

**IMPROVING PADDY PRODUCTION THROUGH STRENGTHENING
CAPACITIES OF SMALLHOLDER FARMERS ON SYSTEM OF RICE
INTENSIFICATION AND SAVING AND CREDIT: A CASE OF IGURUSI
WARD, MBARALI DISTRICT IN MBEYA REGION**

AKYOO ELIMELECK PARMENA

**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT FOR THE
REQUIREMENTS FOR THE DEGREE OF MASTERS IN COMMUNITY
ECONOMIC DEVELOPMENT**

2013

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CERTIFICATION

I, Dr. William Pallangyo certify that, I have read and hereby recommend for the acceptance by the Open University of Tanzania a Dissertation titled “***Improving Paddy Production Through Strengthening Capacities of Smallholder Farmers on System of Rice Intensification and Saving and Credit: A Case of Igurusi Ward, Mbarali District in Mbeya Region***” in partial fulfillment of the requirements for the award of the Degree of Masters of Community Economic Development of the Open University of Tanzania.

.....
Dr. William Pallangyo

(Supervisor)

Date:

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DECLARATION

I, Akyoo Elimeleck Parmena hereby declare that, this project and associated outputs are the products of my original work and no similar work has been or will be submitted to any University or higher institution of learning.

.....

Akyoo Elimeleck Parmena

.....

Date

DEDICATION

To my beloved wife Penina F. Akyoo who was taking care of our children in my absence. My special dedication is addressed to my lovely children James, Jensen and Janice and the entire family for the prayers and patience during the time I was undertaking this study.

ACKNOWLEDGEMENT

First of all, I would like to convey my sincere gratitude and thanks to my Instructor and Project Supervisor Dr. William Pallangyo for his invaluable support, guidance and effective supervision that led to the production of this project report. I wish to extend as well my thanks to all instructors for MCED programme for intake 2011 for their invaluable assistance and the knowledge imparted to us from the beginning of the course to this end. I highly recommend and acknowledge the support from my Host organization (MVIWATA) especially the guidance and advice provided to me by management particularly the Executive Director, Mr. Stephen Anton Ruvuga. For sure this project could not have been possible without MVIWATA support.

My thanks to Igurusi residents for accepting the project and for working with me to this end and Mbarali district authority for the support they rendered to me during the implementation of this project. My I also convey much thankful to my family, parents and relatives for their prayers, courage, assistance and patience they demonstrated in the course of my research to support further my studies. It will be unfair if I don't acknowledge the contribution, collaboration and support I received from all MCED students (2011) especially those from Mbeya Centre. The information, skills and knowledge I gained from them were very valuable and contributed greatly to the improvement of my work. Lastly but not least, I wish to acknowledge any other person and/or organization that in one way or another have contributed to my studies and the production of this report.

ABSTRACT

The “Improving Paddy Production through Strengthening Capacities of Smallholder Producers on System of Rice Intensification and saving and Credit” is a research project that was implemented from October 2012 in Igurusi ward, with the aim to improve the livelihood for smallholder farmers involved in paddy production. However, producer’s farmers in Igurusi ward are facing challenges of lacking access to reliable saving and Credit for their products, rice being one of them. Currently, few farmers’ use Muungano SACCOs to meet their credit demands. Due to lack of reliable saving and credit, producers are not able to cater for the need of labour and they are forced to use seed from previous harvest. The researcher used participatory methods appropriate to enable him collect data without biasness. Primary data was collected by using participatory methods such as field visits, observation, interviews and Focused Group Discussions while taking into consideration gender aspects. The community need assessment enabled the researcher to clearly identify the real community challenges, factors influencing the challenges and community assets available by encouraging full participation of the community in the process. As result from the research process, the lack of access to reliable saving and credit for agro produce and inadequate knowledge and skills for farmers to undertake remunerative were identified as core problems hindering social economic development and livelihood improvement of smallholder farmers in Igurusi Ward. Fortunately, the currently agricultural production and saving and credit for agro - produce is among key national priorities that have gained strong institutional and policy support to reduce income poverty in Tanzania. Rice on other side is among high value crops being promoted for marketing in many parts of Tanzania as a cash crop.

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LIST OF ABBREVIATIONS

CBO	:	Community Based Organizations
CED	:	Community Economic Development
CNA	:	Community Needs Assessment
DALDO	:	District Agricultural and Livestock Development Officer
EAFF	:	Eastern and Eastern Farmers' Forum
ESAFF	:	Eastern and Southern Agricultural Farmers' Forum
FINCA	:	Foundation for International Community Assistant
IFAD	:	International Fund for Agricultural Development
IFAP	:	International Federation for Agricultural Producers
IITA	:	International Institute for Tropical Agriculture
LGAs	:	Local Government Authorities
MIS	:	Market Information System
MVIWATA	:	Mtandao wa Vikundi vya Wakulima Tanzania
NGO	:	Non-Governmental Organization
PRIDE	:	Promotion of Rural Initiatives and Development
SMEs	:	Small and Medium Enterprises
SPSS	:	Statistical Package for Social Scientists
SRI	:	System of Rice Intensification
SWOT	:	Strengths, Weaknesses, Opportunities and Threats

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background information

A community needs assessment means an investigation of the bio-physical, social, economic, political and cultural situation of the community (IIRR and ETC, 2002). The community needs assessment helps in identifies the strengths and weaknesses (needs) within a community. The exercise involves different stakeholders including community leaders, local government, advocacy groups to address identified needs through policy change or development. In conducting the community needs assessment four steps were executed. The first step was planning and organizing where Igurusi ward was visited to discuss with key stakeholders. The second step was data collection where information gathering was guided by participatory methods like observation, interview and focused group discussion. Thirdly, the data collected were coded, analysed by the use of SPSS and summarized and lastly the results were shared with the community through public forum. This chapter presents the results of a Community Needs Assessment for Igurusi, Mbarali District, Mbeya Region.

1.2 The Igurusi Ward Community Profile

Before conducting any Community need assessment, it is important to understand the people, the environment and the situation in which the community need assessment is to be carried out in order to get better prepared for the assessment. It is against this background that community profile for Igurusi ward was conducted before the community needs assessment for the ward. Three main methods were used in

conducting this community profile namely: document review, observation and informal interviews. The results of the community profile are presented hereunder.

1.2.1 Location

Igurusi ward is located in Mbarali district, about 55km from Mbeya Municipality. The ward is composed of nine (9) villages namely, Igurusi, Ilolo, Majenje, Uhambule, Chamoto, Maendeleo, Lunwa, Lusese and Rwanyo.

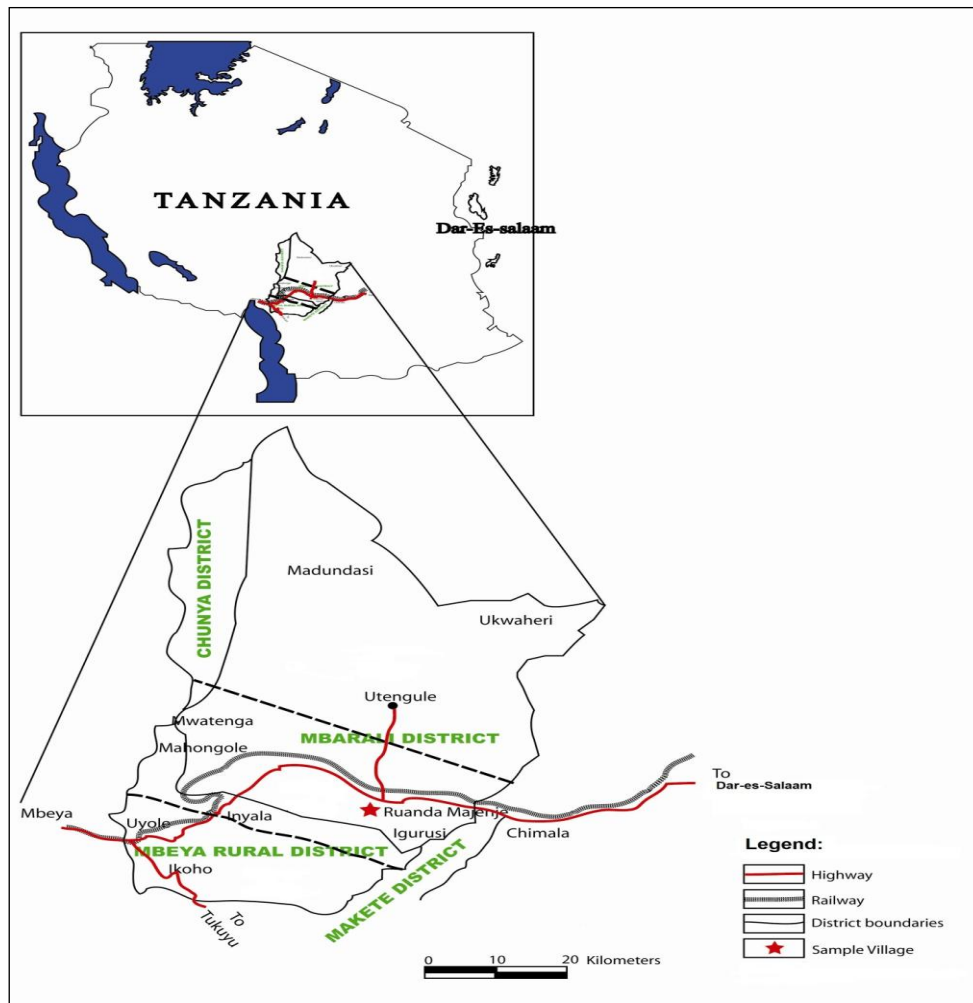


Figure 1: Map of Tanzania and Mbeya Region showing Location of Igurusi Ward

Source: Mbarali District, (2010)

1.2.2 Climate and Vegetation

The altitude of Igurusi Ward ranges from 1,000 metres to 1,100 metres above sea level, with temperature ranging from 10 to 30 Celsius. The mean annual rainfall is 600mm decreasing north eastwards. The growing season is of four months duration, from December to March. The soils are mainly dark grey and prismatic cracking clays; and are generally slightly sodic (Mbarali District, 2010).

1.2.3 Demography

According to the 2002 Census, Mbarali District had a total population of 234,101 with a growth rate of 2.8% per Annual. The current population projection is about 282,911 whereby 140,385 are males and 142,526 are Females. Igurusi ward is among 10 wards of Mbarali District and it has total populations of 19,286 of which 9,325 are men and 9,961 are women. The ward has 4,193 households and 50 hamlets. The major ethnic groups are Sangu, Hehe and Bena. In addition, there are other small tribal groups including Sukuma, Wanji, Barbeig, Masai, Kinga, Nyakyusa and Gogo (Mbarali District, 2010).

1.2.4 Natural Resources

Igurusi ward is endowed with so many natural resources ranging from fertile land, rivers that flow through out the year making agriculture more prominent in the area. It has nice valleys and plains for paddy production. Farmers in Igurusi have a good access to water from local rivers including the Lunwa (Liosi), Mswiswi, Mambi and Meta. These rivers are originated from the Uporoto highlands of the Southern highlands of Tanzania, forming the main catchment of the Usangu Plains. The

natural vegetation is of tropical savannah forest and grass, with lagoon vegetation on swamps and rivers. (Mbarali District, 2010).

1.2.5 Economic Activities

Igurusi residents are involved into different socio-economic activities ranging from agricultural production, livestock keeping; Agriculture is the main economic activity of the people in the area. Irrigated agriculture in the area dates back to the early 19th Century. Paddy production was introduced in the area in 1940's by Baluchis (SMUWC, 2001). The practice spread rapidly among local farmers. The production of food and cash crops accounts for more than 83% of the district gross domestic product (Mbarali District, 2010).

The major crops grown by farmers in Igurusi ward is paddy followed by Maize and Sunflower. Paddy and Sunflower are the main cash crops that are used for business transaction within and outside the District. Very few residents are involved in businesses, fishing, livestock and civil services. Other crops grown in Igurusi ward include beans, Sesame, sweet potato, cashew nut, and Sugar cane.

In some cases, farmers associate crop production with livestock keeping activities. Animal raised by resident in Igurusi include exotic cattle, indigenous cattle, chicken, pigs, ducks, sheep and goats. Apart from agricultural production, there are off-farm activities including charcoal burning, masonry, bricks making, food vending, retail shops, selling of local brews, carpentry, Rice milling, selling, Motorcycle riding, hair salon, shoe making or repair, and telephone services.

1.2.6 Land Pattern and Utilization

The land in Igurusi ward can be classified into forest and savannah woodlands (Miombo), flood plain which is used for paddy production and wetlands which is used for grazing animals.

1.2.7 Social Services

Residents of Igurusi ward have access to the following social services: safe drinking water managed by ward water committee, access to six primary and two secondary school and one health services. The ward is easily accessible through local feeder roads and can communicate to other areas of Tanzania through telephone communication using local networks such as Airtel, Tigo, Zantel and Vodacom.

1.2.8 Tradition and Culture

Traditionally, Igurusi residents has subjected women to do more work per day than men. Although women play a great role in welfare of their families, they are marginalized in many ways as access and contro of resources as well as benefits associated with those resources are enjoyed mostly by men. The social and cultural aspects violate women from decision making process. However, Women are more active in economic activities and they compose a large percent of income generating activities groups that are active in the area.

1.3 Community Need Assessment

According to (IIRR and ETC, 2002), a community needs assessment means an investigation of the bio-physical, social, economic, political and cultural situation of

the community. Sharma et al, (2000), lamented that the aim of community needs assessment is to identify the assets of a community and determine potential concerns that it faces. Sharma et al, added that a community need assessment begins with the planning and organizing phase, followed by data collection, summarizing and disseminating the needs assessment survey results and finally sharing the results through public forums to facilitate action planning process for further inputs.

1.3.1 Objective of Community Needs Assessment

The overall objective was to improve Paddy production through strengthening capacity of smallholder producers in System of Rice Intensification and saving and credit.

1.3.2 Specific objectives

- (i) To get information which will help in improving paddy production in Igurusi ward
- (ii) To organize the smallholder farmers to improve Paddy production through enhancing their capacity and skills in System of Rice Intensification saving and credit services
- (iii) To develop participatory intervention strategies based on issues that emerged from the community need assessment that will improve services delivery in the ward.

1.3.3 Community needs Assessment Questions

The study was guided by the following research questions:

- (i) Which are the most effective ways of improving Paddy productivity of smallholder producers in Igurusi ward?

- (ii) What are the Socio-economic characteristics of the smallholder farmers in the Igurusi ward?
- (iii) What is the community understanding on the major factor limiting paddy production in Igurusi ward?

1.3.4 Research Design

Cross-sectional and explanatory designs were used in which information was obtained from various sources, problems or stresses were identified and the causes of those problems or stress were identified too. In this research, both qualitative and quantitative data was collected from primary and secondary sources by using participatory methods and tools. Data was collected from farmers in Igurusi Ward, MVIWATA staff and document review. In generating primary data, respondents were drawn from smallholder farmers groups in Igurusi Ward and Extension Officers working in the ward from both the NGOs and the government. All of the primary data was collected by using Kiswahili language. The research was executed in three stages. In the first stage, a pilot study was undertaken to pre-test the questionnaires in Igurusi and Lusese villages. This was followed by a survey, and in the third stage, a Focus Group Discussion was undertaken.

1.3.5 Research Methodology

(i) Research Methods

A combination of data collection methods were used in this study. A review of the secondary information and data from different projects documents and existing literature from the previous study in the area was done. A household survey was

conducted in the study area to become familiar, in particular, with agricultural practices, farming systems and geographical characteristics. During the survey, information from the Mbarali district, Division, ward and village levels were collected to give an insight on the current status in terms of socio-economic status, social services available, constraints and opportunities of the farming community in the different study villages. Participatory observation, consultation of key informants, interviews and focus group discussions were used as tools for information gathering. Both quantitative and qualitative techniques were used to analyze the data. Quantitative data were analyzed by using SPSS while qualitative data were data were transcribed into relevant themes and analyzed by using the pattern-matching method. Narratives and testimonies taken from respondents were analyzed and used to support conclusions and argumentations.

(ii) Sampling Procedures and Sample Size

The study covered six villages of Igurusi ward in which non-probability sampling technique was employed. Specifically, purposive or judgmental and quota sampling were applied. Based on easy accessibility and recognizing the fact that most of the paddy production in the ward takes place in the six villages; the survey involved these six villages. The rest of the three villages were involved in the Focus Group Discussion, and meetings. The research covered a sample size of 88 respondents. This sample size was estimated from the following equation (1) (Chawla and Sondhi, 2011).

$$SS = Z^2 X(P) X (1-P) / C^2 \dots\dots\dots (1)$$

Where:

SS = sample size

P = Population

C = Confidence interval expressed as decimal percentage points for this case is 0.05

Z= Values for confidence interval which for this case is 1.96 a 95 Percent Confidence interval

According to 2012 Census, population of Igurusi Ward is estimated to be 19,286 persons.

Having 60 farmers resulted from the formula, 28 farmers from farmer's groups members who participated in the four Focused Group Discussion, were added up to form the total sample size of 88 respondents.

(iii) Research Tools Used

This research used various tools namely; questionnaires, interviews, Focus Group Discussion, problem ranking and prioritizing, checklist, listening and participation in meetings. These tools enabled to collect primary data while the review of various government, and MVIWATA reports was used to collect secondary data.

A total of 60 questionnaires were administered to 60 farmers, 10 from each village involved in survey. Questionnaires had both close ended and open ended questions. The checklist, guided in collecting information during Focus Group Discussion. Four focused group discussions were conducted having participants ranging from six to eight making total of 28 participants in Focus Group Discussion. Participation in focused group discussion based on their knowledge of farming and farmers' issues, accessibility and availability. Checklist was also used to collect information during

interviews with key informants and during observation. Moreover, attending in the Igurusi Ward farmers' network meeting enabled to collect data on farmers' agricultural activities and challenges. This was possible through listening and informal interviews.



Figure 2: Interview During Data Collection

Source: Photo by Researcher, (2012)

1.3.6 Reliability and Validity

(i) Reliability

The survey questionnaires were pre-tested before the actual data collection exercise to ensure and maintain reliability. Likewise, triangulation with the use of multiple methods and tools for collecting the same information ensured the reliability of the tools used.

(ii) Validity

The study used multiple methods and diverse sources of information in order to ensure validity of the data collected. The information collected was validated through the use of questionnaires, document review and checklist. Both observation and Focus Group Discussion were conducted sometimes after the information had been collected.

1.4 Research Findings, Data Analysis and Interpretation of Results

1.4.1 Respondents Age and Sex

The majority (83.3%) of the survey questionnaire respondents were above 35 years old. As shown in figure 1 below, those with the age between 36-45 years old were 50% while above 56 years old represented 8.3% of all respondents. This support the fact that, majority of smallholder farmers in Tanzania is elders as the young generation dislike agricultural activities and migrate to towns where they expect to secure good job. The youth who were found in Igurusi ward were mainly involving themselves in rice milling, motorcycle riding and telephone services.

Table 1: Respondent Age

	Frequency	Percent	Valid Percent	Cumulative Percent
25-35	10	16.7	16.7	16.7
36-45	30	50.0	50.0	66.7
46-55	15	25.0	25.0	91.7
56 and above	5	8.3	8.3	100.0
Total	60	100.0	100.0	

Source: Study Findings, (2012)

There were 60 survey questionnaire respondents from six villages of Igurusi ward. Of these respondents 58.3% were female while male were 41.7% as shown in Figure 2 below:

Table 2: Respondent Sex

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	25	41.7	41.7	41.7
Female	35	58.3	58.3	100.0
Total	60	100.0	100.0	

Source: Study Findings, (2012)

The reason for having more women than men in this study was that the respondents were drawn from the list of farmers groups. From the study it was found that the ward has a total of 190 farmers. Of these groups 56 groups were groups of men only while 106 was group of women only and 28 groups were groups of both men and women. The total members in all groups were 845 members of which 563 members were women and 282 were men.

1.4.2 Respondents Marital Status

As it can be seen from the findings, majority (63.3%) of the respondents were married while 15% were single and 10% and 11.7% were widow and divorced respectively.

1.4.3 Respondents' Main Occupation

Agriculture was reported to be the main occupation for 63.3% of the respondents. The main occupation for the remaining 36.7% of the respondents was either

agriculture and business or business alone. According to the 2006 Integrated Labour Force Survey, agriculture is still the dominant sector with 76.5% of currently employed persons aged 10 year and above in this sector when using the national definition. In 2000/01 agricultural sector contributed 84.2% of total employment. The main crop grown by respondents as it was seen from the results is paddy (43.3%), maize and paddy (38.3%) and beans and paddy (11.7%). Very few farmers (6.7%) grow maize. From the results above it can be seen that almost majority of farmers grow paddy in the study area. The reason for this is that paddy has high demand inside and outside Igurusi ward and also its price is high. Moreover, the respondents and the kind of livestock they were keeping are pig (35%), goat 18%, cattle 16.7%, sheep 13.5%, ducks 11.7% and chicken 5%. The reason for few farmers keeping cattle was due to diseases outbreak and lack of grazing areas.



Figure 3: Farmers in Paddy Field

Source: Photo by Researcher, (2012)

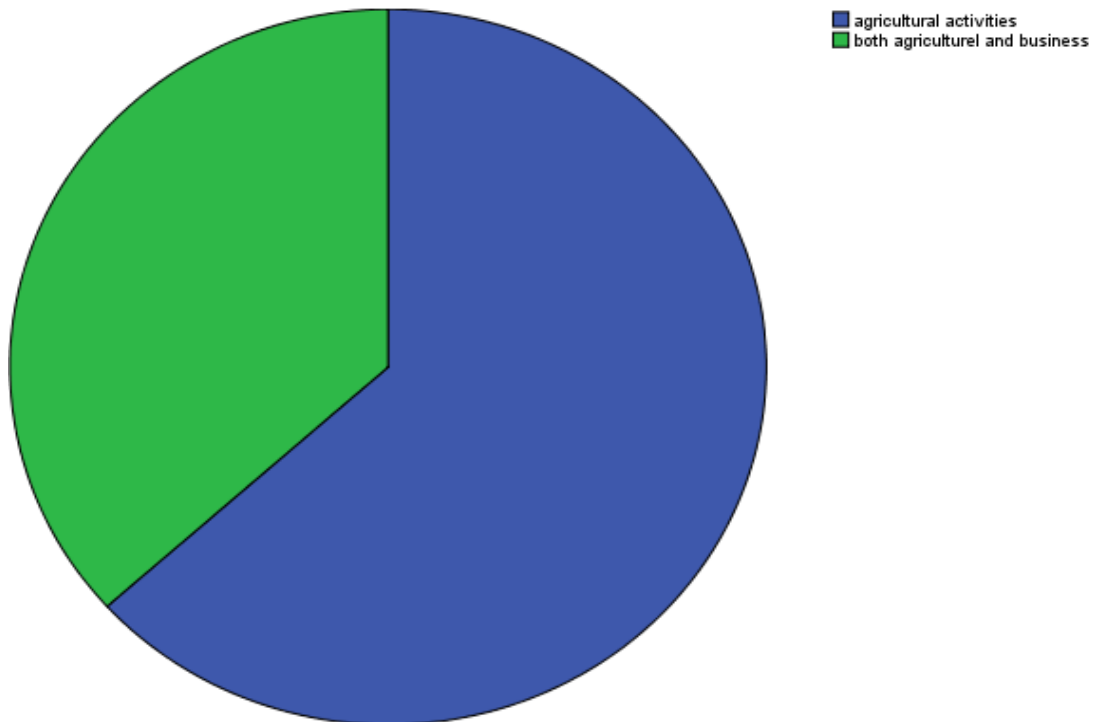


Figure 4: Respondents Main Activities

Source: Study Findings, (2012)

1.4.4 Off-farm Economic Activities

Apart from agricultural production, other sources of income in Igurusi ward include Rice milling and selling, food vending, retail shops, selling of local brews, charcoal burning and bricks making.

1.4.5 Farming and Cropping System Practiced by Farmers

According to interview respondents, majority of farmers (56.7%) are relaying on both rain fed and irrigated agriculture depending on the landscape. However, most of smallholder farmers use traditional and improved irrigation methods. Very few farmers (25.5%) practice improved irrigation. Moreover farmers are facing scarcity of water during dry season which cause conflicts between water users. The results from survey found that majority of farmers (73.3%) are facing difficulties in

accessing water for irrigating their paddy fields. However, the conflicts are seasonal especially during dry season where the demand for water is very high.

Majority of farmers practice subsistence farming for home consumption but also with market orientation for some potential crops. For crops such paddy and sunflower, farmers produce more than what they need for home consumption, which help smallholder farmers to get surplus for sell as an alternative source of income to pay for other social services such as education, attending hospital, buying cloths etc. Majority of farmers if not all are practicing Mono cropping farming.

To ensure maximum utilization of land, farmers could have practiced mixed farming where integration of crops and livestock could allow them to get farm yard manure. For some crops like maize and paddy, farmers could have practiced rotational cropping to maximize production and reduce disease incidence while other crops should have been grown mixed on the same farm not only to maximize land utilization, but also to overcome challenges related to drought occurrence, impact of climate change and unpredictable rainfall with assumption that in case of failure for one crop, the other one can survive. The Table 3 shows agriculture system practiced by respondents.

1.4.6 Quality of Village Leadership and Community Participation in Development Work

The findings show that, majority of respondents (85%) participate in village or community work. The reasons for their participation as it was given by respondent

were that participation in community is mandatory for all community members in Igurusi ward. Moreover about 71.7% of respondent said that most of decision are made by village assembly.

Table 3: Type of Agriculture System Practiced by Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Rain-fed agriculture	9	15.0	15.0	15.0
Irrigation agriculture	17	28.3	28.3	43.3
both depending on landscape	34	56.7	56.7	100.0
Total	60	100.0	100.0	

Source: Study findings, (2012)



Figure 5: Quality of Village Leadership

Source: Study findings (2012)

With regards to the quality of leadership, 66.7% of the respondents were moderately satisfied with the quality of village leadership at various levels. However, 13.5% of the questionnaire respondents were not satisfied with the quality of village leadership as shown in figure below. The main reason cited for unsatisfactory was due to lack of transparency in terms of village income and expenditure.

1.4.7 Challenges that Face Paddy Smallholder Producers

According to interviews and village meetings respondents, farmers/producers claimed that the current extension service delivery system is poor. The information from Mbarali DALDOs office revealed that there is at least one extension worker in every ward to assist farmers with technical support on appropriate production methods. Despite that, farmers informed the researcher that the posted extension workers are not showing up to help farmers in some villages. Due to lack of professional extension staff in some villages, farmers are relying on para – professionals to get technical support on appropriate agronomic practices and modern farming systems. However, scarcity of extension staff compared to high demand from producers has turned the service into business as producers are obliged to pay money in order to get assistance. The available extension workers including para-professionals are used to support both agricultural and livestock production systems. The issue of competency here was seen as a challenge due to difference in terms of educational background. This is critical in the sense that available extension workers don't have the same, equal and adequate knowledge in both fields. It was highlighted that the complication comes in when farmers request for a particular service which is not in line with the extension staff background. Due to lack of clear

understanding of community members on the limitations caused by someone's academic carrier, it is difficult for workers to say no when approached by farmers because they are not capable to differentiate their roles.

In terms of access to agro inputs and government subsidies, it was observed that only very few farmers are using improved seeds and input supplied by the government through the so called voucher system. Farmers claimed that the system is not well functioning. Seeds and fertilizers are in most cases provided late off cropping season and are sold by input supplier agents at higher price not affordable to every smallholder farmers. Even for those who can access them, the quantity supplied is very small compared to the needs, the result of what only few farmers can get access to government subsidies. To cope with the challenge, farmers have developed a culture of preserving their own seeds that are used for sowing in the next growing season. Synthetic fertilizers and pesticides are used for only crops that target income generation to increase production per unit area. Another challenge observed is the impact of climate change aggravated by human activities including agriculture. This has led to increased land degradation in the ward.

On other hand, farmers said that they don't have adequate knowledge for estimating the accurate amount and timely application rates of fertilizers and pesticides at least for those who can afford to buy it. This area needs therefore much technical support from specialized extension staff. Some farmers are able to purchase fertilizers yes, but they don't have adequate knowledge and skills on recommended application rates, a practice that may lead to soil toxicities due to high level of chemicals

concentration in the soil and residual effects. This is accompanied by the fact that majority of farmers don't have better knowledge on the better utilization of natural resources and environmental conservation practices.

“We don't even know how to estimate and apply timely the fertilizers and pesticides in paddy field also seeds and fertilizers are in most cases provided late of cropping season and are sold at higher price.....” (A farmer in Igurusi village 11/10/2012)”

1.4.8 Presence of Civil Society Organization (CSOs)

Non-Governmental Organizations operating in the ward include Inades Formation – Tanzania, OLIVE Tanzania, MVIWATA (Network of Farmers Groups in Tanzania) National Network of Farmers' Groups in Tanzania, and Foundation for International Community Assistant (FINCA) (for financial services). MVIWATA and FINCA have their offices in Mbeya City but offer some services at Igurusi Ward. FINCA is mainly concerned with small loans especially through solidarity groups. MVIWATA has a very strong root in the area working with smallholder farmers in the area of marketing of agro-produce, saving and credit as well as group and networking strengthening and formation. The strong root of MVIWATA in Igurusi ward has resulted into Muungano SACCOS and construction of Igurusi half bulk market which is expected to start its operation later this year.

1.4.9 Financial Services Providers

The findings from the survey revealed that currently financial organizations such as banks and other formal financial institutions have a very low level of penetration in the ward. The financial service providers in Igurusi ward includes NMB which is the only Bank in the area. Discussions with villagers revealed that very few members of

the groups had an account with it. The Bank however, offers whole sale money to the SACCOS for lending to their members. Another financial institution that offer saving and Credit services in the area is Muungano SACCOS. The membership for this SACCOS is only 510, compared to the total population of 19,286. This means that the majority of Igurusi residents do not get financial services from this financial institution. Likewise there is a Social group: these Social groups offer loans to their members out of their collected monthly contributions.

The financial services in the form of loans appears to be common than loans obtained from the commercial banks and SACCOS. The information gathered in a focused group discussion is that the groups are very popular to the extent that most villagers have membership in more than one group. Membership in these groups is voluntary. Lastly there is Promotion of Rural Initiatives and Development Enterprises Ltd (PRIDE) which offers loans to individuals engaged in small and medium businesses. It also offers whole sale loans to Muungano SACCOS at an interest of 15% per annum for on lending to their members.

“Smallholder is willing to involve themselves in saving and credit but the problem is the banks and SACCO’s offer loans with higher interest rate.....” (Farmer in Ilolo Village 12/10/2012)”

1.4.10 Challenges in Financial Services Provision

The Muungano SACCOS offer loans to their members. However, due to poor management of the loan portfolio the SACCOS is not capable of giving their members proper services. Discussion with Muungano SACCOS staff revealed that the money got from PRIDE was used to construct an office building for the SACCOS instead of giving loans to the members. According to focused group

discussions with the members, this resulted into cut off for loans to members for a prolonged period as the SACCOS was obliged to pay first back the loan to PRIDE. It was also reported that the SACCOS face a serious problem of their members who are not ready to repay back their loans in time.

Interest rate for loans accessed from Muungano SACCOS is not less than 15 percent per annum which is relatively high for the small scale farmers. If SACCOS were operating properly they could be positioned to offer a variety of loans and also have a significant size to suit the members' needs. However, this is not the always that case. It was also noted that lack of awareness in using financial organization among rural people. The discussions with the smallholder farmers showed that most of them didn't have an account with a bank. This implied that most of them stayed with their cash at homes. Apart from that lack of knowledge on establishing and running people based financial organizations. The social groups that were met are disbursing loans to the members. However, the manner it was done leaves a lot to be desired, especially if the size of loans and amount of savings would increase substantially. Most of them operated without proper financial records and some of them did not have even properly written constitutions to guide their activities.

Moreover, the poor legacy of cooperatives in the past. The poor performance of the agricultural cooperatives in the past is doing harm to the modern financial cooperatives i.e. The SACCOS. People are still haunted by the fear of what happened to the Agricultural cooperatives in the past. This make those who would be members of SACCOS hesitate to join and the leaders also tend to misuse the societies money. In addition to that, lack of local expertise to run the financial organization. In order

for the member based organization to run properly they have to be managed by trained individuals. The trained individuals can be employed staff or volunteered villagers. At the start this is usually a problem. The slow take off the organization make convinced members to fallback and this can be a snag in the formation of a member based financial organization especially at earlier stages. Last but not least, respondents claimed that bank charge higher interest rate. A community based financial organizations may mobilize their own financial resources to a certain level. To increase their capacity to serve the members they need external funds from banks. However, Banks charge higher interest rates which are a snag to the organizations because ultimately it is the members who are going to pay. The issue of lack of capital emerged in the focused group discussion. The SACCOS lack internal capital resulting from low level of mobilization of savings from their members. This makes the organizations to seek top up capital from outside sources in most cases from commercial banks or NGO financial organizations. Capital from these sources as discussed earlier is usually expensive and the members (farmers) cannot afford to pay.

“Most of the challenges that we face in accessing financial services are those related to poor management of loan portfolio, high interest rate charged by our SACCO’s and poor legacy of cooperative in the past. Many farmers don’t want to hear about saving and credit due to the failure and collapse of cooperative societies in the past (Female farmer in Lusese village 13/10/2012)”

1.4.11 Sources and Main uses of Income

From the study it was revealed that most of smallholder farmers derive their income from agricultural activities. About 61.7% respondents claimed that their main sources of income are farming. It was also noted that the income gained by farmers

used for several purposes including: reinvesting it back to agriculture, sending children to school, meet the basic needs and houses construction. The figure 6 below shows the main sources of income of the respondent.

Table 4: Main Sources of Income of Respondent

Sources of income	Frequency	Percent	Valid Percent	Cumulative Percent
Farming	37	61.7	61.7	61.7
Business	3	5.0	5.0	66.7
Both agriculture and business	20	33.3	33.3	100.0
Total	60	100.0	100.0	

Source: Study findings, (2012)

1.4.12 Environmental Status of Igurusi Ward

The results from interviews and Focus Group Discussion show that, charcoal making is one of the sources of income to some residents in Igurusi Ward. Moreover, all people in the ward depend on firewood as the main source of fuel for cooking. This situation may lead to the disappearance of forests in the ward. The results from this assessment show that there are no dedicated efforts of preserving forests in the ward.

When responding to a question on the presence of village preserved forests, only 35% of the respondents of survey questionnaires responded that there were preserved forests. However, results from focus group discussions and effective listening show that, there are no village preserved forests in Igurusi Ward. But some religious institutions have their own artificial forests. There are also farmer groups dealing with trees planting in the ward. Table 5 shows the results of questionnaire respondents.

Table 5: Presence of Village Preserved Forest

	Frequency	Percent	Valid Percent	Cumulative Percent
yes	21	35.0	35.0	35.0
no	35	58.3	58.3	93.3
Not aware	4	6.7	6.7	100.0
Total	60	100.0	100.0	

Source: Study findings, (2012)

Likewise, it was found that most of smallholder farmers (78.3% do cultivate close to waters sources in order to get enough water for irrigation especially during dry season. It was also noted during interview and focus group discussions that very few farmers (33% are aware of presence of environmental protection bylaws in the ward aware of the presence of village environmental committee.

**Figure 6: Farmers in Focused Group Discussion**

Source: Photo by Researcher, (2012)

1.5 Needs Prioritization

Prioritization was done during the Focus Group Discussion session. In this exercise, all the problems identified in the community needs assessment for Igurusi Ward were listed and members voted for the prioritization of the problem. Before voting exercise, each identified problem was discussed and analyzed in details for better understanding and having a common understanding. The results of the prioritization exercise are presented in Table 6.

Table 6: Problem Prioritization

No.	Problems	Scores	%
1.	Conflicts among irrigated rice producers farmers	0	
2	Poor crops and animals husbandry	4	13.8
3.	Lack of reliable saving and Credit services	9	31
4.	Low level of transparency among village leaders	2	6.9
5	Lack of enough capital to buy agricultural inputs	8	27.5
6.	Inadequate entrepreneurship skills and knowledge	6	21
	Total	29	100

Source: Study Findings, (2012)

1.6 Conclusion

Community Needs Assessment enables to identify community stress, sources of stress and community asset with full participation of the community. This Community needs assessment for Igurusi Ward identified not only a number of stresses with their causes but also the community assets. The lack of reliable saving and credit services was prioritized number one in which inadequate knowledge and skills on saving and credit was identified as a core problem resulting to low output of agricultural produce in the area.

CHAPTER TWO

2.0 PROBLEM IDENTIFICATION

2.1 Background to Research Problem

Access to reliable saving and credit services is one of the major problems facing smallholder farmers, a situation that deprives them from increasing their crop output. Currently, rice is the second important food crop and commercial crop in Tanzania after maize; it is among the major sources of employment, income and food security for Tanzania farming households. According to the United State Department of Agriculture (USDA) world rice statistics 2007, Tanzania is the second largest producer of rice in Southern Africa after Madagascar with production level of 818,000 tons annually. The cultivated area is about 681,000 ha; this represents 18% of Tanzania's cultivated land. The same statistics show that about 71% of the total rice produced in Tanzania is grown under rain fed conditions while the irrigated land presents 29% of the total production with most of it being produced in small village level traditional irrigation systems.

Despite the market potential for paddy, smallholder farmers are faced with low production due to inadequate skills for smallholder farmers on production systems, quality management and post harvesting techniques, entrepreneurship and business skills required for better marketing of their produce. In addition to that, they are faced with lack of reliable saving and credit services that could have supported them to cater for the cost of inputs like seeds, fertilizers and causal labour payments. Due to this situation farmers in Igurusi are always obliged to cultivate small plots and use poor quality seeds.

Currently, Very few farmers in Igurusi farmers who are served by Muungano SACOSS. As it was stated in the findings, the SACCOS serve only 2.62% which means only 505 people get saving and credit services out of 19,286 Igurusi residents.

2.2 Problem Statement

Famers from Mbarali District and particularly in Igurusi Ward depend much on agriculture. However, they are facing a big challenge of lacking access to reliable saving and credit. Currently, farmers do produce small amount of crop due to lack of money to buy inputs. For the rice which constitutes the major food crop for majority of households and source of family income for farmers in the area, market is huge and due to low production farmers are unable to meet demands within the District and even outside the district. Likewise, paddy producers are forced to sell their crop at the peak of the harvest season to solve some social economic constraints they are facing, situations which have been accelerated by lack of storage facilities in the area, lack of access to financial services and lack of access to market information system. All these factors have limited farmers' choice for stockpiling their produce to wait for better prices and reduced their price negotiation power. The lack of strong farmer organizations at ward level or reflection platform where they can make own decisions about prices is a hindering factor for farmers to benefits from their agro products. The existing farmer groups lack good leadership, governance and guiding principles needed to reduce misuse of resources and protect general interest.

In terms of production, majority of small holder farmers from Igurusi are using indigenous crop production methods that are not highly productive. They don't have adequate knowledge of modern production system for paddy crop to maximize

production per unit areas. Through priority setting process, it was observed that farmers of Igurusi do not have adequate knowledge and skills on business management and entrepreneurship skills to maximize profit from agricultural production.

Due to lack of knowledge on entrepreneurship and business management, paddy growers have failed to realize the benefit of selling rice instead of paddy. They are not even capable to analyse their net profit margin they get after selling their produce. The situation has been aggravated by the fact that they are not linked to any reliable market for paddy. They also lack access to marketing information especially current prices for rice or paddy at district, region and nation markets.

The absence of microcredit services providers or community owned financial institutions in the area is another challenge which has increased the magnitude of the problem in Igurusi by the fact that smallholder farmers are not capable to access to some basic needs including agricultural inputs to boost their production. Although paddy crop has a relatively high value compared to other cash crops, the return to producers is still unpredictable, low and it is difficult for the smallholder farmers to realize the benefit from it as long as productivity remains low. In addition to that, options and risks to expand paddy production are not taken care of by respective district authority and constraints of selling and marketing the produce remains not tackled. The research revealed that the economic status, level of poverty and needs differ from one household to another. This has resulted into difficulties for farmers to have a common stand and strong voice and power to influence market price or resist the price predetermined by middlemen.

This project therefore helped to address only one key challenge that was prioritized by community members targeting to enhance farmers' access to reliable saving and credit through strengthening their capacities on production system, marketing skills, entrepreneurship and business development and linking them to key stakeholders in the crop sub-sector to promote paddy crop. The project facilitated as well initiation and management of farmer owned financial saving and lending institutions to facilitate farmer's access to financial resources to boost their productive activities.

2.3 Project Description

The research project target to facilitate smallholder producer farmers of Igurusi Ward to access reliable saving and credit through building their capacities on SRI production systems, business skills and entrepreneurship skills development. According to the information gathered through the needs assessment, smallholder farmers in Igurusi ward are mainly subsistence farmers with low money income and food insecure. The findings show that majority of farmers in Igurusi produce primarily for home consumption, using traditional, low-input systems. The surpluses are sold to cover other basic needs especially household monetary needs. Additionally, majority of those farmers generally lack an understanding of the available saving and credit. Although they sometimes produce satisfactory amount of paddy to suffice home consumption needs and marketing, selling surplus individually either at farm gate or at home but at lowest selling price.

The project was implemented through residential and village based training programs; exchange visits and study tours; facilitating farmers' forums at village and

ward levels; organizing reflection meetings; facilitating regular participatory monitoring and evaluation events such as use of follow up forms, progress reports, meetings and other tools for activity and budget tracking. Exchange visits and study tours were organized to give an opportunity to participating communities to learn from other farmers, exchange ideas and experiences amongst producer groups. The experience shows that visits have proved to be very successful because they offer participants an opportunity for learning from their counterparts. For training programs, the researcher developed training materials that complemented by existing training materials used by MVIWATA. The topics that were covered include leadership skills, group formation and strengthening, farmer group's management, rural micro-finance, SRI production techniques, entrepreneurship development; external facilitators were hired to facilitate some activities that required expertise from outside the project.

2.3.1 Target Community

The improving paddy production through capacity building for smallholder producer farmers on SRI and saving and credit project targeted to strengthen capacities for smallholder farmers from Igurusi ward on System of Rice Intensification (SRI) production, quality management, business skills and entrepreneurship skills development. More focus was given to those farmers who were involved in paddy production and marketing.

The project therefore strived to enhance capacities of smallholder farmers on System of Rice Intensification production and saving and credit in order to increase paddy

production per unit area. The project intended to support farmers in strengthening community owned financial institutions to facilitate them develop own means for accessing to financial resources from within to undertake social economic and remunerative activities. Igurusi residents were acquainted with technical skill on entrepreneurship, business skills and value addition to increase money income and profitability from paddy crop.

Apart from System of Rice Intensification (SRI) production, saving and credit entrepreneurship and business skills development, Igurusi residents were trained on leadership and governance skills in order to increase their price bargaining power. Moreover, the producer farmers in Igurusi were supported to be able to organize into strong groups that can serve for local platform for reflection, learning and for having one voice for advocacy and lobbying on issues of their interest.

2.3.2 Stakeholders

Based on the findings from the community needs assessment, the improving paddy production through SRI and saving and credit project involved stakeholders who were active in providing services to community members in the Igurusi. The project specifically target those involved in rice sub sector and social economic and community empowerment services. Among those that were include National Network of Farmer's Groups in (MVIWATA) meaning the National Network of Small Scale Framers' groups in Tanzania) through its district office in Igurusi; Igurusi, village government authority, Zonal Irrigation unit which was involved in promotion of System of Rice Intensification (SRI) techniques.

Table 7: Stakeholders' Analysis Matrix

Stakeholder	Main area of concern	Roles and responsibilities in the project
Community members (farmer groups involved in paddy production)	Production and selling of paddy to increase household income	Key players in the project design and implementation process. Major actors in paddy production and marketing
Village Administrative authority	Increased agricultural production and marketing	Community mobilization and integration of project activities into village plans
MVIWATA (Mtandao waVikundi vyaWakulima Tanzania)	Increased capacities for farmers on production and marketing for their produce, farmers are united into groups and networks to have a strong voice to advocate for their interest and improved livelihood and management of natural resources	Sensitize group members to increase the production and marketing of paddy in the ward. Providing financial support to the project and main project coordinator
Zonal Irrigation Unit	Promoting System of Rice Intensification	Provision of extension services to farmers such as promoting System of Rice Intensification (SRI) and linking them to other services providers
Muungano SACCOS	Awareness creations and supporting farmers to join saving and credit services	Mobilization in collaboration with MVIWATA to join the SACCOS

Source: Study Findings, (2012)

2.3.3 Project Goals in Community Economic Development

The overall objective of this project was to contribute to improve Paddy Production through strengthening the capacities of smallholder farmers in SRI and saving and credit. This objective was attained by strengthening capacities of smallholder farmers and entrepreneur families from Igurusi ward on the use of saving and credit services to enhance paddy production. The project intend to facilitate establishment of strong farmer groups and networks at village level to enable them to have strong voice and joint strategies for saving and credit for better production.

2.3.4 Project Objectives

In order to realize the impact intended through this project to the target community, the implementation of the project activities aimed to achieve the following specific objectives:

- (i) To build capacities of smallholder producer farmers on groups and networks formation, strengthening and leadership skills
- (ii) To build capacities of smallholder producer farmers on System of Rice Intensification production, business management and entrepreneurship skills and lobbying and advocacy
- (iii) To strengthen smallholder paddy producers capacity in saving and credit for increased paddy production.

Improving Paddy Production through Strengthening Capacities of Smallholder Producers on System of Rice Intensification (SRI) and saving and credit is a project aiming to improve the capacities of people in Igurusi ward of Mbarali district in

Mbeya region through awareness creation, mobilization and training interventions. The project is hosted by National Network of Farmer's Groups in Tanzania (MVIWATA).

MVIWATA (National Network of Small-scale Farmer Groups in Tanzania) is farmer organization responsible for giving farmers a strong voice in lobbying and defending their economic, social, cultural, and political interests. MVIWATA is a network of small-scale farmer groups that are formed into Local Networks at Village or Ward levels, and Middle Level Networks at Regional level.

MVIWATA has a broad based grassroots membership in 19 Regions of Tanzania Mainland and Zanzibar. MVIWATA was founded in 1993 and registered in 1995 (with registration number SO 8612) under the Society Ordinance Act. In 2000 MVIWATA was registered as a Trust Fund, and in 2007 was registered as Non-Governmental Organization under the 2002 NGO Act. The motto of MVIWATA is "the defender of the interests of farmers is a farmer himself". The mission of MVIWATA is to strengthen farmers' groups, local and middle networks to form a sound and strong national farmers' organ to ensure effective representation of their interests, to facilitate learning and training, to enhance communication and advocacy strategies to defend and promote their interests. The vision of MVIWATA is to become a strong farmers' organization that will guarantee small scale farmers' participation and representation in socio-economic and policy decision making process at various levels through learning, initiating, implementing and monitoring their own socio and economic development.

The philosophy of MVIWATA is made by principles of lobbying and advocacy for the development of small-scale farmers in the areas of economic and social, to facilitate communication and learning through exchanges among farmers. Among the reasons which contributed to the establishment of MVIWATA include the following:

- (i) Lack of recognition and participation of farmers in decision making, especially in policies formulation that affect farmers.
- (ii) Low prices of agricultural produce,
- (iii) Lack of reliable markets for agricultural produce markets and
- (iv) Failure of state organs to effectively defend the interests of farmers
- (v) Lack of common voice and position on major issues that concern farmers as a result of lack of communication and forum in which farmers can present their common views.
- (vi) Lack of recognition that farmers are an important component of Tanzanian society'

2.3.5 The Current Structure of MVIWATA

MVIWATA is organized into three levels, namely, grass root level, middle level, and national level. Middle level networks are comprised of the regional and district farmers' networks, while grassroots level is formed by village and ward networks. Currently there are 15 middle level networks in 12 regions and 2 districts in Chunya, Dodoma. Iringa, Kagera, Kilimanjaro, Manyara, Mbeya, Monduli, Morogoro, Rukwa Ruvuma, Shinyanga, Tabora, Tanga and Zanzibar. In 2007 MVIWATA made major constitutional amendments which aimed at enhancing governance and provide for more autonomy to middle level networks of MVIWATA. From the constitutional

amendments, a new forum called The Council was introduced and meets twice a year for consultation purposes on the development of the network. Consequently, there are four levels in the governance structure of MVIWATA namely:

- (i) The Annual General Meeting of members
- (ii) The Council, which is formed by representatives of middle level networks and board members.
- (iii) The Board of Directors, which is formed by nine elected members
- (iv) The Management, headed by Executive Director.

2.3.6 Strategies and Initiatives of MVIWATA

- (i) Building lobbying and advocacy capacity of small-scale farmers through training and formation of strong groups and networks at various levels in order to have active participation and representation in the decision-making process for the benefits of small-scale farmers.
- (ii) Facilitate farmers to initiate economic projects such as savings and credit groups and societies, production and marketing of crops, agri-business and cereal bank in order to improve the living standards.

2.3.7 Affiliation, Networking and Collaboration

MVIWATA has affiliation with other national, regional and international farmers' networks in order build unity and strong lobbying voice of farmers. Currently, MVIWATA is a founder member of Eastern and Southern African Farmers Forum (ESAFF) and Eastern African Farmers Federation (EAFF), and is a member of the International Federation of Agricultural Producers (IFAP). In its strategic plan for 2004-2008, the organization put more focus on the following aspects:

- (i) Strengthening of the middle level of the organisation so as to be able to initiate development activities
- (ii) Capacity strengthening of the national organisation aimed at effective services
- (iii) Organize trainings for leaders, staff and members
- (iv) Strengthening of management and implementation capacity.

2.3.8 Experiences of MVIWATA in Community Economic Development

The main programs that have been implemented by MVIWATA include the following;

- (i) Rural Markets Development Project (RMDP), which was implemented from January 2002 to December, 2004. RMDP was financed by the French Government through its International Development Arm (AFD). Through the implementation of RMDP four rural markets were been constructed, which are Kibagwa market in Kongwa district Dodoma, Tandai and Tawa markets in Morogoro district and Nyandira market in Mvomero district Morogoro.
- (ii) Support to Rural Markets (SRM). The three years project been implemented between April 2006 March 2009, through a partnership between MVIWATA and FERT, financed mainly by the European Union (EU) (ongoing)
- (iii) Improvement of Financial services to farmers by establishing micro finance institutions. MVIWATA is being implementing the project in partnership with LVIA, FERT and UMADEP in Morogoro, Dodoma and Kilimanjaro regions, financed by European Union (EU) (ongoing)
- (iv) Empowering participation of the farmers in planning and monitoring in agricultural sector being implemented through a partnership with IFAD

- (v) Projects for enhancing agricultural and livestock production and local economy in partnership with TRIAS and Swedish Cooperative Centre (SCC) (ongoing)
- (vi) Promotion of Rural Tourism, the project being implemented in partnership with Agriterro (ongoing)
- (vii) Strengthening the farmers' groups and networks at all levels, the project being implemented in partnership with Agriterro, OXFAM and VECO (ongoing)
- (viii) Strengthening Farmer Organizations for Effective Service Delivery in South Tanzania". This project is implemented in partnership with the Swedish Cooperative Centre (SCC) (Ongoing).

2.3.9 Major Activities Implemented by MVIWATA to Meet the Objectives of the above Projects

- (i) Facilitating organization of small-scale farmers into groups, local and middle networks to form a sound and strong national farmers' organ.
- (ii) Lobbying and advocacy for issues of interests to the small scale farmers and ensure representation of farmers' views in the policies that affect them.
- (iii) Capacity building of small-scale farmers on leadership, economic skills such as marketing, savings and credits and income generating activities and on crosses cutting issues such as HIV/AIDS and Gender.
- (iv) Collecting and disseminating of information on experiences and knowledge of farmers through publications such as *Pambazuko* quarterly Newsletter 'The Voice of Farmers', weekly radio program '*Voice of MVIWATA* and other publications.

- (v) Develop participatory economic projects for the purpose of economically empowering farmers
- (vi) Organizing farmers' dialogue and forums such workshops and meetings, study tours, exchange visits and facilitation of farmers to participation in agricultural shows to market their products and enhance learning.

2.3.10 Collaboration and Partnership

MVIWATA has collaboration or partnerships with both public and private institutions. Among those include the Government of Tanzania, the Government of Zanzibar, Sokoine University of Agriculture (SUA), and Moshi University College of Cooperative and Business Studies (MUCCOBs). Other institutions are Non-governmental organizations, local and international such as Agriterro of Netherlands, FERT of France, GRET of France, INADES Formation Tanzania, International Fund for Agricultural Development (IFAD), KEPA of Finland, Lay Volunteers International Association (LVIA) of Italy, OXFAM Ireland and OXFAM International, Participatory Ecological and Land use Management (PELUM), Swedish Cooperative Centre (SCC) of Sweden, TRIAS of Belgium and VECO of Belgium.

2.3.11 Some of Achievements Realized by MVIWATA so far

The achievements realized by MVIWATA include the following:

- (i) Empowerment of Small- scale farmers' networks in regional, district, ward and village level.
- (ii) Improved credit access and living standard of small-scale farmers with rural micro finance institutions, processing, marketing and entrepreneurship. A total

of six markets under farmers' supervision have been constructed in Morogoro, Dodoma, Tanga and Iringa regions.

- (iii) Improved food security situation of farmers as the success of cereal banks, processing and storage modernized techniques.
- (iv) Recognition of farmers who in some areas have been involved in decision making organs such as Regional Advisory Board and ward development committee, as the sign of recognition of MVIWATA.
- (v) Improved knowledge, skills and self-esteem of Small-scale farmers as the success of training program of MVIWATA.

2.3.12 MVIWATA Interventions In Igurusi Ward

In 2010, MVIWATA started to implement a three year project namely "Farmer Organizations for Effective Service Delivery in South Tanzania". The project is currently implemented in the Southern Highlands of Tanzania particularly in Mbarali Districts of Mbeya Region. The project is geared towards improved livelihood of small scale farm families and entrepreneurs living in the project area, through increased access to market, improved management of small businesses, farming and provision of rural financial services. During the identification of target community for the research project, it was agreed that Igurusi ward be the target area for the research study.

Igurusi one of wards of Mbarali district being served by MVIWATA through the "Farmer Organizations for Effective Service Delivery in South Tanzania Project". The project is implemented with an overall aim to strengthen farmer organizations and producer groups on market and marketing information system management and

livelihoods improvement to ensure effective service delivery. The development objective of project is geared towards improving the livelihood of small scale farm families and entrepreneurs living around Igurusi ward. This objective was achieved through facilitating increased access to improved management of small businesses, improved farming practices and provision of rural financial services. In 2007, MVIWATA commissioned a research to Moshi University College of Cooperatives and Business Studies (MUCCoBS) to assess the social economic conditions of people living around Mbarali district. Among the issues that were identified by the research include: (1) poor land management practices and land degradation, (2) lack of reliable markets for agro produce, (3) lack of access to financial services by smallholders producers, (4) poor institutional support and policies to create conducive environment for economic growth and finally (5) inadequate knowledge, skills and capacities for smallholder farmers to initiate and manage social economic projects.

2.3.13 Institutional Analysis of MVIWATA

The institutional assessment of MVIWATA was conducted to identify its strengths in terms of project implementation, its weaknesses that may affects the achievements of anticipated results so that strategies are taken to ensure effective project implementation. The assessment helped also to identify opportunities available within the organization that will facilitate smooth implementation of the planned project as well as external factors beyond the organization that needs further actions. To identify the above issues, the researcher used SWOT analysis techniques to get understanding of the organization assessment.

Table 8: The SWOT Analysis of MVIWATA, the Host Organization

Strengths	The organization has a its own constitution with clearly defined mission
	The organization has long experience in community empowerment and has a membership all over the country in all regions of Tanzania
	The organization has built its credibility and has so many financial donors
	MVIWATA is implementing various development projects in the areas of marketing promotion, capacity building, microfinance, ecosystem management, food security and livelihoods
	Has experienced technical staff and organization leadership obtained through democratic process
	Has already allocated resources for implementing this project
Weaknesses	Weak information management system for disseminating the outcomes form its intervention to the wider community
	Lack of systematic organization database to access its information especially activities being done by its members
	Ineffective participation of local communities in some stages of project cycle management especially project formulation due large number of beneficiaries and coverage area
	Purely donor depending organization hence lack of sustainability measures
Opportunities	The organization has strategies that are in line with current national priorities and strategies
	The only farmer organization owned and managed by small scale farmers from village to national level
	Growing demand and interest of smallholder farmers to join the network for membership
	Presence of government policies and strategies in favour of the organization's activities
	Affiliation with strong organizations at local regional and international level
Threats	Natural disasters and calamities such as Climate change contributing to unreliable and erratic rainfall

CHAPTER THREE

3.0 LITERATURE REVIEW

3.1 Introduction

This chapter presents the information which was extracted from relevant literature in relation to agriculture, SRI, production of paddy/rice as well as the role of saving and credit in promoting poverty reduction and livelihood improvement. The information from visited literature is therefore presented in three sections namely: Theoretical literature review; Empirical literature review; and the policy review as detailed hereunder.

3.2 Theoretical Literature

3.2.1 Definition of agriculture

Agriculture refers to the utilization of natural resources systems to produce commodities which maintain life, including food, livestock, wild animals, fisheries, forest products, horticultural crops, and their related services. Agriculture includes both primary and secondary production systems such as crop and animal production being regarded as primary production and processing industries as secondary production system.

3.2.2 Agriculture in Tanzania

According to the National Sample Census of Agriculture 2002 to 2003, smallholder farmers dominate Tanzanian agriculture with an average of 2.3 ha utilizable land area per household which has not changed over ten (10) past years. Wide variety of crops can be grown in Tanzania due to its wide climatic variation and agro-ecological

conditions. Maize, cassava, rice and banana are principal food crops while traditional export crops include coffee, cashew nuts, cotton, tea and sisal. Other widely grown crops include beans, sorghum, millet, sweet potatoes, and variety of fruits, vegetables, oilseeds and flowers.

For the past 18 years, the contribution of agricultural sectors to the Tanzanian GDP has been increasing year after year up to 1995 after which it started to decrease. The contribution of agriculture to the GDP increased from 47.9% in 1990 to 50.7% in 1995 after which it decreased to 46.8% in 2003, 46.3% in 2004 and 45.6% in 2005. In 2006, its contribution to GDP was 26.2% while in 2007 it was 25.8% (Economic Surveys 2001, 2003, 2005, and 2007). Although its contribution to the GDP has been decreasing, agriculture has remained the main employer in Tanzania employing 67% of Tanzanians (ILFS, 2007; HBS, 2007).

3.2.3 Agriculture in Relations to Poverty in the World

According to the World Bank (2008), in the 21st century, agriculture continues to be a fundamental instrument for sustainable development and poverty reduction. For the poorest people in the world, GDP growth originating in agriculture is about four times more effective in raising incomes of extremely poor people than GDP growth originating outside the sector. About two-thirds of the 3 billion rural people in the world live off the income generated by farmers managing some 500 million small farms of less than 2 hectares each. Hence, efforts to boost agricultural production must focus largely on increasing smallholder productivity. Thus, realizing the potential of food and agricultural production to reduce poverty and hunger depends

largely on the degree to which smallholder farmers, representing 90 percent of the rural poor, are able to participate in productive and remunerative farming and off-farm activities (Birner and Resnick, 2005).

Small-scale farming constitutes about 80 percent of African agriculture, producing largely staple foods (Hazell, 2007). Failure to include smallholders in future strategies will result in further marginalization, increased rural poverty and rising migration of the rural poor to urban areas. Broad-based agricultural growth that includes smallholders can have a large impact on poverty reduction. In addition to boosting food availability and lowering food prices, improved smallholder productivity generates higher incomes and demand for locally produced goods and services, resulting in broad based socio-economic development in rural areas. This dynamic process is a primary reason why agricultural growth is up to four times more effective in reducing poverty compared with growth in other sectors (World Bank, 2007).

In order to ensure that increased food production enhances food security, developing countries must be able to exploit their potential to increase agricultural production and productivity through a more conducive policy framework and increased investment in agriculture and rural development by both national governments and international donors involved in agriculture and rural development. The magnitude of hunger in the world and the difficulties in reducing it even when food supplies are high and prices low highlight a fundamental problem of access to food. Even low food prices will not fully address the problem of inadequate access to food, which is

also affected by the ability of the poor to produce enough food or generate sufficient income to buy it. On the other hand, as most poor rural households rely on agricultural production for a significant share of their income, increasing agricultural productivity is closely related to reducing rural poverty. It follows that increasing food production and productivity should go beyond the objective of reducing prices in global markets – providing an opportunity for reducing rural poverty and hunger. Access to functioning markets for both staples and high value commodities is a key prerequisite for agricultural development and improved productivity (FAO, 2008). The UK Food Group (2008) noted that, agriculture and rural development in Africa will have to concentrate on more people-centred, food-focused and environmentally sustainable approaches if the development of African agriculture is to serve the long-term interests of the majority of Africans.

3.2.4 Agriculture in Relations to Poverty in Tanzania

Since its independence in 1961 to date), agriculture has been the backbone of the Tanzanian economy. Apart from providing food, employment generation, production of raw material for industries, and generation of foreign exchange earnings, it remains to be the country's main source of income for the rural population. The Household Budget Survey (HBS) 2007, revealed that, agriculture, hunting and forestry industry employ more people than any other sector in Tanzania, where 82 per cent of rural households and 38 per cent of other urban households are employed. Cash income accruing to Tanzanians continues to be largely through agricultural products with food crops continuing to dominate, providing the main source of cash income for some 40 percent of households. However, households are more likely to

be poor if they are large, and have a larger number of dependents; if they have a head who is economically inactive; or if they are dependent on the sale of food and cash crops or earning a living from natural products, rather than being part of the formal sector and receiving a wage, salary, or business income. Due to this fact, poverty in Tanzania remains overwhelmingly rural, with some 83 per cent of individuals below the basic needs poverty line being resident in rural areas in 2007 although it is a decrease from 87% in 2000/2001. Therefore, poverty in Tanzania will not decline without growth in rural incomes, and rural incomes will not grow without improving productivity of the agriculture sector, and growth of rural nonfarm businesses.

3.2.5 Rice Subsector in Tanzania

Rice is the second most important crop in Tanzania after Maize and mostly used as a cash crop. Tanzania rice productivity is lower than most neighbouring countries and one of the lowest in the world. Furthermore, Tanzania hardly meets its own rice demand and therefore imports large quantities, mostly from South-East Asia. Despite that the statistics show that Tanzania is the second largest rice producer in Eastern Africa. (ACT Rice and Maize Report 2010). According to the same report, Tanzania's total rice production is 899,000 metric tons from which a small part is exported to neighbouring countries. Around 90% of the rice production is by smallholder (subsistence) farmers with higher productions concentrated in Morogoro, Shinyanga, Tabora, Mwanza and Mbeya regions.

The rice sub sector is highly fragmented with millers and brokers playing a central role in trading process. The supply channels are generally long and the produce

changes many hands before reaching the final consumers. A few more structured supply chains are now emerging and there is increasing interest from large investors in rice sector. According to ACT Rice and Maize report 2011, the profitability – simplified gross margin of rain-fed smallholder farmers varies from negative to moderates of 27%, which suggests the profits are very negligible and most producers remain at a subsistence level. Critical weaknesses in rice sub sector include limited production and distribution of improved seeds, low quality due to mixing of varieties, insufficient chains, inadequate input supply and inadequate extension services. Other weaknesses include lack of sufficient storage facilities, high postharvest losses due to poor handling and use of local milling machines.

3.2.6 Rice varieties grown in Tanzania

Tanzania has traditionally grown local varieties of rice which have descended from the seeds originally imported by Arab traders before 1960. It is self-pollinating crops for which qualities of seeds required are not are difficult to maintain hence over many years. These varieties are like Supa, Behenge, Kule and bwana, Kamalata and many others which are well adapted to the climate and taste preference of the Tanzanians, but they are relatively low yielding, averaging 1 – 1.5 tons per acre. Rice is among few crops that have an enormous number of improved varieties developed and released by the national research institutions of agriculture. However, there is no significant use of improved seeds by farmers nor are rice seeds distributed by the existing private seeds companies operating in Tanzania today. Most seeds planted by majority of farmers are obtained either by using their own seed or by seeds obtained from farmer to farmer exchange.

Despite the efforts of research institutions to develop various rice varieties with more productivity patterns, drought and disease tolerance, there is no strong farmer demand for them. The first reason for that is farmers' awareness of the quality, availability, marketability of produce of these seeds is very low. It is a fact that most of the farmers lack knowledge on the potential and use of improved seeds hence stick to traditionally preferred varieties which are not economically efficient but have prominent aromatic and palatability characteristics. Currently, the agricultural seeds agency in collaboration with district authorities has established an innovative approach to bring the seeds near to farmer and make the seeds more affordable by using agro dealers and village shops. With the intention to make seeds more available at farmers' level, the agricultural seeds agency is now producing the through farmer research groups the "quality declared seeds which are recognized by TOSCI and appreciated by farmers.

3.2.7 Rice Production Systems in Tanzania

Rice production in Tanzania is predominantly dominated by smallholder farmers producing under rain-fed conditions. Historically, rice has been categorized under staple food crop rather than commercial crop. In recent years, with the rapid growth of cities and towns propelled by rapid population growth, the country has experienced enormous increase in rice demand. There are a negligible percentage of rice imports. Currently, most of rice demanded and consumed by the urban population is sourced from rural rice producing areas that have stagnant production capacities. Due to high demand for rice from urban areas, rice has been consequently transformed into commercial crop.

The effects of climate change nowadays has changed weather patterns in such a way that most of wetlands which are major rice producing areas are no longer able to support other food crops, making rice the only source of cash and staple food crop at the same time. According to USDA 2009, the national rice production over decade has had an overall growth although characterized by large fluctuations from one year to another Table 9.

Table 9: Annual rice production trend (1998-2007)

Year	Area harvested	Yield (t/ha)	Production (1000t)
1998	209	1.08	530
1999	475	1.8	511
2000	500	1.02	511
2001	530	1.07	569
2002	500	1.29	465
2003	570	1.26	720
2004	650	0.86	556
2005	688	0.83	573
2006	650	1.21	785
2007	665	1.23	818

Source: USDA2 2009 World Rice Statistics

3.2.8 Leading Paddy production Regions in Tanzania

According to the national sample census of agriculture of 2006, the major leading regions in rice production include Morogoro, Shinyanga, Tabora, Mwanza and Mbeya. Rice production in these regions has been favored by available agro-climatic conditions that are offering sufficient and enough rains to support the growth of paddy. In Mbeya region, rice is mainly grown in Mbarali and Kyela Districts.

Table 10: Areas under Paddy Production per Region

Region	Area under paddy production in acres	Percentages of total area under paddy production in Tanzania
Morogoro	312,512.7	19.7%
Shinyanga	293,722.5	18.5%
Tabora	162,172.8	10.2%
Mwanza	215,460.6	13.6%
Mbeya	133,215.2	8.5%

**Source: National Sample Census of Agriculture, Volume II-Crop Sector
National Report, 2006**

3.2.6 System of Rice Intensification as a Means for Improving Paddy Production

According to IFAD (2012), System of Rice Intensification (SRI) was discovered by Jesuit Priest in 1980's in Madagascar. SRI aimed to revive the natural growth potential of rice through a set of good practices that question traditional farming methods. With SRI Fields are not kept flooded. The soil is kept alternatively dry or wet allowing the plant root's to take oxygen from the ground surface. In this way less water and fewer seeds are needed to produce the same quantity of rice. Seedlings are transplanted while very young from the nursery to the field one by one in square patterns to allow spacing between rice plants.

In addition, the use of organic fertilizers combined with SRI practices is recommended as in many cases, it gives even better results than chemical fertilizers. The reduced need for inputs (such as water, seed and chemical fertilizers) makes SRI affordable to poor smallholders, and its successes enhance its potential for replication.

3.3 Empirical Literature Review

3.3 1 Improving Paddy Production through System of Rice Intensification:

Experience of IFAD in East and Southern Africa

In most East and Southern African countries, rice is a staple food for rural households. In that case increasing rice production is a powerful pathway to improve household's food security and reduce rural poverty. Realizing the potential of increasing rice production as a tool of reducing poverty, IFAD has been promoting System of Rice Intensification in East and Southern African Countries.

In 1997, IFAD introduced SRI in Madagascar in Mandrare inland –valley lowlands by improving rural infrastructure and promoting the adoption of SRI practices. After successful implementation of SRI in Madagascar, IFAD introduced SRI in Rwanda and then Burundi. The practices were disseminated through training and visit across borders.

The SRI experiences in Madagascar, Rwanda and Burundi shows that farmers have gained familiarity with the new techniques and farmers were able to form farmers groups and saving and credit associations. Through the use of saving and credit associations farmers were able to cater for the cost of inputs, labour and crop management. From this experience it is evident that through SRI farmers are able to reduce water use conflicts as the system require use of little amount of water.

IFAD combined SRI with infrastructure rehabilitation including roads and irrigation systems and improvement of access to social services such as health centres, public

schools and safe drinking water in the area. The combination of infrastructure improvement and SRI techniques has shown positive results.

The SRI was disseminated by IFAD to smallholder farmers through farmers to farmer's dissemination and IFAD played the facilitation role. As a result of using farmers to farmer dissemination techniques, replication by neighbouring farmers has been spontaneous. In addition to demonstration through use of demonstration plots, dissemination of SRI experiences is also done through booklets and radio programmes.

3.3.2 CARE International: Promoting Marketing through Formation and Strengthening of Farmers Association in Northern Mozambique

Working with extremely poor communities lacking much of the most basic infrastructure, CARE joined forces with Cooperative League of the USA (CLUSA) and its local partner, OLIPA: sustainable development organization (NGO/Mozambique)) to develop and test a model of rural enterprise and service delivery that builds on the relative strengths of farming communities, commercial traders, government, and the banking sector. The NGOs act as a catalyst; government plays a role as coordinator and facilitator of information flow (e.g. with agricultural researchers); but agricultural production and trade increases through a partnership of farmer groups, traders and providers of financial services.

The logic is persuasive, but more importantly, experience to date strongly suggests that the achievements are wide-reaching, sustainable and replicable. Working

through their own structured network of extension groups, farmer associations and apex organizations, farmers were able to secure commercial contracts for their produce, selling at higher prices than possible individually. This margin is now recycled to pay for inputs for subsequent crops, the provision of informal but coordinated, demand-led extension services, community infrastructure (typically a small crop warehouse, clinic or school) and services (adult education and hands-on rudimentary training in agribusiness and marketing).

Access to financial services is fostered through savings groups and association bank accounts. Government agents work with NGOs to provide initial exposure to new technology which is then cascaded through the informal extension network. Communities building clinics or schools are able to apply leverage on government to provide staff. Acquiring skills, confidence and a track record, these communities negotiate loans with traders to purchase inputs and bulk up crops. As production grows, small enterprise, savings and investment activities all expand. By mid-2000, 80 000 farm families were participating in 2000 extension groups in Nampula and Zambezia provinces. Current year production of white sesame and pigeon pea for export was worth US\$ 4 million, maize yields and incomes were significantly higher for participating farmers than for others, and there were improvements in food security, enterprise by men and women's groups, and savings mobilization. Experience with white sesame has been particularly revealing. Increased production has led to greater trader activity, and competition amongst traders has pushed up farm-gate prices. Whilst trader loans for seed and other inputs were a crucial first step as the associations developed and expanded their activities, in subsequent

seasons associations which were strong enough to finance seed from savings or other sources, were able to negotiate much better sale prices for their crop.

3.3.3 Experience of MVIWATA in Improving Paddy Production

In partnership with RLDC MVIWATA implemented a project namely Rice profitability through increased profitability and better marketing. This project was implemented in 21 villages of 4 districts namely Igunda, Manyoni, Mvomero and Babati. The project started in March 2010 and phased out in March 2012. During the project lifetime, farmers were capacitated in System of Rice Intensification, provision of improved agronomic practices and enhancement of farmer's organizations. Other skills acquired by farmers during the project time are creating innovative marketing and business linkages between farmers with private sector market actors; by facilitate formation of paddy production and marketing groups and training of farmers on groups formation and management, train of farmers/groups leaders on leadership skills, facilitate farmers access to extension services so as to increase productivity through promoters training in rice agronomy and facilitate training on rice agronomy and linking farmers to market through promotion of collective selling and facilitate farmers access to market information.

3.4 Policy Review

3.4.1 Structural Adjustments And Policy Reforms

Prior to initiating reforms towards a market oriented-economy in 1984, Tanzania was a state controlled economy (Mbiha, E.R, et al, 2001). The same Authors argued that during that time, the government directly intervened in the market through price

fixing, imposing restrictions on trade, monopolizing the commodity market using state owned companies and subsidizing the agricultural inputs and food commodities. Purchase of food crops from surplus areas, processing and the distribution in demand/deficit areas were mainly undertaken by the state owned National Milling Corporation. Agricultural cooperatives operated in the rural areas as agencies for the National Milling Corporations. In 1986, Tanzania made a firm commitment to pursue a market economy and to undertake the Structural Adjustment Program (SAP). The new policy places a clear restriction on the actions that the government can adopt to achieve its objectives. Except in a very limited case such as restocking of the emergency grain reserve, the government is not supposed to intervene in the food markets; rather its role has been limited to facilitate and promote the participation of the private sector. Specific policy reforms that target the agricultural sector include:

- (i) Withdrawal of the government from fixing producer and consumer prices
- (ii) Reduction in export taxes
- (iii) Removal of agricultural subsidies in input such as fertilizer, seeds and chemicals
- (iv) Removal of quantitative restrictions in movement of agricultural commodities and inputs and
- (v) Reducing and rationalization of state marketing and credit institutions including liberalization of markets and promotion of the private sector.

The market information system dates back into 1970 when the Marketing Development Bureau (MDB) was established under the Ministry of Agriculture by then. The project was funded by UNDP while FAO was the participating and

executing agency. The project came into full operation in 1972. During its inception Marketing Development Bureau (MDB) had the following objectives:

(1) To provide advice to the government on marketing policy, (2) to organize marketing training for the staff that would be required by the Ministry, marketing authorities and cooperatives for their marketing activities and (4) to establish a regular market news service. Later on additional tasks were put to the Marketing Development Bureau (MDB) and these include: (1) to set consumer prices, (2) to carry out research on costs of crop production behalf of the Cooperative Unions and (3) to recommend producer prices for staples and major cash crops in 1973/74. When it started, information reported by Marketing Development Bureau (MDB) was official commodity prices and volumes. In early 80s even before market liberalization, the Marketing Development Bureau (MDB) had already extended its coverage to include unofficial parallel markets. However, such information became legitimate and acknowledge by the government after gradual transformation in terms of functions, organization structure and commodity coverage. As a reflection to such changes the department' names have been alternating to dates from the marketing information bureau to Agricultural Information Services and Market Information Service (MIS).

3.4.2 The Tanzania Development Vision (Vision 2025)

The vision 2025 envisages agricultural sector that by the year 2025 is modernized, commercial, highly productive and profitable, utilizes natural resources in an overall sustainable manner and acts as an effective basis for inter sectoral linkages. According to this vision, the diversification of the economy must be based on the

dynamic industrialization programme focused on local resource based industries (agro-processing) capable of meeting the needs of other sector whilst continuously developing activities that have dynamic comparative advantages.

3.4.3 Tanzania Rural Development Strategy (2001)

The strategy states that, the empowerment of the rural population is crucial to sustain whatever achievements being made in rural areas. In Tanzania, this implies development of appropriate skills and implementation capacity, formulation of appropriate strategy and creation of development institutions at the local, regional, and national levels to ensure effective use of resources. The Rural Development policy recognizes that agriculture will continue to be the major employer for most of Tanzanians within the near future. Thus for promoting employment generating activities in the rural areas, the government will continue to create a conducive environment for the development of the sector.

3.4.4 Agricultural and livestock Policy (1997)

In 1997, the government of Tanzania formulated the Agricultural and Livestock Policy. This policy dwells only on agriculture with the ultimate goal of improving the well being of the people whose principal occupation and way of life is based on agriculture. The objectives of this policy are:

- (i) Ensuring basic food security for the nation,
- (ii) Improvement of the standard of living in rural areas through increased income, from agriculture and livestock production,
- (iii) Increased foreign currency earnings,

- (iv) Production of raw materials for local industries,
- (v) Development of new technologies which increase productivity of labour and land,
- (vi) Promote integrated and sustainable use and management of natural resources,
- (vii) Development of human resources within the agricultural sector, and
- (viii) Provide support to agricultural sector.

It is stipulated in this policy that the government would provide its services using the following tools:

- (i) Agricultural extension, using extension workers,
- (ii) Agricultural research, using ARI and other research centres,
- (iii) Training so as to optimize the human resources, and
- (iv) Provision of regulatory services such as seeds and seed production, plant protection and animal health services, agricultural information and marketing of inputs and outputs. Others are cooperative development services, technical services such as agricultural mechanization and soil conservation.

The policy does cover a number of important crops such as oilseeds, pulses, fruits and vegetables. It has been observed that the National Agricultural and Livestock Policy of 1997 puts emphasis on the role of the private sector in achieving its policy objectives but limits the role of the Government to public sector support functions. Such support sectors include Policy formulation and supervision, research, training, extension and information services, sanitary regulations, quality control and protection of the environment, and creation of conducive environment for

agricultural growth, specifically in relation to the development of markets and marketing systems for inputs and outputs.

3.4.5 Sustainable Industries Development Policy-SIDP (1996 to 2020)

The policy recognizes the importance of agro-industries in contribution to human development and creation of employment opportunities where the industrial sector has a role to create sustainable employment opportunities which in return would increase effective demand through increased incomes. This will be possible through the development of agro allied industries like food, textiles, building materials, leather and leather product industries, promotion of small scale industries and informal sector activities organized all industrial branches which offer broad-based entrepreneurial development for employment and income generating opportunities.

3.4.6 Small and Medium Enterprise (SME) Development Policy 2002

This policy recognizes the importance of agricultural sector in poverty reduction and calls for rural industrialization. According to this policy, the Government will facilitate the establishment of manufacturing enterprises in rural areas so as to add value to agro products by using the following strategies to facilitate rural industrialization:

- (i) Strengthen extension services aimed at promoting industrialization through SMEs,
- (ii) Facilitate the establishment of industrial clusters or business centers at regional, district and ward levels,
- (iii) Facilitate the transfer of technology to rural areas, including upgrading of existing technologies, and

- (iv) Support establishment of rural industrial cooperatives.

3.4.7 Agricultural Marketing Policy 2008

In August 2008, Tanzania formulated the Agricultural Marketing Policy. The overall objective of the Agricultural Marketing Policy is to facilitate strategic marketing of agricultural products while ensuring fair returns to all stakeholders based on a competitive, efficient and equitable marketing system. The policy has the following specific objectives:

- (i) Stimulate diversification and value addition in agricultural commodities in response to increasing and changing market demand;
- (ii) Promote adherence to quality, standards and grade in agricultural products to start with the domestic market;
- (iii) Reform the legal and regulatory framework that guides the agricultural marketing systems and harmonization to obligations and rights emerging from the multilateral trading system and regional trading arrangements;
- (iv) Empower, promote and support the formation and development of agricultural marketing institutions;
- (v) Promoting investments in agricultural marketing infrastructure and agro-business;
- (vi) Stimulate and facilitate the development of efficient and effective agricultural marketing information, research and intelligence systems for the development of existing and new agricultural markets;
- (vii) Promote development, adoption and use of risk management strategies in agricultural marketing;

- (viii) Enhance access to agricultural marketing finance;
- (ix) Identify and promote niche markets as way of addressing agricultural commodity markets facing mature global markets; and
- (x) Mainstreaming of cross-cutting issues.

This policy acknowledges that majority of crops in the country are marketed in their raw forms, losing opportunities for higher earnings and generating employment. The main constraints facing the agro-processing industry include high operational costs mainly because of high prices of imported fuel and spare parts, unavailability of appropriate processing machines and spare parts and limited knowledge in operation of the machines. Despite these constraints, agro-processing has a tremendous potential for increasing income through value addition and increasing shelf life, access to food security through the establishment of small-scale agro-processing businesses and rural agro-based industries. Economic growth in the rural areas will in most cases be led by the growth of commercial agro-industries which are efficiently run and responsive to evolving market demands.

Under value addition: The Government will support and promote training in entrepreneurial and marketing skills for agricultural marketing stakeholders; Private sector will be encouraged and supported to participate in the training on entrepreneurial and marketing skills; Entrepreneurship and marketing curricula in vocational training centres, colleges and learning institutions will be reviewed and strengthened; and, Agricultural marketing extension services will be strengthened.

3.4.8 National Rice Development Strategy (NRDS) 2008

The Government through the Ministry of Agriculture and Food Security has finalised in May 2008 the draft of the National Rice Development Strategy that targets to transform the existing subsistence dominated rice sub-sector progressively into commercially and viable production system (RLDC, 2011). The general objective of the strategy is to double rice production by 2018. If successfully implemented, the National Rice Development Strategy would increase the national food security and income generation at household level through production of sufficient quantity and quality rice. The NRDS targets in its implementation eight identified strategic areas:

- (i) Improving seed systems and fertilizer distribution
- (ii) Developing improved varieties, production and integrated crop management options
- (iii) Post harvesting and marketing of rice
- (iv) Improved irrigation and water harvesting technology
- (v) Enhancing access to and maintenance of agricultural equipments
- (vi) Improving capacities for technology development, training and dissemination systems
- (vii) Access to credit and/or agricultural finance, and
- (viii) Promotion of medium and large scale processing industry

Following the above mentioned objectives in relation to prevailing conditions at farmer level, there are several areas that need attention in order to improve marketing systems. At production level and given the large number of producer farmers in the rice sub-sector, market system provide an opportunity to organise farmers into

economic groups in order to reach better production, get access to financial services and capital. More organised farmers will allow for access to better services delivery such as production skills through providing agronomic skills, post harvesting techniques and marketing skills of paddy.

CHAPTER FOUR

4.0 PROJECT IMPLEMENTATION

4.1 Introduction

This chapter presents the original plan and the actual implementation, and reports what was accomplished in ten (10) months of the project life span. The residents of Igurusi ward were the owners of the project and the main project beneficiaries. MVIWATA was the overall in charge of the project. They provided extension services, and facilitate project activities by providing financial support to the planned activities. On the other hand, the Researcher was the Project facilitator responsible for providing technical advice support in terms of capacity development for project beneficiaries in the areas of System of Rice Intensification (SRI) production techniques, other areas of technical support were group formation and strengthening, micro financial services development, entrepreneurship and business management skills development. This chapter is summarized in the Planning Matrix; Implementation Matrix; Logical Framework Matrix, budgeting and implementation status and associated results. It also highlights the project outputs and products that was intended and those that were achieved.

4.2 Products and Outputs

The project implementation life was 10 months starting from October 2012 to July 2013. In order to achieve the project objectives that are planned, at total of ten (10) capacity building and five (5) preparatory and monitoring and evaluation activities was implemented to deliver the following expected products and outputs:

4.2.1 Products

- (i) 20 smallholder farmers trained on groups and networks formation and strengthening
- (ii) 20 smallholder farmers trained on System of Rice Intensification production techniques
- (iii) 20 smallholder farmers trained on post harvesting techniques and crop quality management for paddy
- (iv) 20 smallholder farmers trained on management of community financial institutions, entrepreneurship and business development

4.2.2 Outputs

- (i) Smallholder farmers of Igurusi have initiated strong farmer groups and networks and are managing them properly
- (ii) Smallholder farmers of Igurusi have adopted System of Rice Intensification (SRI) production techniques for paddy crop and are actively participating in remunerative activities
- (iii) Smallholder farmers of Igurusi are knowledgeable in post-harvesting techniques and crop quality management
- (iv) Smallholder farmers of Igurusi have acquired knowledge of managing financial institution, entrepreneurship and business development.

4.3 Project Planning

This section provides a roadmap and processes that was followed to achieve the intended objectives.

Table 11: Summary of Project outputs and activities

Overall objective: To contribute to improved paddy production through strengthening capacities of smallholder farmers of Igurusi ward in System of Rice Intensification and Saving and Credit	
<i>SO1: To build capacities of smallholder farmers of Igurusi on groups and networks formation, strengthening and leadership skills</i>	
<i>Output1: Smallholder farmers of Igurusi have initiated strong farmer groups and networks and are managing them properly</i>	Activities:
	1. Conduct capacity building workshop for 20 farmers on groups and networks formation
	2. To strengthen of capacities of existing farmers groups on leadership and governance
	3. To strengthening the capacities of farmers in lobbying and advocacy in order to increase their capability to defend their interest
<i>SO2: To build capacities of smallholder producer farmers of Igurusi on System of Rice Intensification, post harvest techniques business management and entrepreneurship skills</i>	
<i>Output2: Smallholder farmers of Igurusi have adopted System of Rice Intensification for paddy crop and are actively participating in remunerative activities</i>	Activities:
	1. Conduct capacity building workshop for 20 farmers on System of Rice Intensification, crop management techniques
	2. Conduct capacity building workshop for 20 farmers on entrepreneurship skills and business development
	3. Conducting capacity building workshop for 20 farmers on post harvesting techniques and crop quality management
<i>Specific Objective 3: To strengthen financial institution linkages for smallholder farmers of Igurusi for increased access to credit</i>	
<i>Output3: Small holders farmers of Igurusi are linked to potential financial institutions</i>	Activities
	1. Conduct capacity building workshop for 20 farmers on the use, management and maintenance of community owned financial institutions
	2. Organize exchange one learning visit for 10 representative farmers to areas with similar project interventions for learning purposes
	3. Facilitate capacity building for 20 farmers on the lending services
	4. Facilitate linkage of smallholder farmers to financial service providers
<i>SO 4: Project implementation plans and strategies are in Place to facilitate the research process</i>	
<i>Output 4:Output 4: Project management and implementation strategies developed and in place</i>	1. Conduct initial contact with MVIWATA for familiarization with the organization and review of literature available
	2. Conduct monthly and end of project monitoring and evaluation activities
	3. Identification of project site and target group and conduct community need assessment of the target community
	4. Facilitate mobilisation and sensitization workshop for community members and
	5. Facilitate participatory priority setting and planning workshop with community members

It provide information on how the project was implemented, description of activities that was planned and implemented to achieve each objective, resources to be used, time management during the implementation and key people and institutions who played a key role in the process.

It also provides indicators that were used to measure the level of achievement of planned activities as well as the means for verification used. Due to the fact that there are so many factors that may in one way affect any project implementation process if not well addressed, this section provides therefore a number of assumptions and risks for consideration in order to achieve the intended results.

4.3.1 Project Implementation Plan

The first step of the project planning was to develop a community driven and participatory implementation plan that provided a framework and guideline to the project implementation process. In order to achieve the intended project goals and objectives, a total of three main outputs were planned to be produced through execution of ten (10) capacity building activities.

The activities that were conducted in the implementation of this project included residential and village based training programs that was conducted in Igurusi, events for facilitating farmers' forums at village and ward levels; organizing reflection meetings every month for sharing lessons and learning; and facilitating regular participatory monitoring and evaluation events. These capacity building activities was focused on themes like leadership skills, group formation and strengthening,

farmer group's management, rural micro-finance, System of Rice Intensification production techniques, entrepreneurship development, lobbying and advocacy.

For some activities, experienced facilitators from MVIWATA technical team was used to deliver the knowledge to the target groups. Table below summarize the project implementation logical framework highlighting key intervention areas, objectively verifiable indicators, means of verification of achievements and possible assumptions predefined for the project to be successful.

Table 12: Project Implementation Logical Framework

Intervention Logic	Objectively Verifiable Indicators	Means of Verification	Assumptions
Overall Objective			
<i>To Improve paddy production through strengthening capacities of smallholder farmers on SRI and saving and credit</i>	<ul style="list-style-type: none"> • Monthly business profits • Ability for farmers to access to social basic needs 	<ul style="list-style-type: none"> • Baseline surveys reports • Impact assessment studies and end of project evaluation reports 	<ul style="list-style-type: none"> • Local government is supportive of livelihood improvement and willing to involve the community members in the decision making processes. • Other stakeholders especially MVIWATA are playing role the implementation. • Conducive cultural/traditional environment
<i>SO1: To build capacities of smallholder farmers of Igurusi on groups and networks formation, strengthening and leadership skills</i>			
Output 1	Objectively Verifiable Indicators	Means of Verification	Assumptions
<i>Smallholder farmers of Igurusi have initiated strong farmer groups and networks and are managing them</i>	<ul style="list-style-type: none"> • Committed and accountable leaders democratically elected 	<ul style="list-style-type: none"> • Progress Reports • Evaluation report 	<ul style="list-style-type: none"> • The local government is supportive to the project • Trained farmers are committed to the project

Intervention Logic	Objectively Verifiable Indicators	Means of Verification	Assumptions
<i>properly</i>	in place at the end of the project		
Activities			
1. Conduct capacity building workshop for 20 farmers on groups and networks formation and strengthening to increase their capability to defend their interest	At least 20 farmers are trained	<ul style="list-style-type: none"> • Workshop report • Project progress report 	Timely disbursement of financial contributions from partners (MVIWATA and farmers)
2. To strengthen of capacities of existing farmers groups on leadership and governance	At least 20 farmers are trained	<ul style="list-style-type: none"> • Number of farmer meeting conducted • Farmer group meetings report 	Timely disbursement of financial contributions from partners (MVIWATA and farmers)
3. To strengthening the capacities of farmers in lobbying and advocacy in order to increase their capability to defend their interest	At least 20 farmers are trained	<ul style="list-style-type: none"> • Workshop report • Project progress report 	Timely disbursement of financial contributions from partners (MVIWATA and farmers)
SO2: To build capacities of smallholder producer farmers of Igurusi on System of Rice Intensification, post harvest techniques business management and entrepreneurship skills			
Output 2	Objectively Verifiable Indicators	Means of Verification	Assumptions

Intervention Logic	Objectively Verifiable Indicators	Means of Verification	Assumptions
<i>Smallholder farmers of Igurusi have adopted SRI techniques for paddy crop and are actively participating in remunerative activities</i>	At least 70% of Igurusi residents are using SRI techniques and other agronomic practices in paddy production and 20% are engaged in business activities	<ul style="list-style-type: none"> Progress Reports Evaluation report 	Farmers are supportive to the project initiative
Activities			
1. Conduct capacity building workshop for 20 farmers on SRI and crop management techniques	At least 20 farmers are trained	<ul style="list-style-type: none"> Workshop report Project progress report 	Timely disbursement of financial contributions from partners (MVIWATA and farmers)
2. Conduct capacity building workshop for 20 farmers on entrepreneurship skills and business development	At least 20 farmers are trained	<ul style="list-style-type: none"> Training reports Project Progress reports 	Timely disbursement of financial contributions from partners (MVIWATA and farmers)
3. Conducting capacity building workshop for 20 farmers on post harvesting techniques and crop quality management	At least 20 farmers are trained	<ul style="list-style-type: none"> Training report Project Progress reports 	Timely disbursement of financial contributions from partners (MVIWATA and farmers)
SO3: To strengthen financial institution linkages for smallholder farmers of Igurusi for increased access to credit			
Output 3	Objectively Verifiable Indicators	Means of Verification	Assumptions

Intervention Logic	Objectively Verifiable Indicators	Means of Verification	Assumptions
<i>Smallholders farmers of Igurusi are linked to potential financial institution</i>	<ul style="list-style-type: none"> • Number of financial institution actors supporting farmers in Igurusi • At least one (1) financial institution sign an agreement with Muungano SACCOS 	<ul style="list-style-type: none"> • Project progress reports • Monitoring Evaluation reports 	Timely disbursement of financial contributions from partners (MVIWATA and farmers)
Activities			
1. Conduct capacity building workshop for 20 farmers on the use, management and maintenance of community owned financial institutions	At least 20 farmers trained	<ul style="list-style-type: none"> • Training report • Project Progress reports 	Timely disbursement of financial contributions from partners (MVIWATA and farmers)
2. Organize exchange one learning visit for 10 representative farmers to areas with similar project interventions for learning purposes	At least 10 farmers facilitated to in the field visit	<ul style="list-style-type: none"> • Field visit report • Project progress reports 	Timely disbursement of financial contributions from partners (MVIWATA and farmers)
3. Facilitate capacity building for 20 farmers on the lending services	At least 20 farmers trained	<ul style="list-style-type: none"> • Training report • Project progress reports 	Timely disbursement of financial contributions from partners (MVIWATA and farmers)

Intervention Logic	Objectively Verifiable Indicators	Means of Verification	Assumptions
4. Facilitate linkage of smallholder farmers to financial service providers	At least 20 farmers trained	<ul style="list-style-type: none"> • Training report • Project progress reports 	Timely disbursement of financial contributions from partners (MVIWATA and farmers)
SO 4: Project implementation plans and strategies are in Place to facilitate the research process			
Output 4	Objectively Verifiable Indicators	Means of Verification	Assumptions
<i>Project management and implementation strategies developed and in place</i>	Massive participation of the target community and other stakeholders in the project implementation	<ul style="list-style-type: none"> • Project report 	MVIWATA has provided full collaboration and support to the initiative
Activities			
1. Conduct initial contact with MVIWATA for familiarization with the organization and review of literature available	At least five staff of MVIWATA contacted	<ul style="list-style-type: none"> • Project progress reports 	Timely disbursement of financial contributions from partners (MVIWATA and farmers)
2. Conduct monthly and end of project monitoring and evaluation activities	Target group and project location identified	<ul style="list-style-type: none"> • Project progress reports • M&E reports 	Timely disbursement of financial contributions from partners (MVIWATA and farmers)
<ul style="list-style-type: none"> • Identification of project site and target group and conduct community need assessment of the target 	At least two key priority needs of the target community are addressed at the end of the project.	<ul style="list-style-type: none"> • Project Progress Reports • Evaluation report 	Timely disbursement of financial contributions from partners (MVIWATA and farmers)

Intervention Logic	Objectively Verifiable Indicators	Means of Verification	Assumptions
community			
<ul style="list-style-type: none"> Facilitate mobilisation and sensitization workshop for community members 	At least 50 farmers contacted and sensitized	<ul style="list-style-type: none"> Mobilization report 	Timely disbursement of financial contributions from partners (MVIWATA and farmers)
<ul style="list-style-type: none"> Facilitate participatory priority setting and planning workshop with community members 	At least one workshop organized for priority setting and planning	<ul style="list-style-type: none"> Training report Project Progress reports 	Timely disbursement of financial contributions from partners (MVIWATA and farmers)

4.3.2 Inputs

During the implementation process, the following inputs were provided to facilitate smooth implementation: technical staff with required expertise, time, financial resources, training materials including notebooks, ball pens, market pens, masking tapes, flip charts, venue for the training, transport and communication facilities and financial resources to cover for refreshments and day meals for participants during the training sessions. On other hand, electronic devices such as mobile phone and computer were used for communication and for preparation of training programmes and for recording and storage of the workshop proceedings. The contribution of inputs to the project was provided by MVIWATA (53.98%), farmer contributions (31.55%) and the contribution by the researcher (14.47%).

4.3.3 Staff Pattern

No project staffs were recruited for the purpose of implementing this project. All activities were implemented and facilitated by the researcher and MVIWATA project staffs who are based in Igurusi.

4.3.4 Project Budget

The project total budget was TZS 7,090,000.00 which was contributed by MVIWATA, the host organization who contributed TSH 3,913,000.00 (55.19%), the researcher who contributed 2,176,000.00 (30.69%) and local contributions by farmers mainly in kind, physical resources and cash money amounting to 1,001,000.00 (14.12%). The project budget covered costs related to transport, accommodation, meals, stationeries, venue, and per diems as well as printing of education materials. Here below is the detailed budget per activity.

Table 13: Total Project Budget

S/N	Activities	Total Budget	Contribution by MVIWATA	Contribution by the Researcher	Contribution by farmers
1	Conduct capacity building workshop for 20 farmers on groups and networks formation and strengthening to increase their capability to defend their interest	400,000.00	280,000.00	40,000.00	
2	Conduct capacity building workshop for 20 farmers on System of Rice Intensification production techniques for paddy	400,000.00	280,000.00	40,000.00	
3	Conducting capacity building workshop for 20 farmers on post harvesting techniques and crop quality management	400,000.00	280,000.00	40,000.00	
4	To strengthen of capacities of existing farmers groups on leadership and governance	0	0	0	
5	Conduct capacity building workshop for 20 farmers on entrepreneurship skills and business development	400,000.00	280,000.00	40,000.00	
6	Capacity building workshop for 20 farmers on formation and management of	400,000.00	280,000.00	40,000.00	

	community owned financial institutions				
7	Conduct capacity building workshop for 20 farmers on leadership skills	400,000.00	280,000.00	40,000.00	
8	Conduct capacity building workshop for 20 farmers on the lending services	400,000.00	280,000.00	40,000.00	
9	Organize exchange one learning visit for 10 representative farmers to areas with similar project interventions for learning purposes	1,805,000.00	1,263,500.00	180,500.00	
10	Facilitate capacity building for 20 farmers on the use saving and credit institutions and link them to network of financial institution through the existing MVIWATA SACCOS network	400,000.00	280,000.00	40,000.00	□□□□□□ □□□
11	Conduct initial contact with MVIWATA for familiarization with the organization and review of literature available	100,000.00	0	100,000.00	
12	Conduct monthly and end of project monitoring and evaluation activities	0	0	0	
13	Identification of project site and target group and	1,000,000.00	0	1,000,000.0	

	conduct community need assessment of the target community				
14	Facilitate mobilisation and sensitization workshop for community members and	585,000.00	409,500.00	175,500.00	
15	Facilitate participatory priority setting and planning workshop with community members	400,000.00	0	400,000.00	
	Total Project Costs	7,090,000	3,913,000	2,176,000	1,001,000

4.4 Project Implementation

The implementation of this project started effectively in October 2012. At total number of 15 activities were planned for implementation in order to achieve the planned objectives. However, up to July 2013 (the time of writing this report), only twelve (12) activities representing 80% out of 15 planned activities were implemented. The remaining three activities representing (20%) of total activities are supposed to be completed before end of July 2013. Activities that are not yet implemented are those related to capacity building on formation and management of community owned financial institutions, capacity building on post harvest handling as well as the final project evaluation. Following the above results, the budget that has been used for the implementation of activities up to July 2013 was TSH 6,274,650/= (88.5%). This section therefore provides a narration of activities that were implemented and the results achieved thereof.

Project Implementation Ghantt Chart

Table 14: The Project Implementation Plan Matrix

Outputs	Planned Activities	Implementation Timeframe (months) October 2012-July 2013									
		OC	NV	DC	JA	FB	MA	AP	MA	JN	JL
1. Smallholder farmers of Igurusi have initiated strong farmer groups and networks and are managing them properly	1 Conduct capacity building workshop for 20 farmers on groups and networks formation and strengthening to increase their capability to defend their interest										
	2 To strengthen of capacities of existing farmers groups on leadership and governance										
	3. To strengthening the capacities of farmers in lobbying and advocacy in order to increase their capability to defend their interest										
2. Smallholder farmers of Igurusi have adopted SRI production	1. Conduct capacity building workshop for 20 farmers on SRI and crop management techniques										

[illegible]

[illegible]

It compares the activities that were planned against the actual implemented ones with appropriate remarks on the implementation process in relation to the effectiveness and use of resources. Due to the fact that most of activities were targeting capacity building, a direct impact and/or changes resulting from the project intervention at beneficiary group may not be directly observed as it requires change in mindset and time for people to integrate the knowledge and skills acquired into their routine activities. Apart from narrative report of the activities implemented, this section provides also an indicative picture of how the project was managed in terms of time management and sequence of activities (Project Implementation Gantt Chart).

4.4.1 Project Implementation Report

During the implementation process, 20 farmers were capacitated on various aspects of paddy production and skills development ranging from leadership skills, group formation and strengthening, farmer groups management, System of Rice Intensification production techniques, entrepreneurship development, lobbying and advocacy. Other activities that were implemented are those related to preparation process of the research project to enable the researcher design and put in place proper mechanisms and strategies that contributed to the achievement of this project up to the level where it is now. The project implementation progress is described here below and per expected output.

4.4.1.1 Output 1: Smallholder Farmers of Igurusi Have Initiated Strong Farmers Groups and Networks and are Managing them Properly

Under this output, four capacity building activities were conducted to enhance the capacities of smallholder farmers on groups and networks formation and

strengthening. Conducted at different occasions, these activities involved a total of 20 representative farmers selected from six (6) villages that constitute Igurusi ward namely Igurusi, Ilolo, Majenje, Chamoto, Maendeleo and Lusese villages. Each village was represented by 3 representative farmers selected from different groups involved in paddy production.

After the training sessions, representative farmers who attended the training were supposed to go back and share the acquired knowledge and skills with their respective fellow group members so that many farmers can also apply that knowledge. At the end of the trainings, trained farmers were asked to develop own action plans that will be used for training other farmers and to integrate the knowledge into their activities. Other activities conducted to reach this output were targeting strengthening of capacities of existing farmers groups on leadership and governance.

Due to the fact that these activities fall under the term of reference and contract for MVIWATA project Officer in Igurusi, these activities were carried out on regular basis by the project officer as part of contribution of MVIWATA to the research project. As result from these interventions, all farmers groups in the project area have reviewed their organizational set up and now have new leaders. These activities were also supported by the ward and village government authorities as they directly relate to their current development programs for community empowerment being implemented through local district agricultural development plans (DADPs).

4.4.1.2 Output 2: Smallholder Farmers of Igurusi have Adopted System of Rice Intensification Production Techniques for Paddy and are Actively Participating in Remunerative Activities

Under this output, two out of three activities planned activities were implemented. These activities involved a total number of 20 smallholder farmers representing six villages of Igurusi ward (same as in the output1). Farmers were trained on System of Rice Intensification production techniques for paddy, post harvesting techniques and crop quality management. Due to the fact that these trainings were conducted before the harvesting season, farmers promised that the knowledge acquired on production system will be applied in the next season while that on post harvesting and quality management shall be applied immediately during the current harvesting season. The aim here was to enable farmers to acquire simple methods and techniques on post harvest management for paddy crop so that they can be able to stockpile their produce and wait until when the price is good for them to sale.

4.4.1.3 Output 3: Smallholders Farmers of Igurusi have Acquired Knowledge of Managing Financial Institution, Entrepreneurship and Business Development

The interventions under this output targeted to enhance smallholder farmers capacity on saving and credit, entrepreneurship and business development. A total of 20 farmers were trained on use and maintenance of saving and credit institutions especially the establishment, mobilizing saving and credit, entrepreneurship skills as well as business management skills. Muungano SACCO's has been linked with MVIWATA SACCO's network currently operated by MVIWATA to link smallholder producers from Igurusi and other Saving and credit actors to Network of

SACCO's already incorporated in MVIWATA saving and credit database. In addition to the training workshops, Muungano SACCO's was facilitated to enter into contract with CRDB bank and the SACCOS is now getting support of wholesale loan amounting 35 Millions which are supposed to be paid back for the coming five years.

4.4.1.4 Output 4: Project Management and Implementation Strategies are Developed

Prior to conducting the research, the researcher organized a series of contact meetings with MVIWATA leaders, MVIWATA management and technical staff to get clear picture on MVIWATA strategic directions and its main intervention areas. These interaction meetings allowed the researcher to discuss and agree with MVIWATA management about the project location and the target groups that shall be served through the project intervention. This decision came out as result from subsequent discussion as MVIWATA, an organization wanted to benefit also from the technical support provided by the researcher to her beneficiaries. It is from these negotiations that Igurusi ward of Mbarali district was selected as project intervention areas so that the project can provide an input to the ongoing project.

The next step that followed was to conduct a desk review of MVIWATA to understand in nutshell key interventions being carried by MVIWATA, achievements realized, and associated changes that have occurred in the communities where the projects are implemented. Together with the achievement made by MVWATA, the researcher tried also to learn from current challenges and failures encountered so that

they can serve as benchmark for developing new intervention strategies. It was learned that one of the challenges facing MVIWATA is how to ensure effective community participation in all stages of project cycle management. More effort is needed to increase community ownership, commitment and future sustainability of development programmes being implemented by MVIWATA. Another activity undertaken under this output was to conduct a participatory community needs assessment followed by mobilization and sensitization workshop and priority setting and planning workshops. The assessment involved MVIWATA project officer stationed in Igurusi, community representatives from Igurusi ward with equal representation of villages, village leaders and the researcher himself. The need assessment helped to identify major concerns, opportunities, weaknesses and strengths of Igurusi residents and the latter were used to develop strategic intervention plans implemented through this project to address the issues that emerged from the assessment.

4.4.2 Challenges Encountered During the Implementation Process

During the project implementation process, one of the most challenges encountered was negative farmers' perception and attitude developed towards new development intervention due to failed promises by some actors. As there are multiple actors involved in the development process, there are also so many objectives and ways of addressing a particular problem. However, all these actors are converging towards the same beneficiaries who are the farmers. In this case, farmers find themselves confused and overloaded with so many techniques, initiatives and tools sometimes

used or recommended by those actors. As result, farmers fail to know which might work well and help them to solve their problems.

In some villages under the project, such negative attitude towards new interventions was observed, and some community members were not scared to tell the researcher that they are tired of unrealistic and failed promises that never turn up, especially promises from politicians and government. The researcher was therefore obliged to liaise and work with village leaders and some pioneers from farmer groups to create a common understanding about the aim of the research, explaining that the research meant for academic purposes to help the student apply the skills and knowledge gained from the theoretical sessions. At the beginning of the process especially during the inception phase, this situation constituted a hindering factor for the researcher to get a good response from some farmers only due to the fact that the researcher was accompanied by some development staff from Mbarali district council and that we went there used the district vehicle. The reason behind this is that they don't want to lose much time and resources for projects that in most cases never be completed. Another challenge was associated insufficient resources capital, time and human capacities for implementing the project. The agreement with the Host Organization was to carry out the research in Mbeya region particularly in Igurusi Ward. The distance factor affected a bit the implementation process as the researcher was obliged to travel time to time to Igurusi from his resident town which is Mbeya. Meanwhile, the Host Organization was so kind to allocate some financial resources and transport facilities for the researcher and the Organization staff to support the implementation.

CHAPTER FIVE

5.0 PROJECT PARTICIPATORY MONITORING, EVALUATION AND SUSTAINABILITY

5.1 Introduction

Participatory Monitoring and Evaluation is a guiding tool and process for the supervision and assessment of the program/project performance and its impact on the target groups and beneficiaries. The PM&E should provide information that will enable the project implementers and its stakeholders to track progress of various interventions carried out and to enhance informed decision-making at all levels of implementation of programs/projects.

To ensure that participatory monitoring and evaluation is carried out effectively, a sufficient budget was allocated by the organization to facilitate the process. Monitoring and Evaluation is therefore needed to ensure effective and efficient implementation of planned policies, programmes, strategic plans or activities, A good monitoring and evaluation system should be able to assess, measure and evaluate the level of implementation, performance, and achievements of outputs, outcomes and impacts.

This chapter describes how the project was monitored and evaluated in order to learn from changes that happened as result from the project implementation process, be it achievements realized and failure encountered. It also highlights project sustainability measures and exit strategies undertaken to ensure continuity of the project intervention after phasing out and handed over to the community members.

5.2 Participatory Monitoring

Participatory Monitoring is the planned collection, analysis and dissemination of information by local stakeholders for the purpose of informing them of the progress of the process. The decision on the type of information to collect, how to collect it, how to analyze, and disseminate it, lies with the local stakeholders. Participatory Monitoring permits the target groups to say whether the process is working and benefits them or not. It helps stakeholders to learn from experiences and do better in future. In this project, participatory monitoring was used to keep track and report on the progress of the project implementation towards the achievement of the planned project objectives and goal. Participatory monitoring therefore should be viewed as an input that allows continuous adjustment of the program. Without adequate monitoring, it is impossible to estimate if a policy, program, or a project is effective.

5.2.1 Relationship between Monitoring and Evaluation

Monitoring and evaluation are closely related. They are mutually supportive of each other and equally important. Monitoring can provide qualitative and quantitative data using selected indicators, data that can serve as inputs to evaluation exercises. Evaluation also supports monitoring. It can serve as a source of lessons that can be applied in the development of conceptual or methodological innovations for use in refining the monitoring activity. In most cases, monitoring and evaluation serve the responsibility and accountability function through provision of critical information that demonstrates whether or not the policy, program, strategic plan or project satisfies the needs and priorities of the both the internal and external stakeholders and whether it has brought the desirable impact.

The prerequisites for effective monitoring and evaluation are baseline data, and indicators of successful performance and results. Monitoring and evaluation are of little value if a policy, program, strategic plan or project does not have clearly defined objectives and appropriate indicators for judging its success or failure. The lessons derived from monitoring and evaluation can improve the overall quality of ongoing and future implementation. Effective monitoring and evaluation provide feedback that is used to identify potential problems and success areas. Lessons learned during evaluation must be incorporated in reviewing planned future implementation.

5.2.2 Monitoring Information System

Monitoring is the systematic and continuous, sometimes periodic, collection of data as specified in the related indicator of specific activity/action (result) planned in project. It also includes routine evaluation done internally by MVIWATA management of an institution. During monitoring process, there are two types of information have to be distinguished:

- (i) Information related to the performance of the institutional as an operational unit. This largely originates from within and pertains to the monitoring of action /activities and results.
- (ii) Information related to the reaction of stakeholders of the project activities and the general context in which the project was implemented. This type of information usually originates from outside the project implementers. This activity focused on the monitoring of the impact on stakeholders and the monitoring of the context or external environment which underline the assumptions that were made when preparing the project intervention strategies

The aim of monitoring was to provide the basis for corrective actions to improve the design. Where properly conducted, monitoring can reveal early signs of problems in implementation. It enables project implementers to have control of what is going on, take timely action to deal with problems that arise and adjust the strategies to improve the efficiency, effectiveness and relevance of activity under consideration.

5.2.2.1 Monitoring System used in the Project

This project employed participatory monitoring system in which participatory methods and tools were applied. Monitoring was carried throughout the project implementation. Participatory monitoring covered activities implementation, assessment of farmers capacities to integrate the knowledge and skills acquired through trainings and other capacity building activities on SRI, organization development and strengthening, leadership skills, entrepreneurship and business skills development. The collected monitoring information was synthesized, analyzed and the results used for making various decisions related to the project. Both qualitative and quantitative information was collected for monitoring this project.

5.2.3 Participatory Monitoring Methods used to Engage Community in the Monitoring Process

To keep an eye on the progress of the project activities, five (5) participatory methods were used in monitoring the project implementation process. The methods used include physical observation; field visit in the farm field; interviews with beneficiaries (formal and informal); meetings and review of feedback reports from farmer groups. Observation and visits were used assess changes in farmers capacities

to apply improved agronomic practices such as land preparation methods, harvesting and storage. Observation was also used to assess quality management of the crop from field to market. On the other hand, review of reports field visit, daily, weekly and meeting was used to monitor the implementation process. Improvement of farmer's capacity in group management, leadership, business management was assessed through monthly meetings and reports. Both formal and informal interviews were used to collect information on the crop quality management and farmers participation.

Table 15: Participatory Monitoring and Evaluation Plan

What was Monitored	Performance indicator	Results/ achievements observed	Remarks
Implementation of the activities that were planned	At least 20 farmers are trained	At total number of 20 farmers from Igurusi ward were trained on group and network formation and strengthening, SRI and post harvesting techniques, leadership, business management and entrepreneurship skills development	
	Number of strong farmer groups	Participating famer groups have revised their organizational management and have elected new leaders	
	At least 10	10 farmers were facilitated	

What was Monitored	Performance indicator	Results/ achievements observed	Remarks
	farmers facilitated to in the field visit	to participate in a three day field learning visit to Ipatagwa scheme in Mswiswi ward	
	At least five staff of MVIWATA contacted	During the preparation phase, the researcher managed to have meetings with MVIWATA Executive Director, Finance and Administration Officer, the Programme Office, heads of marketing, microfinance and lobbying and advocacy officer and the project staff in Igurusi ward.	The support provided by MVIWATA to the researcher has greatly contributed to the achievement made so far
	Target group and project location identified	The identified project site and the target group are the same that were agreed upon during the preparation phase	
	At least two key priority needs of the target community are addressed at the end of the project.	Two priority areas that constitute the basis for this project development were identified during participatory community priority setting that was held at Igurusi	

What was Monitored	Performance indicator	Results/ achievements observed	Remarks
	At least 50 farmers contacted and sensitized	The sensitization workshop was attended by a total of 50 farmers from all villages of Igurusi ward	
	At least one workshop organized for priority setting and planning	A two day workshop was organised for feedback, sensitization and participatory priority setting and planning	Participation priority setting has increased community participation
Stakeholders and community participation in the project	Amount of contribution from partner organizations	All contributions have been provided as per planned budget. It was observed that contributions from farmers may go beyond higher than it was proposed. The district has joined the project through providing technical support during training	and ownership pro the project, and also increased commitment of other partners to the project
Finance: Resources utilization and effectiveness	Financial report indicating expenditures and budget planned	For proper financial utilization, the money that was allocated by MVIWATA was provided through imprest acquisition. In due implementation, no accumulation of imprest was allowed.	Good financial management systems have been established to ensure proper resources utilization

What was Monitored	Performance indicator	Results/ achievements observed	Remarks
Time management:	Activity implementation report indicating time frame	The mid-evaluation report shows that activities were implemented as per planned timeframe	Timely implementation process was facilitated by timely disbursement of funds from partners

5.3 Participatory Evaluation

Participatory Evaluation is the process whereby the communities, beneficiaries, and target groups take lead in planning, carrying out and reporting the results of their own process. Field staff and other outsiders only facilitate and support their efforts. Participatory Evaluation is not the classical end of phase, end of project evaluation, where the final judgment and verdict is being made. It entails reflection, assessment, analysis of what happened in past in order to make adjustments. It encourages individuals, groups, projects, and organizations to stop and reflect back through a series of breaks/reflection sessions.

The outcomes of Participatory Evaluation can complement and enrich external end of phase evaluations. During the implementation of this project, participatory evaluation was conducted to assess systematically and objectively the relevance, performance and success of projects. The process was undertaken for a variety of reasons including to judge the worth of activities that were undertaken; to estimate the usefulness of attempts to improve them; to assess the utility of the project

intervention strategies and initiatives; and to increase the effectiveness of management of the project. The project evaluation was conducted on periodical basis after every three months using monitoring data. The criteria for evaluation were based on the strategic objectives in the pre-determined in project. It comprised of physical observation and interviews by the researcher on beneficiaries and other stakeholders. Therefore, the evaluation went beyond the implementation of activities to include the outcome and impact of the planned results.

Table 16: Project Performance Indicators

Level of Project Evaluation	Performance Indicators
Overall Objective: To contribute to improved paddy production in Igurusi ward through strengthening the capacities of smallholder farmers in System of Rice Intensification and Saving and credit	<ul style="list-style-type: none"> • Monthly business profits • Ability for farmers to access to social basic needs
Output 1: <i>Smallholder farmers of Igurusi are managing groups and networks properly</i>	<ul style="list-style-type: none"> • Committed and accountable leaders democratically elected in place at the end of the project
Activities	
Conduct capacity building workshop for 20 farmers on groups and networks formation and strengthening to increase their capability to defend their interest	At least 20 farmers are trained
Conduct capacity building workshop for 20 farmers on System of Rice Intensification (SRI)	At least 20 farmers are trained
Conducting capacity building workshop for	At least 20 farmers are trained

Level of Project Evaluation	Performance Indicators
20 farmers on post harvesting techniques and crop quality management	
To strengthen of capacities of existing farmers groups on leadership and governance	Number of strong farmer groups
Output 2: <i>Smallholder farmers of Igurusi have adopted System of Rice Intensification for paddy crop and are actively participating in remunerative activities</i>	At least 70% of Igurusi residents are using SRI and other agronomic practices in paddy production and 20% are engaged in business activities
Activities	
Conduct capacity building workshop for 20 farmers on System of Rice Intensification	At least 20 farmers are trained
Capacity building workshop for 20 farmers on System of Rice Intensification	At least 20 farmers are trained
Conduct capacity building workshop for 20 farmers on post harvest handling and crop management techniques	At least 20 farmers are trained
Output 3: <i>Smallholders farmers of Igurusi are linked to potential financial institution</i>	<ul style="list-style-type: none"> • Number of financial institution actors supporting farmers in Igurusi • At least one (1) financial institution sign an agreement with Muungano SACCOS
Activities	
Conduct capacity building workshop for 20 farmers on the use and management of community based financial institutions	<ul style="list-style-type: none"> • At least 20 farmers trained

Level of Project Evaluation	Performance Indicators
Organize exchange one learning visit for 10 representative farmers to areas with similar project interventions for learning purposes	<ul style="list-style-type: none"> At least 10 farmers facilitated to in the field visit
Facilitate capacity building for 20 farmers on the lending services and linking farmers with financial service providers	<ul style="list-style-type: none"> At least 20 farmers trained
Output 4: <i>Project management and implementation strategies developed and in place</i>	<ul style="list-style-type: none"> Massive participation of the target community and other stakeholders in the project implementation
Activities	
Conduct initial contact with MVIWATA for familiarization with the organization and review of literature available	<ul style="list-style-type: none"> At least five staff of MVIWATA contacted
Conduct monthly and end of project monitoring and evaluation activities	<ul style="list-style-type: none"> Target group and project location identified
Identification of project site and target group and conduct community need assessment of the target community	<ul style="list-style-type: none"> At least two key priority needs of the target community are addressed at the end of the project.
Facilitate mobilisation and sensitization workshop for community members and	<ul style="list-style-type: none"> At least 50 farmers contacted and sensitized
Facilitate participatory priority setting and planning workshop with community members	<ul style="list-style-type: none"> At least one workshop organized for priority setting and planning
Other things that were evaluated	
Stakeholders and community participation in the project	<ul style="list-style-type: none"> Amount of contribution from partner organizations
Finance: Resources utilization and effectiveness	<ul style="list-style-type: none"> Financial report indicating expenditures and budget

Level of Project Evaluation	Performance Indicators
	planned
Time management:	<ul style="list-style-type: none"> • Activity implementation report indicating time of implementation

5.3.1 Participatory Evaluation Methods

The project was evaluated in a participatory manner. Researcher, participating community members and other stakeholders were given chance reflect on the past project performance and achievements and failures and in making important decisions about the future of the project. The methods that were used included physical observations and interviews with beneficiaries and other actors who are directly or indirectly affected by the project. The evaluation process was conducted by the researcher himself, MVIWATA project officer posted in Igurusi ward, MVIWATA Management staff and Board Members from head office in Morogoro. Two types of evaluation process were used. Monthly evaluation which was combined with monitoring activities and mid – term project evaluation to look at the implementation of activities, immediate results and outcome realized by the project.

The evaluation tried also to assess the project in CED by measuring outcomes derived from the project such as new knowledge and skills gained by community members, and the extent to which the knowledge has contributed to income increase. Additionally, the evaluation looked for guidance and recommendation needed to strengthen and improve the project, make it sustainable and enhance its performance for the benefit of the target community. Three participatory tools were used in

evaluating the progress of this project activity. Among those were: checklists, effective listening, and use of monitoring reports. While checklists were used in the formal face-to-face interviews, appreciative inquiry, effective listening and looking were used to get feedbacks from the evaluation meetings.

Summary of Project Monitoring and Evaluation to date (June 2013)

Table 17: Summary of Project Monitoring and Evaluation

What was Monitored	Performance indicator	Results/ achievements observed	Remarks
Implementation of the activities that were planned	At least 20 farmers are trained	At total number of 20 farmers from Igurusi ward were trained on group formation and strengthening, SRI and post harvesting techniques, leadership, business management and entrepreneurship skills development	
	Number of strong farmer groups	Participating farmer groups have revised their organizational management and have elected new leaders	
	At least 10 farmers facilitated in the field visit	10 farmers facilitated to participate in a three day field learning visit to Ipatagwa scheme in Mswiswi ward	
	At least five staff of MVIWATA contacted	During the preparation phase, the researcher managed to have meetings with MVIWATA Executive Director, Finance and Administration Officer, the Programme Office, heads of marketing, microfinance and lobbying and advocacy officer and	The support provided by MVIWATA to the researcher has greatly contributed to the achievement made so far

What was Monitored	Performance indicator	Results/ achievements observed	Remarks
		the project staff in Igurusi ward.	
	Target group and project location identified	The identified project site and the target group are the same that were agreed upon during the preparation phase	
	At least two key priority needs of the target community are addressed at the end of the project.	Two priory areas that constitute the basis for this project development were identified during participatory community priority setting that was held at Igurusi	
	At least 50 farmers contacted and sensitized	The sensitization workshop was attended by a total of 50 farmers from six villages of Igurusi ward	
	At least one workshop organized for priority setting and planning	A two day workshop was organised for feedback, sensitization and participatory priority setting and planning	Participation priority setting has increased community participation and ownership pro the project, and also increased commitment of other partners to the project
Stakeholders and community participation in the project	Amount of contribution from partner organizations	All contributions have been provided as per planned budget. It was observed that contributions from farmers may go beyond higher that it was proposed. The district has joined the project through providing technical support during training	
Finance: Resources utilization and effectiveness	Financial report indicating expenditures and budget planned	For proper financial utilization, the money that was allocated by MVIWATA was provided through imprest acquisition. In due	Good financial management systems have been established to ensure proper resources

What was Monitored	Performance indicator	Results/ achievements observed	Remarks
		implementation, no accumulation of imprest was allowed.	utilization
Time management:	Activity implementation report indicating time of implementation	The mid-evaluation report shows that activities were implemented as per planned timeframe	Timely implementation process was facilitated by timely disbursement of funds from partners

5.4 Project Sustainability

This section describes the sustainability plans for the project that have been developed to ensure that the project continues and sustains after phasing out. It highlights precautionary measures that have been undertaken to ensure that the outcomes and best practices from the project will remain for the benefit of Igurusi resident's regardless possible changes that may occur or as result from the end of external funding support from MVIWATA, the researcher or any other development partners who may came in later. The project sustainability has taken into consideration the following aspects: social sustainability, economic sustainability, institutional sustainability, and environmental sustainability both in short and long term perspectives.

5.4.1 Economic and Financial Sustainability

The development goal of this project was to contribute to improve Paddy Production by smallholder farmers through capacity building in SRI and saving and credit. To

achieve this objective, a total number of 20 smallholder farmers representing Igurusi ward were acquainted with skills on entrepreneurship and business development especially on System of Rice Intensification and the use of saving and credit association for improving paddy production. These interventions into increased capacities for farmers on business management and SRI and participation into more and sustainable remunerative activities to increase money income. At the end of the project, participating farmers were expected to participate in locally owned financial institutions such savings and credits societies (SACCOS) both formal and informal that will enable them to access easily to financial means that can enable them to acquire the basic needs and solve their problems without selling their crop at lowest price, the prevailing situation. Anticipated local fundraising mechanisms have been designed whereby local financial institutions will get support from monthly farmer contributions that will be determined by group members themselves.

This project creates wealth to both project owners and paddy producers in Igurusi. Igurusi residents' wealth shall be created through the profit accrued from selling sufficient quantities and quality of rice/paddy and by initiating small and medium businesses and saving and credits facilities in the wards where more farmers shall get access to financial resources to undertake economic activities.

5.4.2 Environmental Sustainability

The strengthening small holders farmers' capacities on SRI and saving and credit for paddy growers project is a capacity building project aiming to impart knowledge and skill to smallholder farmers from Igurusi ward on System of Rice Intensification,

quality management, business skills and entrepreneurship skills development. The project promotes System of Rice Intensification techniques and saving and credit that are sustainable and environmental friendly. There is no environmental hazard from by-products were brought from this project that could lead to environmental destruction as there are no excessive industrial chemicals that were used by farmers in producing paddy crop.

5.4.3 Social Sustainability

Social Sustainability is the core element of Sustainability. Some may argue differently, but essentially sustainability is about creating and maintaining quality of life for people. Financial and Environmental factors are important, but they are both means to the end, rather than ends in themselves. Therefore, the fact that this project has put in place mechanisms for financial and environmental sustainability, the same strategise has facilitated the project attain social sustainability. Once beneficiaries and surrounding communities will have increased the knowledge on SRI and business management they will likely be able to increase production which at the end will result into increased income and improved livelihood.

By doing so, the community will be able to access basic social needs such as education for their children, health services, communication and transport facilities. They will be able to link with other places and different stakeholders where they may lean and acquire new knowledge of doing things differently. As far as there is no sign of conflict in the society within the project area, we can conclude that the project is socially sustainable. This can be explained by the fact that so far, the

project has demonstrated increased community participation, ownership, commitment and contribution to the project.

5.4.3 Institutional Sustainability

The presence of strong farmer groups and networks with committed and accountable leadership to coordinate the project activities at community level is one of the aspects that demonstrate the existence of the institutional sustainability.

CHAPTER SIX

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter provides a summarized description of the findings from the participatory needs assessment, literature review and the lessons learnt from the project implementation process. It also highlights key challenges, and opportunities that were identified during the implementation. Together with the reasons that guided the researcher to opt for this project and the way it was implemented, this chapter will also provide a summary of the outcomes that emerged as result from the project as well as the exit strategies that were implemented to ensure the project sustainability. In this chapter, the author will discuss in brief the experience gained from the project and therefore draw some recommendation on the way forward, particularly what should be tried out by other scientist and development actors who may be willing to address similar problems.

6.2 Conclusions

The “Improving Paddy Production through Strengthening Capacities of Smallholder Producers on System of Rice Intensification and saving and credit” is a research project that was implemented from October 2012 in Igurusi ward, Mbarali district of Mbeya Region. The overall objective of the project was to improve paddy production through capacity building of farmers in SRI and saving and credit. Igurusi residents are among so many Tanzanian farmers faced with a number of challenges including inadequate skills on the production systems of paddy, quality management and post harvesting techniques, entrepreneurship and business skills required for better

marketing of their produce. In addition to that they are faced with a challenge of lack of reliable saving and credit. Due to this situation, farmers in Igurusi are obliged to use locally seeds from previous season and result into low production outputs.

To identify this challenge, the researcher conducted a participatory community needs assessment to assess the social economic conditions of people living in Igurusi. The assessment employed different participatory research methods for data collection that enabled the researcher to acquire both primary and secondary data. While secondary data were collected from review of available literature, primary data were collected by using various methods including field visits to appreciate community initiatives through observation, interviews and focus group discussions whereby both qualitative and quantitative techniques were used for data collection.

The data obtained from the assessment was synthesized, and analyzed to get meaningful interpretation which was used to discuss and interpret the findings. For more accuracy, suitable computer software was selected for analyzing the data with respect to the objectives set for the study. Through assessment, it was observed that Igurusi community members have a good knowledge on the current problems that they are faced with. The most challenge for them is the lack of adequate knowledge to set up their own priorities and strategies for solve these problems. Another challenge observed was the current poverty incidence and lack of access to financial resources to support the implementation of community priority actions.

It was observed that if community members are given good chance for participation, they are likely capable to contribute to the identification of the real needs/problem

that provide good entry point for developing a project that the community can own and manage for increased sustainability. Again, effective involvement and participation of community members in project design and implementation allowed for local contribution from community resources to address the identified problem. What is needed is the use of appropriate participatory methods and tools and facilitation skills that allows effective community participation in the process.

The community need assessment enabled the researcher and community members to clearly identify the real community challenges, factors influencing the challenges and community assets that are available within the community. Igurusi residents were able not only to identify a number of problems but also available opportunities and proposed the way the challenges can be addressed. The lack of access to reliable saving and credit for agro produce and inadequate knowledge and skills for farmers to undertake remunerative activities especially lack of reliable saving and credit were identified as core problems hindering social economic development and livelihood improvement for smallholder farmers in Igurusi ward.

The information gathered through participatory needs assessment was complemented by theories available into different literature. The empirical review supported the hypothesis that saving and credit related interventions are required to improve agricultural production. It was learned that facilitating farmers' access to reliable saving and credit has generated a lot of benefits for smallholder farmers in terms of skills development in entrepreneurship skills development and business management, leadership skills and price negotiation skills.

Farmers with access to saving and credit were able to buy inputs, at what market and price to sale their produce and at what time to sale their produce. Even though, it was observed that there is no single mode for improving paddy production through facilitating saving and credit services for agro produces. An integration of methods is required if you want to be successful. Therefore, a holistic approach is needed to promote saving and credit and enterprise development, to look at the whole range of saving and credit constraints so as to improve the terms on which farmers participate in saving and credit. Currently, agricultural production and saving and credit is among the key national priorities that have gained strong institutional and policy support to reduce income poverty in Tanzania. Rice is among high value crops being promoted for marketing in many parts of Tanzania as a cash crop. With the available conducive policy environment for the production and marketing of rice in the country, more efforts should be invested in improving its production. To achieve this objective, smallholder producer farmers have to be facilitated and capacitated to manage small and medium scale production projects in the rural areas where paddy crop is being produced.

More effort is required to facilitate them access to reliable saving and credit so that they can get multiple options on what crop to plant and at what time, at what market to sale their produce and at what time. To achieve effective farmers' access to saving and credit as a mean to improve production leading to improved livelihood and income, a holistic approach is needed to promote saving and credit and enterprise development, and thus should consider the whole range of saving and credit constraints so as to improve the terms on which farmers participate in the market.

The project implementation life was 10 months starting from October 2012 to July 2013 and a total of ten (10) capacity building and five (5) preparatory and monitoring and evaluation activities were implemented to deliver the following expected products and outputs.

To implement these activities, The project total budget was TZS 7,090,000.00 which was contributed by MVIWATA, the host organization who contributed TSH 3,913,000.00 (55.19%), the researcher who contributed 2,176,000.00 (30.69%) and local contributions by farmers mainly in kind, physical resources and cash money amounting to 1,001,000.00 (14.12%). mainly in kind, physical resources and some cash money. The implementation started effectively in October 2012. At total number of 15 activities were planned for implementation in order to achieve the planned objectives.

However, up to July 2013 (the time of writing this report), only twelve (12) activities representing 80% out of 15 planned activities were implemented. The remaining three activities representing (20%) of total activities are supposed to be completed before end of July 2013. Activities that are not yet implemented are those related to capacity building on formation and management of community owned financial institutions, capacity building on post harvest handling as well as the final project evaluation. Following the above results, the budget that has been used for the implementation of activities up to July 2013 was TSH 6, 274, 650/= (88.5%).

During the implementation process, 20 farmers were capacitated on various aspects of paddy production and skills development ranging from leadership skills, group

formation and strengthening, farmer groups management, SRI techniques, entrepreneurship development, rural financial institution management, business management and post harvest handling techniques and crop management techniques. Other activities that were implemented are those related to preparation process of the research project to enable the researcher design and put in place proper mechanisms and strategies that contributed to the achievement of this project up to the level where it is now.

To keep an eye on the progress of the project activities, five (5) participatory methods were used to monitor and evaluate the project implementation process. The methods used include physical observation; field visit in the farm field; interviews with beneficiaries (formal and informal); meetings and review of feedback reports from farmer groups. Observation and visits were used to assess changes in farmer's capacities to apply improved agronomic practices such as land preparation methods, post harvesting and storage techniques. Observation was also used to assess quality management of the crop from field to market. On the other hand, review of field visit, daily, weekly and meeting reports was also used to monitor evaluate the project implementation process and associated outcomes.

Improvement of farmer's capacity in group management, leadership, business management and price bargaining power were also assessed through monthly meetings and activity reports. Both formal and informal interviews were used to collect information on the crop quality management and farmers participation into remunerative activities. The presence of strong farmer groups and networks with

committed and accountable leadership to coordinate the project activities at community level constitutes one of the aspects that demonstrate the project sustainability in social, economical, institutional and environmental terms.

6.3 Recommendations

In order to successfully and sustainably promote increase in production of paddy/rice as potential alternative cash crop to improve the livelihood and income for smallholder producer farmers, there so many recommendations that should be seriously considered. Together with project related recommendations, Hereunder are the recommendation made in this regards:

- (i) In order to be successful when planning for a similar project, the researcher should make sure that there is effective and gender balanced community participation in the whole process starting from community needs assessment, priority setting and planning, implementation and monitoring and evaluation of the project outcomes.
- (ii) In order to attract more consumers and realize more benefits from production of paddy, quality management needs to take care of. Most of small holder farmers lack knowledge and adequate skills on quality management as part of value addition process. Therefore, there is a need for more capacity building on entrepreneurship skill and business management so that farmers can sale rise of good quality to meet consumer preferences.
- (iii) Through the experience gained from this project, time was one among major factors that were likely to affect the achievement of intended results. It is therefore recommended to allocate more time for the design, implementation

and follow up of the outcomes from the project. This is because the experience shows that it is very difficult to assess and realize a direct impact from a capacity building project in short term period as the outcomes depend much on the level of mindset change of beneficiaries, a matter of what much time is required to assess how the trained people have changed and managed to integrate the acquired knowledge into their daily programmes.

- (iv) Due to the fact that there is no single mode adequate for improving paddy production through facilitating saving and credit, an integration of methods is required to be successful. Therefore, a holistic approach is recommended to promote saving and credit. The approach to be used should be able to look at the whole range of financial services constraints so as to improve the terms on which farmers participate in the saving and credit.

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APPENDICES

Appendix I: Community Needs Assessment for Igurusi Ward of Mbarali District

Household Survey Questionnaire no:.....

Interview date:.....

1. Respondent's age:.....

2. Respondent's Sex:
 - (a) Male.....
 - (b) Female.....

3. Marital status:
 - (a) Married.....
 - (b) Widow.....
 - (c) Single.....
 - (d) Divorced

4. Respondent Village:.....

5. What is your main daily activity?
 - (a) Agricultural activities
 - (b) Business

6. Which crop(s) do you grow mainly?
 - (a) Maize
 - (b) Beans
 - (c) Paddy
 - (d) Sunflower
 - (e) Others (list).....

6. What types of livestock are you keeping (Indicate the number of animals)
- (a) 6.3 cattle
 - (b) 6.4 Goat
 - (c) 6.5 Sheep
 - (d) 6.6 Chicken,
 - (e) 6.7 Ducks,
 - (f) 6.8 Pig
 - (g) 6.9 Others mention.....
7. What kind of off-farming activities do you carry out? (list)
-
-
8. Which crop(s) do you grow mainly?
- (a) Maize
 - (b) Beans
 - (c) Paddy
 - (d) Sunflower
 - (e) Others (list).....
9. What kind of off-farming activities do you carry out? (list)
-
-
10. What type of agriculture do you practice?
- (a) Rain dependent agriculture
 - (b) Irrigation agriculture
 - (c) Both depending on landscape
11. What type of cropping systems are you practicing?
- (a) Crop rotation
 - (b) Mono cropping

- (c) Mixed cropping
- (d) Mixed cropping with animal husbandry
- (e) Animal husbandry
- (f) Agroforestry (mixture of crops and trees)

12. Do you participate in community work?

- (a) Yes
- (b) No

13. Reasons for your answer:

.....

13. Who makes decision in your community?

- (a) Leaders
- (b) Village assembly

14. How can you rate the quality of your village leadership?

- (a) Highly satisfactory
- (b) Moderately satisfactory
- (c) Satisfactory
- (d) Not satisfactory
- (e) Highly unsatisfactory

(f) Reasons for your answer:

15. Do you have a village plan?

- (a) Yes
- (b) No
- (c) If yes, who developed it?

16. What are your village development priorities?

.....

.....

17. What are the current social services providers in your village village?

.....

.....

18. What are the current financial services providers in your village area?

.....

.....

19. What are the challenges in financial services provision in your village

.....

.....

20. Is there any NGO's operating in your village?

(a) Yes

(b) No

(c) If yes list.....

21. What are your main sources of income?

.....

.....

22. Do you own any business?

(a) Yes

(b) No

(c) If yes, what type of business do you own?

.....

.....

23. What is your average cash income per year?
.....
.....
24. What are the main uses of your income?
.....
.....
25. Are people cultivating close to the sources of water?
(a) Yes
(b) No Reasons.....
26. Is there village environmental committee?
(a) Yes
(b) No
(c) Not aware
27. Does a village have a preserved forest?
(a) Yes
(b) No
(c) Not aware
28. Do you have any environmental protection bylaws in the ward?
(a) Yes
(b) No
(c) Not aware
29. What types of natural resources do you have in the area?
.....
.....
.....

Thank you very much for your cooperation

Appendix II: Focus Group Discussion checklist

1. In what ways is the community of Igurusi involved in village development activities?
2. What are the opportunities and challenges that face you in paddy production?
3. What has motivated the community of Igurusi to resume the production of Paddy?
4. In what ways does your community preserve and conserve the environment?
5. What are the challenges in financial services provision?
6. What are the challenges in using water for irrigation?

Appendix III: Application Letter for Request To Work with Paddy Smallholder Producers in Igurusi Ward

Elimeleck P. Akyoo

P.O.BOX 825

Mbeya

30/04/2012

MWENYEKITI

Muongano SACCOS

P.O.BOX 816,

Mbarali

Ndugu,

YAH: MAOMBI YA KUFANYA SEHEMU YA MAFUNZO KATIKA SACCOS YA MUUNGANO

Kichwa cha habari chahusika.

Mimi ni mwanafunzi ninayesoma shahada ya pili katika fani ya maendeleo ya jamii na uchumi katika chuo kikuu Huria. Kama sehemu ya kukamilisha masomo yangu naomba nafasi ya kufanya sehemu ya masomo yangu ya mafunzo kwa vitendo katika SACCOS ya Muungano.

Katika mafunzo hayo ya vitendo, nitapenda kushiriki pamoja nanyi katika kutambua mahitaji ya maendeleo ya Igurusi na baadae tuangalie kwa pamoja namna ya kukabiliana na changamoto zitakazojitokeza baada ya kuchambua fursa na mahitaji kwa maendeleo endelevu.

Ninategemea ushirikiano wenu

Wenu katika maendeleo

Elimeleck P. Akyoo

Nakala: Mkurugenzi Mtendaji – MVIWATA

Appendix IIV: Estimate Budget for One Day Workshop for 20 Participants

Participants	No. of Participants /items	No. of days	Cost per unit	Total cost
Travel costs (researcher/MVIWATA staff)	2	2	5,000.00	20,000.00
Return transport costs from Ipagwata to Igurusi	1	1	5,000.00	5,000.00
Subsistence allowance for the researcher	1	3	65,000.00	195,000.00
Meals and refreshments	20	1	3,000.00	75,000.00
Conference Hall	1	1	15,000.00	15,000.00
Writing pads	22	1	1,200.00	26,400.00
Ball pens	22	1	600.00	13,200.00
Markers pens	2	1	7,000.00	14,000.00
Masking tape	3	1	800.00	2,400.00
Flip charts	2	1	7,000.00	14,000.00
Printing & photocopy of education materials	1	1	20,000.00	20,000.00
Total budget				400,000

Appendix V: Estimate Budget for a Three Day Field Visit for 10 Participants

Participants	No. of Participants /items	No. of days	Cost per unit	Total cost
Return transport costs from Igurusi to Ipagwata	11	2	10,000.00	110,000.00
Subsistence allowance for MVIWATA staff	1	3	65,000.00	195,000.00
Subsistence allowance for farmers	10	3	25,000.00	750,000.00
Costs for hiring on car Land cruiser for 3 days	1	3	250,000.00	750,000.00
Total budget				1,805,000