during the first and second year of the project; to conduct final evaluation led by MLFM*

## 2. Evaluation Purpose, Questions, Methodology and Limitations

### 2.1. Evaluation purpose

The purpose of the final evaluation is to contribute to the global priority for cost effective innovative strategies to improve food security and maternal and child health in disadvantaged communities and more importantly to integrate learning opportunities for all project stakeholders to review project accomplishments and obtain strategic feedback on project value and performance from participants at all levels, including mothers and caregivers, other community members and opinion leaders, health workers, health system administrators, local partners, other organizations, and donors. The FE report will be broadly accessible to various audiences will be used as a source of evidence to help inform decisions about future program designs and policies.

### 2.2. Evaluation Questions

1. To what extent did the project accomplish and/or contribute to the results (goals/objectives) stated in the project implementation plan?
2. What were the key strategies and factors, including management issues, that contributed to what worked or did not work?
3. Is the project reaching the most vulnerable population, or are we missing them?
4. Which elements of the project have been or are likely to be sustained or expanded?
5. How effective is the combination of Food security and MCH program in reducing malnutrition?
6. How the project has contributed to learning and evidence that is directly relevant to improving policies and practices, as well as global learning about community-oriented health programming

### 2.3. Evaluation methodology and limitations

The evaluation methodology used both quantitative and qualitative data. The approach comprised a desk review of secondary data sources, the Beneficiary-Based Household survey and the collection of qualitative data.

**Secondary Data:** CFO as the lead evaluator reviewed the project reports (e.g., Project Implementation Plan; annual reports; monitoring data and reports), Health Center reports, relevant policies and strategy documents at the national level (e.g., MOH policies and strategies) to assess the quality of quantitative and qualitative data.

**The Beneficiary-Based Household survey** have been implemented from August 27 to September 5, 2019 in order to assess the knowledge, practices and health care coverage (KPC) related to Antenatal care (ANC), breastfeeding, nutrition, Vitamin A coverage, hygiene, food security, income generating activities and access to community based education among the project beneficiaries, mothers of under five children. Please refer to Annex 3: KPC Survey Questionnaire. A sample of 270 farmers has been selected among 903 total project beneficiary's members of farmer's groups, the sample has been designed using the systematic probability-proportional-to-size sampling. Ten clusters (Villages), including 27 farmers in each, have been selected according to *Feed the Future* Sampling Guide for Beneficiary-Based Surveys<sup>5</sup>. The KPC questionnaire including 62 questions was addressed to 270 mothers for under five children, project beneficiaries' members of Farmer's groups. Instruments were translated into Kinyarwanda and field tested prior to the evaluation. Enumerators have received the refresher training for two days as they were familiar with data collection using tablets. The data have been collected by interviewing the beneficiary farmers at their households, conducting direct measurement and observation.

The data were analyzed in SPSS program, Excel.4 and Excel.5. Basic statistical analysis, primarily frequencies and ranges, were conducted to identify any inconsistencies, so that the data set could be cleaned accordingly and then we designed appropriate table for each indicator. Mean or percentages with confidence intervals were generated for the descriptive analysis and p values were calculated for select nutrition indicators and 95% confidence intervals were provided for all indicators using ENA for SMART 2011 program. The KPC Survey raw data (Annex 5) provides detailed information indicating full compliance to standard procedures. There were no major issues with data quality in the collection, analysis and reporting for data, as the evaluation team has extensive experience in conducting these surveys.

**Formative evaluation** has been conducted using **Focus Group Discussion (FGD) and Key Informant Interview (KII)** at the same period with quantitative data collection. The formative guides were designed by the final evaluator based on the project interventions and type of stakeholder engagement. The measurement instruments focused on multi stakeholder perspective and value of the project interventions, potential and challenges to scale up and sustainability. Site visits were conducted by the evaluation team to the health facility and communities to perform FGD and KII, with stakeholders. There were no major impediments to the field implementation schedules and all selected sites were visited. Below is the sample for the Household survey and for the formative evaluation.

**Table 3: Sample Frame for Household Survey and Final Formative Evaluation**

Beneficiary- based Household Survey & Final Evaluation	Sample Size
Beneficiaries-based Household Survey	270
Final Formative Evaluation Stakeholders	Total Participants
Farmers accessing to microcredit and receiving goats (2 FGD)	20
Mothers- members of Farmer's groups (FGD)	20
Fathers- members of Farmer's groups (FGD)	20
Pregnant mothers attending ANC (FGD)	20
Mothers & Fathers with malnourished children attending HC nutrition Service (FGD)	10
Local Leaders (FGD)	10
Rural Facilitators (FGD)	10

<sup>5</sup> Diana Maria Stukel and Gregg Friedman. 2016. Sampling Guide for Beneficiary-Based Surveys for Select *Feed the Future* Agricultural Annual Monitoring Indicators. Washington, DC: Food and Nutrition Technical Assistance Project, FHI 360.

Head of Health Center (KII)	1
Health Center Staff (FGD)	7
Veterinary (KII)	2
Agronomist (KII)	1
SACCO Manager	1
Project Field staff	2
Project leaders	3

The inherent limitations of qualitative research studies are still applied to this project evaluation, as samples are not selected randomly, and may not be representative of the entire study population. However, with the cluster sampling the principles of randomness has been applied. It is likely that farmers at the periphery of the community who may belong to the poorest wealth quintile may not be selected. Inherent bias due to the purposive selection and subjective responses from formative research are known, though these make valuable contributions to compliment and triangulate information obtained from stakeholder perspectives on program effectiveness and value.

### 3. Findings, Conclusions, and Recommendations

#### 3.1. Findings

Evidence from the final Household beneficiaries-based survey report and from the formative evaluation findings indicate that the Integrated model “Food security and Maternal and Child Health Program” resulted in successful capacity building and women empowerment, in Muyange Health Center’s catchment area. The improvements were higher in timely first Antenatal care seeking, access to microcredit by vulnerable families and positive impact on food security.

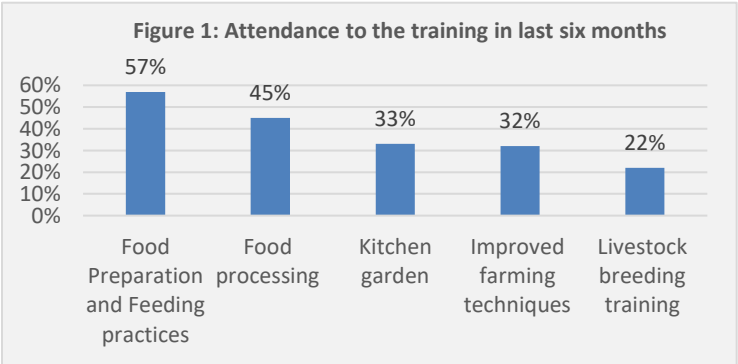
##### 3.1.1. Project Achievements and Impact

- **Improved knowledge and practices on hygiene and good nutrition**

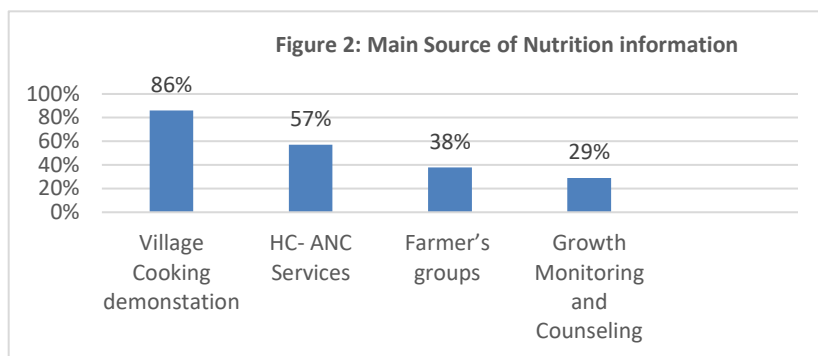
The project has accomplished and contributed to the goals, objectives and results stated in the project implementation plan. The household survey report confirms the improvement in knowledge on nutrition and hygiene key family practices. Most respondents have completed only the primary school education (73%), 19% did not completed the primary school. Most respondents (99%) are in the three first poverty level wealth quantile (ubudehe category1-18%; ubudehe category 2 -37%; ubudehe category3- 45%). 93% reporting mutuelle membership, 79% in possession of a valid health insurance card.

The KPC survey assessed about the training sessions received by mothers in the past 6 months on food preparation, child feeding, other trainings received and the main source of the information.

The training on food preparation and feeding practice has been the most attended by many participants (57%). The main source of the information is the Village

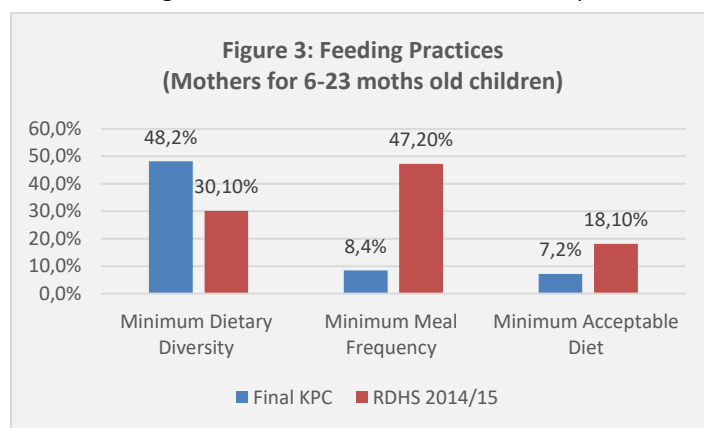


Cooking Demonstration sessions that have been attended by 86% of respondents in the six months prior to the survey. The knowledge of beneficiaries on nutritional necessities and good hygiene has been also improved through education sessions conducted at HC /ANC Services as confirmed by 57% of respondents. These Pregnant women have been trained during the ANC sessions on breastfeeding, nutrition needs during pregnancy, best nutrition practices during pregnancy, delivery plan and appropriate child feeding practices.



Appropriate infant and young child feeding (IYCF) practices include initiation of solid and semisolid foods at age 6 months and increasing the amount and variety of foods and frequency of feeding as the child gets older while maintaining frequent breastfeeding (WHO et al, 2008). Therefore, four food groups are considered the minimum acceptable number of food groups for breastfed infants and non-breastfed infants (Arimond and Ruel, 2004).

Among all children age 6-23 months, 48.2% were fed according to the minimum standards with respect to food diversity (four or more food groups). That is a notable achievement surpassing the RDHS 2014/15 results (30,1%) on the same indicator. After one year of project implementation, the project annual monitoring survey have also revealed positive change in household food diversity score, the Food Diversity Score passed from 2.02 (figures from baseline survey, 20th December 2016) to 4.82. The improvement can be associated to the combination and integration of food security activities to the nutrition education program. However, the indicator on Meal frequency is still very low (8.4%) that have negative impact on the results of the Minimum acceptable Diet.



**Table 4: Other Behavior Change**

Indicator	End of project Value
Proportion of mothers who did first put the baby to the breast in the first hour of birth	80%
Proportion of mothers with children 0-59 months who own a kitchen garden	54%
Proportion of mothers with children 6-59 months who have received a Vitamin A dose within the last six months	95%
Proportion of mothers with children 12-59 months who have taken any drug for intestinal worms in the past six months	94%
Proportion of mothers with children 6-59 months who have received Micronutrients Product packets in the past six months	84%
Proportion of mothers who wash hands at least four critical times for Hand Washing	61%
Proportion of household with soap for hand washing at the time of the survey	89%
Proportion of mothers with children from 0-59 months who know or use appropriate method to treat drinking water	66%
Proportion of Household with appropriate and cleaned latrine	39%



Proportion of beneficiaries with domestic animal kept in the shed separate from the main house,	95%
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Breastfeeding within 1h of birth, and Vitamin A, and MNP supplements and deworming also illustrated remarkable improvements respectively 80%; 95%; 84% and 94% in Muyange HC catchment area (Table 3). 95% of respondents are no longer sleeping together with the domestic animals in their main houses. Availability of soap in the household is impressive (89%). 61% of mothers know the four critical time for hand washing. 66% of mothers are treating drinking water. The knowledge of beneficiaries on nutritional necessities and good hygiene has been improved through trainings, meetings and weekly sessions. Through the FGDs with local leaders, local authorities have expressed satisfaction and confirmed that the project improved knowledge on nutritional necessities, so mothers are well trained and are preparing balanced diets and practicing good hygiene. The multiple channels of key nutrition and hygiene messages such as CHWs, Rural Facilitators, Local leaders and Health Facility staff have been effective due to the community mobilization strategy that brought positive behavior change. However, the indicator on good latrine is very low (39%) and require much attention from all community mobilizers including support from local leaders.

- **Improved food security of small farmer’s families**

**Table 5: Food Security**

Indicator	Numerator	Denominator	%
Proportion of mothers who have been worried that the HH would not have enough food in the past 30 days	35	270	13%
Proportion of mothers or any HH member who were not able to eat the kinds of preferred foods because of a lack of resources in the past 30 days	38	270	14%
Proportion of mothers or any HH member who have to eat a limited variety of foods due to a lack of resources in the past 30 days	21	270	8%
Proportion of mothers or any HH member who have to eat some foods that they really did not want to eat because of a lack of resources to obtain other types of food in the past 30 days	40	270	15%
Proportion of mothers or any HH member who have to eat a smaller meal than they felt needed because there was not enough food in the past 30 days	27	270	10%
Proportion of mothers or any HH member who have to eat fewer meals in a day because there was not enough food in the past 30 days	14	270	5%
Proportion of mothers or any HH member who was there ever no food at all in the HH because there were no resources in the past 30 days	3	270	1%
Proportion of mothers or any HH member who went to sleep at night hungry because there was not enough food in the past 30 days	15	270	6%
Proportion of mothers or any HH member who went a whole day without eating anything because there was not enough food in the past 30 days	9	270	3%

Most of food insecurity indicators are fortunately low, less than 15%. Food security of small farmer’s families has been strengthened by the improvement and multiplication of the farming products. This has been possible by the training of the rural facilitators on maintenance, cultivation and building kitchen garden using FFLS approach facilitated by qualified agronomists, training on microcredit, small/medium size breeding animals and distribution of livestock. The farmers appreciate the training and the guidance they receive from the rural facilitators. The rural facilitators feel more confident in providing trainings on farming techniques to farmer’s groups and continue to monitor them for successful farming techniques. During the focus discussions with the farmers groups participating to FFLS sessions, they appreciated a lot the benefits gained from farmer’s groups. They confirmed that they have been trained in best agricultural techniques like land preparation, seeding techniques, utilization of fertilizer and compost, rotational agriculture techniques; harvest conservation techniques and breeding of small cattle like chicken, rabbit, goat etc. The farmer’s groups appreciated the training received and the best agricultural techniques

which allowed them to cultivate on small area using few seeds and harvesting much and to breed raise small cattle like chicken and rabbit. They confirmed having moved from past techniques of agriculture to modern agriculture techniques which allowed them to increase the harvest with small land. Today, they have enough farm products to use at home and to sell for money. Imbaraga Coordinator highlighted during the KII that training and mobilizing farmers to grow sweet potatoes fortified in Vitamin A and beans fortified in Iron and mobilizing farmers for growing and consuming vegetables have brought significant impact on malnutrition reduction.

Livestock breeding has also contributed to food security and to raising family income. The process of livestock reproduction and return process to the farmer group members has been successful. Rural facilitators have been monitoring the return process (kuzitura). Up today the project has distributed 88 goats to most vulnerable beneficiaries who have returned 40 goats to their neighbors. The project is no more purchasing the livestock for distribution but getting reimbursement through return process among the beneficiaries. Until now the system is working and the farmers trust that it will sustain. To save the livestock's lives, a local private veterinary has been selected, trained and equipped to sustain the small animal breeding. The key informant interview with him has revealed much appreciations to the project for the training received and for the surgery equipment. He confirmed that the mortality rate among the beneficiary's livestock has decreased and estimated it to almost 1%.

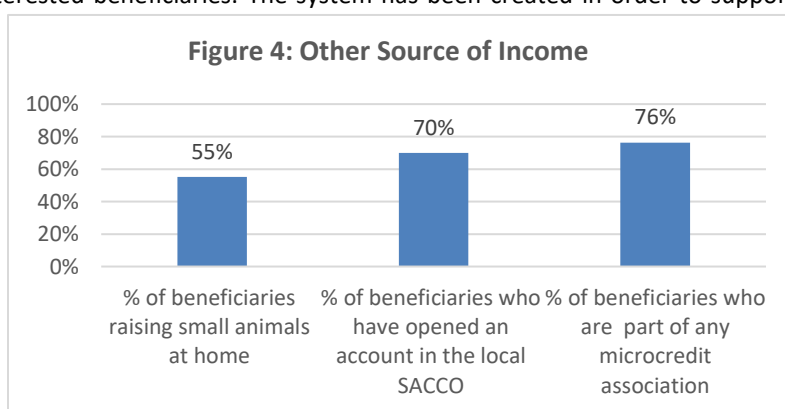
**Table 6: Livestock**

Indicator	Numerator	Denominator	%
% of respondents raising small animals at home	149	270	55%
% of beneficiaries raising small animals distributed by Imbaraga	68	149	46%
% of beneficiaries experiencing livestock death	2	68	3%
% of beneficiaries with livestock receiving deworming treatment, multivitamin or any other treatment provided by the trained veterinary	138	149	93%

The percentage of the respondents who are raising livestock distributed by the project (Imbaraga) is 46%. Only 3% have experienced deaths during the three years of the project life. Food security had been ensured through the deworming treatment and other treatment provided by the trained veterinary and also by the successful systematic distribution of multivitamin to the domestic animal estimate at 93%, as KPC result. Farmers' awareness has been raised in order to know the general symptoms of goat diseases, which require the assistance of the local veterinary for treatment. Through KII with the sector veterinary, he appreciated the training organized for farmers, he mentioned that the project has been raising up the culture of Breeding domestic animal that was apparently decreasing. He confirmed to have been supported by the project in his responsibilities and to continue to monitor and to maintain the achievements even after the project end.

Food security has been also improved by the creation of a rotational fund and organization of workshops on microloans and microbusiness for the interested beneficiaries. The system has been created in order to support

financially the beneficiaries. The guarantee fund deposited in SACCO by the project enabled the small farmers to access to the micro credit with less bank interests decreased from 30% to 16%. The farmers have been very supported and empowered with the access to loan. They could afford to purchase and to raise animals for breeding, to pay scholar fees for their children and responding to many family needs. The SACCO manager confirmed that the reimbursement process is highly



successful. Farmers has been processing the reimbursement on time without delay. 76% of respondents have gotten loan from SACCO. Women have been empowered and men has been attracted by the microcredit in order to join the farmer’s groups as most farmer’s group members are women (70%) so men participation has been increasing since the implementation of microcredit system. Microcredits have been very successful; all stakeholders have highlighted the success through key informant interviews and focus group discussions. However, there is much concern among beneficiaries to not again getting access to the loan after the project close since they are not very economically strong to sustain the project achievements. The project short term did not allow them to be economically growing enough. That sustainability issue should be addressed.

- **Improved diagnosis and treatment of malnourished children and pregnant women at Muyanza HC and at community as well**

The project improved the diagnosis and treatment of malnourished children and pregnant women at Muyanza HC and at community level as well.

The KPC Survey showed the following:

**Prevalence of global acute malnutrition -Weight/Height (<-2 z-score and/or oedema)**

All (242) : ( 6) **2.5%** ( 1.1- 5.3 95% CI)

Boys (118) : ( 3) 2.5% ( 0.9- 7.2 95% CI)

Girls (124) : ( 3) 2.4% ( 0.8- 6.9 95% CI)

**Prevalence of underweight - Weight / Age (<-2 z-score)**

All (264): ( 23) **8.7%** ( 5.9-12.7 95% CI)

Boys (128): ( 14) 10.9% ( 6.6-17.5 95% CI)

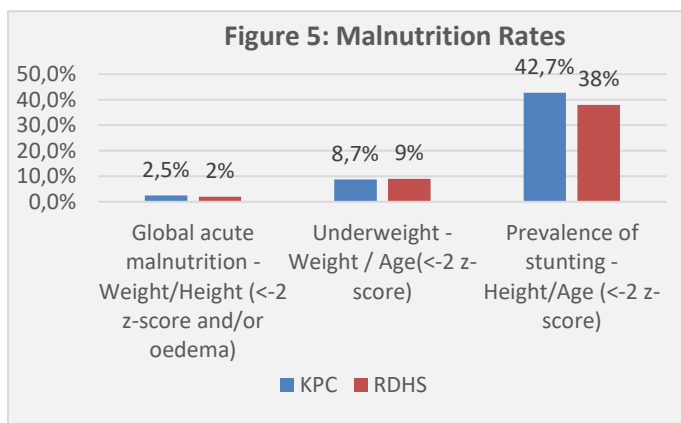
Girls (136): ( 9) 6.6% ( 3.5-12.1 95% CI)

**Prevalence of stunting - Height/Age (<-2 z-score)**

All (248) : (106) **42.7%** (36.7-49.0 95% CI)

Boys (124) : (55) 44.4% (35.9-53.1 95% CI)

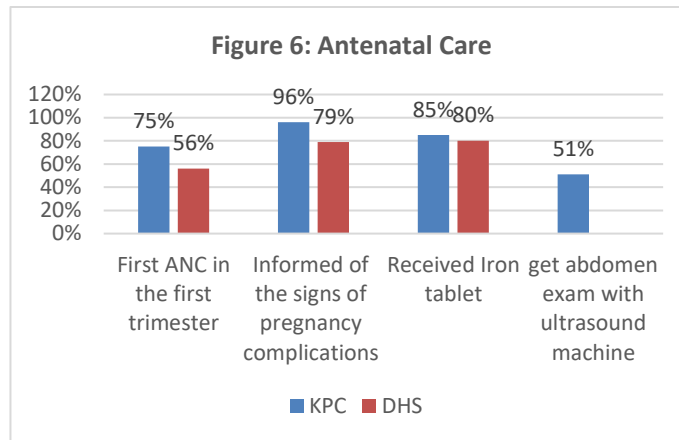
Girls (124) : (51) 41.1% (32.9-49.9 95% CI)



Although there is much decrease in Acute malnutrition, the stunting rate or chronic malnutrition rates is very high: 42,7%, it is higher than the RDHS 2014/15 national rates: 38%. The FGD with the HC staff and KII with the head of the HC, health staff also highlighted that underweight and wasting have been decreasing significantly. The screening reports for all services of Muyange Health Center also showed that stunting is slightly increasing during the last two years from 42 new cases in 2018 to 47 new cases in 2019. However, it is known that almost 30% of population use health services in developing countries. Trainings and refresher trainings on anthropometric measurements in order to diagnose the malnutrition and refresher trainings has been given to HC staff. They have been also trained and updated on preventing, screening and treating malnutrition in children and pregnant women, anemia screening, and nutritional monitoring. At the community level, CHWs have been trained to make anthropometric measurements and to refer to HC severe malnutrition cases. However, stunting rate is still very high, appropriate strategies should be implemented and reinforced such as community outreach nutrition activities, homebased nutrition program and One-thousand-day program in order to prevent and consequently to reduce stunting rate.

During the KPC Survey, 75% of respondents living in Muyange HC catchment area reported to have seeking first ANC in the first trimester of their last pregnancy. That is a remarkable achievement. The result surpasses the national

RDHS result for First ANC (56%). However, in Rwanda, the first visit tends not to be during the first trimester due to cultural reasons as many women wait until the pregnancy is “showing” before seeking care. The high coverage of first ANC in Muyange HC can be attributed to the use of ultrasound exams for ANC first visit for free. MLFM has equipped the HC with ultrasound machine and other medical material such as a hematological analyzer, medicines and other medical supplies in order to improve ANC. HC nurse and midwives, have been trained on how to use related new equipment and how to read and value the reports. FGD with the health Center staff revealed appreciation for performing successfully ultrasound exams as those exams are regularly approved by the District Hospital. According to the HC 2019 records on Echography for ANC, an average of 40 Ultrasound exams were performed monthly. The FGD with the HC staff also confirmed that the referrals have been made timely because of the use of ultrasound machine in ANC service, the cases of fetus distress have been reduced due to the improvement in diagnosis of obstetrical complications. That is a sign of improved quality of ANC. The focus group with pregnant women attending ANC services revealed excitement on ultrasound exam. Women said: “we can’t miss it” we are lucky to have that fantastic machine in our HC”; sometimes they have requested for the second ultrasound exam that is charged. The proportion of pregnant women informed on the signs of pregnancy complications during antenatal visits is 96%; 85% of respondents reported having taken iron tablets or syrup during the pregnancy of their last birth.



**Table 7: Stakeholder Perspectives of Project Contributions and Performance**

Project Stakeholders	Key Findings on Project Value and Effectiveness
	<b>Sector Level</b>
Sector Executive secretary, Sector Agronomist and Veterinary SACCO Managers	<p><b>Perception of Project Contributions;</b> The executive Secretary of the Buyoga Sector highlighted the contribution of the project in increasing solid kitchen garden that allowed people to consume more vegetables thus reducing child malnutrition. The sector agronomist and SARO appreciated the implementation of the project. The project reached remote population; the follow up has been done and the collaboration with the leaders has been effective with regular reports. In agriculture, the farmers have been trained under the supervision of the sector agronomist who contributed in the mobilization of people. The harvest improved which increased the income of the population. This led to the increase of the rate of health insurance in Buyoga Sector. The increase of kitchen garden has reduced the malnutrition rate. The capacity building of the private veterinary helped the whole sector in good services to the livestock. According to the sector agronomist and SARO, the mindset and the live style of the population have changed. People are no longer sleeping with livestock. They got the vegetables from their kitchen garden. Even some beneficiaries’ neighbors learned from them how to build kitchen garden. The breeders are getting good services to their livestock. The SACCO Managers have confirmed the increase in numbers of bank clients. The microcredit has been successful as the reimbursement is timely proceeded. Ten groups have completed the reimbursement and two groups have gotten the second loan from SACCO.</p> <p><b>Challenges:</b> Sector agronomist and SARO mentioned that the project has not been extended to the whole sector of Buyoga: One cell was not part of the project. The selection of the project beneficiaries of the project did prioritize the most vulnerable people. They deplore also that no training has been organized at sector level for the population. Only rural farmer facilitators and private veterinary have been trained to take care of the population livestock. Trainings of breeding’ facilitators together with the veterinaries at cell level was needed</p> <p><b>Sustainability:</b> The authorities at sector level intend to take note of different farmer’ groups and do the follow up of their activities. One of them interviewed said:” The beneficiaries are our people. We should follow and supervise their activities, advise them on how to take care of their livestock and they can use their livestock in their development”. As the project trained and equipped a private veterinary, the project will be sustainable because he has been urged to use the official prices from the ministry and will stay near the beneficiaries. The</p>

<p><b>Health Center Teams</b></p>	<p>leaders said that a regular report will be asked to him. The sector breeding facilitators are also farming facilitators</p>
	<p><b>Recommendations:</b> The leaders at sector level suggest in case of the project replication to consider all people of the same administrative entity. If the project is planned for the sector, all its cells should be parts of the project and the project should identify all vulnerable people starting by the most vulnerable. They have recommended in the future to train the breeding’ facilitators together with the veterinaries at cell level.</p>
	<p><b>Perception of Project Contributions;</b> The Head of the HC greatly valued the collaboration and partnership and the focus on working with the <b>poorest and remote communities</b>. Muyanza Health center team has extremely appreciated the contribution of the project to the improvement of the services delivered by this health center. Their capacity of diagnosis and treatment of malnourished children and pregnant women improved and the knowledge of pregnant women and mothers on nutrition and good hygiene practice improved due to the improvement in ANC services. Due to the contribution of MLFM project, Muyanza HC has been classified first among 13 HC which belong to Rutongo District Hospital in August 2019. The provision of an ultrasound machine to the rural health center and the training of its nurses by Doctors from Italia have been considered as the uniqueness of the project. The ultrasound and other technical equipment like hematological analyzer, an autoclave, sterilizer, medicines and artificial micro-nutriments contributed on the improvement of the services provided in ANC. Some cases have been well diagnosed for example: one case of twins’ pregnancy with one died. This case has been transferred to Rutongo hospital and has been confirmed. The referrals have been made on time because of the use of ultrasound machine in ANC. The cases of asphyxia have been reduced. With the project, nurses have been trained and updated on mothers and children health prevention, identification and treatment of malnutrition and its rehabilitation. 75 community health workers have been trained on nutrition for child and mother, 1000 days for child, anthropometric measurements. Sometimes some HC’s staffs trained were sent on field to help in community during cooking demonstration sessions and growth monitoring. The project used 7 sites of cooking demonstration located in Muyanza health center catchment. The project provided also the children under 5 years with different support like food.</p>
	<p><b>Sustainability;</b> The material provided to the Health center will remain and benefit to the population under the supervision of Sisters of the Congregation of Piccole Figlie di S. Giuseppe. In addition to that, trained Health center staff and CHWs will continue to support the community according to their duties and responsibilities.</p>
	<p><b>Lessons learnt:</b> HC team has learned from the program implementation some key . The local food can be used to improve nutrition status and local people once trained they can lead the process at community level. For example in cooking demonstration, the activities are led by CHWs and they used only the local food brought by the parents and gotten from their homes. Integrating cooking demonstration into growth monitoring has contributed to enhance the attendance rate. The health center has been able to perform ultrasound exams while before people believed that only Hospital with Doctors do it. So from that, they have learned to do not fear for anything but to learn it in order to increase self confidence</p>
<p><b>Community</b></p>	
<p><b>Cell and Village Leaders</b></p>	<p><b>Perception of Project Contributions.</b> The project contribution is highly appreciated at cell and village levels. The project has built the capacity of a private veterinary and equipped him with material to support breeders and to train those who got goats how to take care of them. The project has brought changes in lifestyle of the population due to increased harvest due to increased knowledge in modern technique of agriculture and use of fertilizer, training in business management, the loan, donation of goats, donation of some drugs, Importance of kitchen garden and awareness of the use of carrots, beet, cabbage, onion. This led to the improvement of their knowledge on nutrition and provided food security resulting in increased income at household level and thus the reduction of malnutrition. Other project contributions reported by cell and village leaders relate to the changes in lifestyle of the population, men who have left their families because of the poverty in their family came back after hearing that their wives received goat. Also cases of conflicts within family have been reduced because of wellbeing.</p>
	<p><b>Sustainability:</b> The cell and village I leaders said that the people who received livestock have been asked to keep them and take care of them and if not they will be punished. The cell plan is to continue the supervision and follow up of the use of the aids provided by the project. They promised to sensitize the beneficiaries in order to improve community ownership of MLFM activities and to continue to apply knowledge, skills and competencies gotten from the project. They pledged to sensitize rural facilitators to implement the continuous training of farmer’ groups and to remind the CHWs to realize their daily duties. Local leaders shall be involved in continuous monitoring of the use of learned agricultural techniques, cooking demonstration program, good maintenance of kitchen garden and training in preparation of balanced diet in local community. They are convinced to increase the number of Growth monitoring sites sessions to 2 times and to promote personal hygiene.</p>

CHW Rural Facilitators	<p><b>Challenges:</b> Poverty was mentioned as one of the biggest challenges to development. Additional supervision and training reinforcement were recommended. Some livestock distributed the beneficiaries bought from other regions didn't adapt to the climate died. The livestock breeders call late to the veterinary when livestock has the disease problem because for them it can more expensive to the animal value. Some beneficiaries used for other purpose the aids received or sold them. Some people ashamed refused to accept that they are vulnerable or that have some needs. Some young girls who have given birth at parent's home without enough means to take care of their kids, have refused to join the project. Some key material needs to be used in agriculture like watering can and pesticide spray pumps have not been distributed to farmers.</p>
	<p><b>Recommendations:</b> They insist on providing continuous training of local community in order to change their behavior/mindset in good way. Also, the continuous promotion of hygiene and sanitation has been highlighted. They recommend the triangulation of messages provided by cell and village leaders and private veterinary in order to continue to train the beneficiaries on the ownership of the livestock they got.</p>
	<p><b>Perception of Project Contributions:</b> The community appreciated the contribution of MLFM project. The Rural facilitators have been trained to train the farmers in modern techniques of agriculture, the agriculture's seasons of different crops, how to take care of the small cattle (food, housing, sick care for the small cattle, health and nutrition during umugoroba w'ababyeyi/parents evening club (health insurance, cooking demonstration), improving harvest through the modern agriculture techniques. By those trainings, members of farmer's group changed their style of dressing, eating. They acquired the culture to attend different meetings called by the local authorities and the local leaders appreciated them and take them as the examples. The facilitators are proud because they have been given valued/considerate, they are called teachers, they are used as trainer in different program of other projects for example there is one who has been selected by DUHAMIC Adri and is used by Radio Huguka. The Rural Facilitators increased self-confidence and skills.</p>
Farmer's groups Pregnant women	<p><b>Challenges:</b> Rural facilitators have gotten the curriculum teaching agriculture, but they did not have the curriculum for teaching nutrition. Some means for training like beans support, organic fertilizer, water for irrigation, watering can were missing or not enough. The facilitators were not members of farmer groups. For that they were not beneficiary of the support given to the members of those groups. For example, they were not eligible for micro credit. They were not eligible to get goats given to the others. However, despite the challenges, the rural facilitators were enthusiastic about continuing their contributions as they felt valued and appreciated by the communities.</p>
	<p><b>Recommendation:</b> They recommend having more trainings</p>
	<p><b>Project Awareness and Contributions;</b> Farmer groups have been mobilized to cultivate beans, soya, vegetables, maize and Irish potatoes using modern farming techniques. They have been proud also for having access to micro credit. The farmer group members confirmed that they have been trained by the rural facilitators in farming and nutrition. The training received are the best agricultural techniques like land preparation and seeding techniques, utilization of fertilizer and compost, rotational agriculture techniques, techniques of harvest conservation, breeding of small cattle like chicken, rabbit, goat etc. The nutrition topics were the techniques of building the kitchen garden and planting vegetables; the importance of balanced diet and how to prepare it; the preparation of good porridge with sorghum, soy and maize. The training and the accompaniment have led to the transformation in the farmer group members with improved nutrition knowledge and food security. They have moved from past techniques of agriculture to modern agriculture techniques which allowed them to increase the harvest on small area. They affirm that, today, they have enough to use at home and to sell for money. The pregnant women learned to prepare a balanced diet for a pregnant women, and delivery plan: what to prepare for the birth like clothes for baby and mother, money to be used in case there is a problem or for emergency case, health insurance and the emergency signs during the pregnancy period which must push a women to go directly to the hospital or HC.</p>
	<p><b>Challenges:</b> Initial disinterest of fathers for farmer's groups but eventually their mindset was transformed when they witnessed the evidence of microcredit outcomes. The groups have been selected using the criteria of vulnerability. However, to form the groups of farmers, they selected some people who seemed to be capable to follow and practices the lessons with the means required because some vulnerable people refused to be part of the farmers groups. Some members of the farmer's groups did not receive micro credit, some did not get goats and they did not appreciate the way the selection happened.</p>
	<p><b>Sustainability:</b> The farmer' groups promised to become not discouraged but to continue to work using the lessons learned from the project and if needed they will call upon the local leaders, to continue to give the membership contribution in their groups and to continue to work with their facilitator</p>
<p><b>Recommendations:</b> The major reported recommendations were: <i>to increase the number of farmers' groups</i> because there are some who are not belonging to any group while they wanted to adhere; to give a small swamp land for orange sweet potatoes plantation; training on banana plantation and cultivation of agriculture</p>	

Project implementers	crop highly needed on the market. All pregnant women attending ANC recommended to reduce the price of ultrasound exam to reduce it from 2000 Rwfr to 1000 francs and they wished to have ultrasound exam for free in the last term of their pregnancy
	<b>Partnership:</b> The project has been implemented in partnership by a consortium of 3 organizations: MLFM, Imbaraga and Veterinaires sans frontiere. They highlighted very good collaboration and partnership during the implementation process. They have been responding to field issue together and supervision was also done as a team.
	<b>Challenges;</b> the main challenges reported by the implementers are; the budget constraint that did not allow the implementation of some key activities. However, the consortium has been trying to get other funding sources. Abrupt change of climate that paralyzed sometimes farming activities; lower mindset of some people who do not want the transformation and want to stay under project dependence. The implementation of the project delayed starting, it started 2 years after its elaboration hence that impacted on the budget and project implementation. The local leaders have not been much involved in the sensitization.
	<b>Lesson learnt:</b> The final evaluation should be budgeted. The budget should be well designed and revised for successful implementation. The project has been very successful, it can be replicated mainly the micro-credit project in order to enhance the community economic development. The FFS is a good approach to bring behaviour change related to farming; The regular meetings with the beneficiaries reinforce the good collaboration between the partners and lead to the good synergy between actors.
	<b>Recommendations:</b> There was a unanimous response from all implementers that if the project is replicated, they wished the project to cover more than one sectors of Rulindo District. This will reinforce the support to the District in different project activities and will permit to compare the results between sectors, the impact be visible when the area of action is wide. There is crucial need of accompaniment of the beneficiaries and a continuous follow up for sustainability of the project realizations. A chain of solidarity with the cattle received is recommended.

### 3.1. 2. Contributing factors to the success

Equipping Muyange Health Center with ultrasound machine and training HC staff to perform successfully the ultrasound exams, has been a contributing factor to the improvement of the quality ANC and to the increased timely first ANC visits.

The good and strong partnership between all implementing agencies including Movement for the Fight against Hunger (MLFM), Vétérinaires Sans Frontières (VSF), Imbaraga, and the Congregation of Piccole Figlie di S. Giuseppe as the co-promoter of the project has been crucial in the success of the project and its sustainability.

Technical and Management skills and competences of each partner in his specialized project intervention were a key for success and the consortium flexibility have allowed smooth project implementation and surpassing most project targets

Close project follow- up by Kigali Management team has been reinforcing teamwork and partnership through joint field visits with purpose to respond adequately to the challenges or problems met at field and also to reduce the travel cost

Building the capacity of rural facilitators and CHWs though intensive trainings and refresher trainings to train their peer have been a contributing factor to the success in term of project acceptability, ownership and sustainability.

Keeping up the quality of all trainings by using skilled trainers (TOTs) and providing training resource on time is a strong contributing factor to success.

The integration of many interventions (Health care, nutrition, food security, economic activities..) in one project was a key to reinforce each program and to respond to the rural family needs

### 3.1.3. Equity, Sustainability and Expansion

The comprehensive strategy integrating Food security and MCH strengthened by economic development activities created through access to microcredit, has been successful and responded to the socio economic felt needs of the population. The project has contributed to food security by providing the beneficiaries with best agricultural techniques like land preparation and seeding techniques, utilization of fertilizer and compost, rotational agriculture techniques, techniques of harvest conservation, breeding of small cattle like chicken, rabbit, goat etc. and access to micro credit. At the same time, they have been trained by Health Center staff and CHWs in different areas regarding, nutrition and feeding practices through cooking demonstration sessions for the pregnant women and mothers of children under 5 years.

*Equity and Gender:* The project has reached vulnerable people, most of beneficiaries are in the three first Ubudehe categories. 77% (696 out of 903) of farmers FFS beneficiaries are women. Women have been empowered as primary beneficiaries of the project. Remote and underserved areas of the HC catchment area have been reached since the farmer's groups are established in all six cells covered by Muyange HC. The selection of beneficiaries used the vulnerability criteria, however those criteria were not applied in forming all farmers groups mainly FFLS group as it was required to select the people who seemed to be capable to learn and to practice the lessons with the required means. In some cases, some vulnerable people refused to be part of the farmer's groups (*FGD Rural facilitators*). The support provided to the beneficiaries was not harmonized. All beneficiaries (malnourished) did not receive the same package of support or assistance. Some beneficiaries have received goats and goat sheds, others received blades, others have been facilitated in requesting for micro-credit (*KII VSF*).

*Sustainability:* The equipment provided to Muyanza health center will continue to be operational and to produce its effects under the management of the Sisters of the Congregation of Piccole Figlie di S. Giuseppe. Despite the potential staff turnover that might happen, the trained Health center staff, CHWs, Rural facilitators and Private veterinary will continue to train, to serve and to support the farmers and the community according to their duties and responsibilities. Since the project has been implemented by international and local organizations, we assume Imbaraga as a local organization dedicated to support the farmers will make exit plan allowing close follow up on the return of goats and the follow up on the microcredit associations, The project has been successful in responding to the rural population needs. District and sector leaders have appreciated the project structure and achievement. There is a room to expand the project by buying in the inclusion of similar project or keeping up the same project in the District plan for fund raising. According to the key informant interview with VSF country director and the coordinator of MLFM Project, microcredit associations can be sustained by keeping monitoring the beneficiaries who got loan for proper reimbursement. Imbaraga would take that responsibility, the beneficiaries who will finish the reimbursement should inform Imbaraga which will facilitate another group basing only on 650.000 Rwandan francs given as mortgage. Local leaders shall take in their hands the monitoring of the project's activities. They should take time to visit the beneficiaries of the project in order to see how they take care of the livestock given to them and advise them to save for the livestock's treatment. The people who received livestock shall keep them and take care of them and if not they will get sanctions. The cell leaders have a plan to continue to follow up the use of the aids provided by the project. (*FGD Local leaders*)

The partners should apply the lessons learned and replicate the same project in other areas.

### 3.1.4. Project Challenges and Limitations

The key challenge to the project was the budget limitations that did not allow to cover the same interventions to all beneficiaries in all targeted cells. The existing Project strategy was not well designed and initially developed for facility-based rehabilitation but GMP sessions are not enough supported with minimal use of data. The 1000 days strategy preventing stunting was not enough supported however it can be very successful in reduce stunting rate in Muyanza HC catchment area. Only 10 Rural Facilitators including only 5 CHS have been trained for most project interventions, however the project could reinforce and strengthen the CHW structure through capacity building in



order to sustain nutrition interventions. There was an initial resistance by men, to engage in FFS training, which was overcome by the introduction of microcredit groups leveraging the community leadership and rural Facilitators to advocate for their participation. Baseline KPC and formative research were not planned at the beginning of the project, so it was difficult to assess the program progress and the project contribution to the success. The program has been supporting the Screening for child malnutrition but not strongly supporting screening for malnutrition in pregnancy in order to prevent stunting. Field staff were not enough in order to supervise the rural facilitators and community health workers. Rural Facilitators have been trained in many farming topics, so they can train and advise the farmers in agricultural techniques, however Focus Group discussions with the farmers have highlighted the need for the Rural Facilitators to get more trainings in livestock in order to assist more the farmers since the veterinary is not easily accessible and the Rural Facilitators are not enough skilled to provide basic care. Referral for children with severe malnutrition from the community is not well done, Only the HC is supporting 11 children while the moderate stunting is high and should retain the attention of the nutritionist. The project did not develop the exit plan involving sector leaders in order to sustain the project achievements. The final evaluation was done during the rainy seasons that paralyzed data collection.

## 3.2 Conclusions

The Food Security & MCH project has been a successful project implemented with a genuine effort to find synergies between three partners: MLFM, VSF and Imbaraga. The lead agency, MLFM, is to be praised for a high level of integration of the project team and transparency with its partners. All three partners deserve credit for the great benefit of improving food security at household level. The coalition worked, both in terms of internal management and in terms of support to and recognition by local leaders. The Food Security & MCH project played a key role in reaching more beneficiaries than planned, in so doing, it managed to combine leadership and flexibility. The project has been commended for its flexibility and ability to stretch resources. Much efforts had been made to bring additional resources.

Equipping the HC with the ultrasound machine and providing trainings to relevant HC staff to perform the exams during ANC appear to be the driver of the remarkable achievements of first ANC (75%) in the past three years. That have given to the HC more applauds for the achievements in improving ANC quality although the non-project area accounts for approximately first ANC around 56% according to DHS 2014/15. On the other hand, the heavy emphasis on capacity building, the number of people trained and supported to actually put the training into practice, the remaining trainers in the communities and in community structures, the efforts in coaching, in “doing with”, will leave behind an impressive level of standing capacity for the HC and community groups to respond to the shock of the end of the project in a constructive manner.

The primary result of the project objective was to improve the knowledge of beneficiary on modern farming techniques through FFS that allowed to cultivate on small area using few seeds and harvesting much and to breed raise small cattle like goats, chicken and rabbits. The improved knowledge contributed to the increase in harvest and to the food security at household level. Very notable results have been achieved in the minimum dietary diversity increased from 8% (DHS 2014/15 Value) to 48% (Final Evaluation Value). The Food Diversity Score passed from 2.02 (figures from baseline survey, 20th December 2016) to 4.82 (2018). Ultimately the prevalence of acute malnutrition rate has decreased to 2.5% while the prevalence of underweight is 8.7%. The proportion of mothers or any HH member who went to sleep at night hungry because there was not enough food in the past 30 days (6%); the proportion of mothers or any HH member who was there ever no food at all in the HH because there were no resources in the past 30 days (1%).

The culture of breeding livestock has been reinforced through the livestock multiplication and return process.; 55% of the respondents were raising small animals at home, 93% of livestock received deworming treatment, multivitamin or any other treatment provided by the trained veterinary. In order to save the livestock’s lives, a local private veterinary has been selected, trained and equipped to sustain the small animal breeding. The return has

been very successful more than 40 goats have been returned to the neighbors in two years. The establishment and support of microcredit groups shown clear results, empowering economically rural women, reinforcing FFS and livestock breeding activities, ultimately due to the microcredit outcomes men have been more involved in FFS activities since many men have escaped their households due to poverty and food insecurity.

To a large extent the project has contributed to improving knowledge of beneficiary community on nutritional necessities and good hygiene practices Very notable results have been achieved:

- The training on food preparation and feeding practice has been the most attended by many participants (57%).
- The main source of the nutrition information was the Village Cooking Demonstration sessions that have been attended by 86% of respondents in the six months prior to the survey
- Positive health behaviors occurred such as point-of-use water treatment (66%); 95% of domestic animals are kept in the separate shed from the main house.

Although weakest in the minimum meal frequency (8%), the consumption of iron rich food consumption (14%); and in the appropriate and cleaned latrine (39%); the project areas also saw improvements in related household behaviors such as the use of Micronutrients Product packets (84%); knowledge on the four critical times for Hand Washing (61%); soap availability in homes (89%).

The project showed that building from the grounds up does work. During the evaluation, it wasn't the NGO staff but rather the local leaders at all levels and rural facilitators, who praised the project lavishly for being present on the ground. The project showed that field presence does not mean substitution, but rather that capacity building requires coaching and accompaniment at the most operational level, which in this case is the CHWs and Rural Facilitators charged with training farmers and visiting households. Local informants, from Sector officials and staff to CHWs and FFS Facilitators to community members, tend to largely recognize the value of the FFS and microcredit groups supported by the project and attribute an actual improvement of food security to its work. The evaluation above presents other strengths and weaknesses of the project. Among the strengths, is the integrative approach to curative and preventive community health through the CHWs and Rural Facilitation collaboration.

Among the weaknesses can be identified insufficient resourcing of M&E. The project nonetheless built tools and processes for decision-oriented M&E and producing documentation about its efforts. However, in the context of indicators being "sold" and "purchased", the project was not strong enough in supporting multi-stakeholder efforts at using indicators to guide programmatic response and quality improvement. The baseline data were missing, and the monitoring data was not strengthened particularly at community level. Other weaknesses have been identified, for example in placing insufficient efforts on preventing stunting by fully applying the key strategies recommended by the MOH. Lack of support to the existing Hygiene clubs in the effort to improve community and Household hygiene that have led to very low coverage in appropriate and cleaned latrine.

Finally, the project implemented many good practices in trying to advance sustainability. The combined achievements in MCH and food security leave behind a set of capabilities, experiences, and human resources with a strong potential for adapting to the noticeable interruption of the end of project. The fact that so many of the project's interventions were still in the acceleration phase by the end suggests that this adaptation will be closely supported by the local leaders.

### 3.3 Recommendations

Food Security & MCH as a project has ended. However, the evaluation can make the following suggestions to the District notably Buyoga Sector, Muyange HC, local leaders, and their development partners:

### 1) Consolidate the fundamentals

- Quality Assurance for Rural Facilitator Performance--Support the MOH current initiatives in providing refresher training to CHWs and support Rural Facilitators in maintaining the skills to be acquired through refresher trainings in farming techniques and livestock breeding.
- Continue developing supervision for CHWs and Rural Facilitators as a supportive function distinct from control
- Monitoring microcredit and livestock return—the efforts to strengthen community microcredit groups and to monitor closely the livestock return system need to continue.
- Analyze and resolve the issue of livestock return and reimbursement of SACCO credits. The local leaders should organize the follow up and the monitoring plan of the project activities.
- To assist the remaining vulnerable families identified in the sector
- The Health Center should make proper plan with appropriate strategies to maintain the achievement in nutrition, to reinforce the nutrition messages on meal frequency and to prevent and to tackle stunting as an alarming health problem. The 1000-day strategy should be fully implemented.
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### 2) Developing creative solutions to sustain the system.

- Integrating Rural Facilitators into Farmer'groups as members of the groups in order to benefit from the project outcomes as incentives and for their socio-economic development. In-kind support should be provided to Rural Facilitators (boots, raincoats). External partners making such contributions should be duly acknowledged, but strongly encouraged to do so through the group or associations mechanisms rather than independently.
- This evaluation highlights strong and valuable elements of the model "Rural Facilitator" as a source of motivation and peer-accountability among CHWs and Rural Facilitators, a way to integrate important community health and community development elements. The District, and its development partners should seek to support and strengthen the model where it is already in place and consider expanding it.
- Assess livelihood and food security impact at community (i.e. village-wide) level of income-generating activities led through FFS groups and microcredit groups.

### 3) Final suggestions to the consortium of the three partners

- For new projects in Rwanda or elsewhere launch activities with the type of phase out planning ("end in mind"), rather than wait for the end of the project.
- Establish project M&E based on agreed upon, plan baseline, midterm and final evaluation and shared project-district-partners objectives and results.
- Establish a strong field-based monitoring and supervision system by recruiting enough field staff and equipping them with transportation means in order to reach the remote area in a regular basis.
- Based on the lessons of the project and the credibility of the project consortium, consider sharing the project's experience with other agencies to advance good practices for enhancing sustainability. This could include efforts to channel micro-grants to create learning and exchange opportunities between officials and local leaders from different districts; or supporting innovations in partnership between districts and civil society (cooperatives, academia,) to continue advancing community health and community development.

## 4. References

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3. Rwanda Ministry of Health: Fourth Health Sector Strategic Plan, July 2018 – June 2024
4. MLFM Project Annual Reports

5. Diana Maria Stukel and Gregg Friedman. 2016. Sampling Guide for Beneficiary-Based Surveys for Select *Feed the Future Agricultural Annual Monitoring Indicators*. Washington, DC: Food and Nutrition Technical Assistance Project, FHI 360.

## 6. Annexes

Annex 1	Evaluation Implementation Plan
Annex 2	Evaluation Team Members
Annex 3	KPC Questionnaire
Annex 4	KPC Survey indicator table
Annex 5	KPC Survey raw data