

**IMPROVING LIVELIHOODS OF SMALLHOLDER PADDY PRODUCERS  
BY STRENGTHENING THEIR CAPACITIES IN PACKAGING AND  
MARKETING, A CASE OF MATUFA VILLAGE IN BABATI DISTRICT**

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

**2014**

**CERTIFICATION**

I, undersigned Shungu certify that, I have read and hereby recommend for the acceptance by the Open University of Tanzania a Dissertation titled **“Improving livelihoods of smallholder paddy producers by strengthening their capacities in packaging and marketing”-: A case of Matufa village in Babati district**” 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. Hamidu Shungu**  
(Supervisor)

.....

Date

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**DECLARATION**

I, **Terevaeli Barakael**, do hereby declare to the Senate of Open University of Tanzania that this project is my own original work, and that it has not been submitted for the similar degree in any other University.

.....

Signature

.....

Date

**DEDICATION**

To my beloved parents Terevaeli Pallangyo and Esther Terevaeli, my beloved Uncle Elimeck Akyoo, my friend Christer Tenga and the entire family for their courage, patience and prayers during my undertaking of the study. May almighty God bless you.

## **ACKNOWLEDGEMENT**

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## **ABSTRACT**

A project with an objective of improving livelihoods of smallholder paddy producers by strengthening their capacities in packaging and marketing was implemented in Matufa village in Babati district from June 2013 to December 2013. The project was initiated following a participatory community needs assessment carried out in the village by the researcher, host CBO and Matufa village community. The needs assessment was guided by the following specific objectives; to obtain information which will help to improve livelihoods of small holder paddy farmers in Matufa village by increasing marketability of their farm products, to guide small holder paddy farmers in Matufa village in creating a good packaging system for their products in order to improve marketing, to develop participatory intervention strategies aimed at solving issues aroused during community needs assessment. The findings revealed among other things that, the Matufa village community was faced with an absence of village health centre, poor irrigation infrastructures, lack of reliable saving and credit services, poor market for produced crops, absence of a secondary school in the village and unavailability of agricultural implements. Among all the identified problems poor markets for produced crops was ranked as a major problem which required immediate intervention. Following the findings a participatory strategy for improving marketability of produced crops was developed and implemented by training farmers in marketing skills and packaging techniques. Farmers were also enabled to participate in various exhibitions to market their packed products.

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**LIST OF ABBREVIATIONS**

ACT	Agricultural council of Tanzania
AMSDP	Agricultural marketing system developing program.
BRAC	Bangladesh rural advancement committee
CBO	Community based organization.
FMP	First mile project.
GDP	Gross domestic product.
IFAD	International fund for agriculture development.
MVIWATA	Mtandao wa vikundi vya wakulima Tanzania.
PRIDE	Promotion of rural initiative and development enterprise.
RIDC	Rural livelihood Development Company
SAGCOT	Southern Agricultural growth corridor of Tanzania.
TAP	Tanzania agricultural partnership.
URT	United republic of Tanzania.
VICOBA	Village community bank.

## CHAPTER ONE

### 1.0 INTRODUCTION

#### 1.1 Background Information

As defined by McCaslin and Tibeziinda, (1997) needs assessment is a systematic process for establishing priorities and making decisions on project planning, development and operations. It intends to determine and address needs or existing gaps between the current condition and the desired condition or wants. Community needs assessment involves asking community members what they see as the most important need for them and the obtained results are used as a guide for future intervention actions. Usually the needs that are highly rated are the ones that get addressed.

Community needs assessment is conducted so as to identify how people rank issues, problems and opportunities in order of importance and urgency. It also help to determine community support for initiatives and end speculation about what people real want. Wcmcaa.org,(2013) Community needs assessment helps to identify the most important needs in community and hence act as a basis for accessing, planning and creating strategies to meet those needs in a most effective way possible. Community needs assessment in Matufa village was conducted through four steps. In the first step the area was visited and interviews with key stakeholders were done. In the second stage data collection through participatory methods like questionnaires, observation, and focus group discussion were conducted. Finally the collected data were coded and analyzed using SPSS and the results were presented to the community.

## **1.2 The Matufa Village Community Profile**

It is necessary to understand the environment, traditions, economic activities, and general characteristics of an area before conducting any community needs assessment for your assessment to be effective. It is for this reason the Matufa village community profile was studied before the community needs assessment was conducted. The activity was carried out through observation, interviews and documentary review and the obtained results are presented below;

### **1.2.1 Location**

Matufa village is found in Magugu ward which is located north of Babati town, west of Tarangire national park, south of Madukani, and east of Kiru. The ward is composed of seven other villages which are; Magugu, Matufa, Mawemairo, Masare, Gichamedia, Darame, and Mapea. Matufa village has four sub-villages which are Kichangani, Burunge, Migungani, and Sau.

### **1.2.2 Climate and Vegetation**

The village is found in semi-arid low lands with annual rainfall ranging between 500mm to 750mm. The climate supports the growth of crops like maize, cotton, beans, millet and paddy.

### **1.2.3 Demography**

Matufa village have 694 households which makes a total of 4204 residents of which 2062 are men and 2142 are women. Among these only 630 people are employed and capable of contributing financially to village development plans such as construction of a village dispensary and other development activities. This is according to the

survey conducted by the village leadership on January 2013 in analyzing the capability of village residents in contributing financially to village development plans.

#### **1.2.4 Natural Resources**

Matufa village is endowed with various natural resources including fertile land which supports cultivation of various crops both cash crops and food crops. Among the food crops grown includes rice, sorghum, maize, beans, sweet potatoes and cassava while the cash crops are groundnuts, sunflowers, sugarcane, rice and cotton. The fertile soil of Matufa village also supports the growth of shrubs that supports livestock keeping. Livestock kept in Matufa village are cattle, goats, sheep and poultry. Also water resources having their sources from Kiru river makes the north western part of the village a base of the village economy as it supports paddy production which is the main source of income among majority of village residents.

#### **1.2.5 Economic Activities**

The people of Matufa village are engaged into various economic activities ranging from agriculture, livestock keeping, and business. Majority of villagers are engaged in paddy production in the flood plain located in the North western part of the village and production of other crops like ground nuts in other areas of the village. Also Matufa villagers are engaged in business of selling rice and groundnuts in their village and in the nearby Magugu village town.

#### **1.2.6 Land Pattern and Utilization**

The land of Matufa village can be classified into a flood plain which is used for

paddy production, bushes which are used for livestock keeping, areas of settlement, social services, and business along the main road from Babati to Arusha and within the sub-villages.

### **1.2.7 Social Services**

People of Matufa village have access to various social services including health services provided by Magugu health centre in the nearby village about two and a half kilometers from the village and also a monthly mother and child health clinic provided at the village offices by district health officers. Also there is a primary school and a nursery school at the village providing education to children of Matufa village. Residents of Matufa village have also an access to safe drinking water from water tapes, and water pumps. The village is easily accessible through the main road running from Babati town to Arusha town which passes across the village. Also within the village it is easy to communicate to other areas of Tanzania and abroad using local networks such as Airtel, Vodacom, Tigo, and Zantel.

### **1.2.8 Traditions and Culture**

Matufa village is composed of residents of different tribes and religion who cooperates in various social economic activities without any discrimination. In the village men are the owners of major means of production to a large extent although the tendency is decreasing with time and recently women ownership of properties especially land which is the major means of production is growing. As well majority of women in Matufa village are engaged in agriculture and petty business especially selling of rice and groundnuts in their village and in the nearby village centre (Magugu) bus stand.

### **1.3 Community Needs Assessment**

Kanaskar and Kulkarni, (2012) explained community needs assessment as a way of collecting information on community's opinions, needs, challenges, and assets used to determine a project which will meet the real needs of a community. Israel and Iivento, (1995) argued that needs assessment can identify unmet needs in the community, provide evidence of support for policy options, and increases public involvement in policy making. Community needs assessment was conducted in Matufa village in order to determine strengths, weakness, challenges and opportunities available to improve livelihoods of small holder paddy farmers and then to develop participatory intervention measures aimed to solve identified issues by utilizing available strengths and opportunities.

#### **1.3.1 Objectives of Community Needs Assessment**

The overall objective was to improve livelihoods of smallholder paddy producers through strengthening their capacities in marketing and packaging.

##### **1.2.2.1 Specific Objectives**

- a) To obtain information which will help to improve livelihoods of small holder paddy farmers in Matufa village by increasing marketability of their farm products.
- b) To guide small holder paddy farmers in Matufa village in creating a good packaging system for their products in order to improve marketing.
- c) To develop participatory intervention strategies aimed at solving issues aroused during community needs assessment.

### **1.2.2.2 Community Needs Assessment Questions**

- a) What are the most effective ways of improving marketability for Matufa village farmers' products?
- b) What are the packaging methods used by small holder farmers in Matufa village before marketing their rice?
- c) What are the socio-economic characteristics of the small holder paddy producers in Matufa village?

### **1.2.3 Research Methodology**

#### **1.2.3.1 Research Design**

The selection of appropriate research design for this study was reached after consideration of available time, resources, conditions and situations of respondents, and for that case cross-section research design was used. The method was selected to enable a researcher to look at numerous things at once. Then appropriate data collection tools and methods were then developed.

In this study both quantitative and qualitative data were collected where as informants were conducted with small holder paddy farmers, village leaders, district agricultural officers, professionals from MVIWATA and other organizations. To obtain information about the phenomenon self administered questionnaires were used to determine farmers' economic status and to establish a project on rice packaging and marketing under their own management.

## **1.2.4 Research Methodology**

### **1.2.4.1 Research Methods**

Various research methods were used in collecting data on this study. Various documents on previous projects and other documents related to the area of study were reviewed. Household survey and area survey were conducted to understand geographical and social-economic characteristics of the area. Questionnaires, focus group discussions, observation, and interview with key stakeholders were used to collect primary data. During the survey various information from Babati district, ward, village, and sub village levels were collected to understand socio-economic challenges, opportunities, strengths, and weakness facing Matufa village. Collected quantitative data were analyzed by using software package for statistical science (SPSS) while qualitative data collected in this study were analyzed by the use of thematic analysis and comparative analysis. Testimonies and narrations from respondents were taken and used to support discussion and conclusion.

### **1.2.4.2 Sampling Procedure and Sample Size**

The study took place in four sub-villages of Matufa village where as two sub-villages were involved in household survey and the other two were involved in focus group discussions. Selection of sample size was made by using both probability and non-probability sampling techniques. Probability sampling was made to obtain potential respondents for quantitative and qualitative study. A total of 45 respondents were randomly selected from the villages in inclusion of influential people and 4 representatives from each sub-village. Out of 45 questionnaires, 35 questionnaires were filled in and returned. The selected sample size used for quantitative data

collection was made in consideration of researcher's available time, resources, and possibility of making meaningful data analysis. Purposive sampling technique was used to select potential respondents who were knowledgeable to the research topic. The selected respondents by using purposive sampling technique comprised of 5 government officials, 10 MVIWATA CBO members, 10 paddy growers, and 10 rice sellers making a total of 35 informants. The sample size obtained from probability and purposive sampling techniques made up a sample size of 70 respondents.

#### **1.2.4.3 Research Tools Used**

In order to answer research questions and meet research objectives various research tools were used to collect primary and secondary data. Primary data were collected through interviews, questionnaires, focus group discussions, and observations. Documentary review on previous project reports, policy documents, and other materials both published and unpublished was made to obtain secondary data.

##### **1.2.4.3.1 Questionnaires**

In this study the researcher prepared and distributed questionnaires to selected respondents who had ability to read and write, for those who had no ability were assisted by their fellows. The questionnaires were useful in collecting general information on sex, age, quantity of crop production, and level of education. The questionnaires also helped to obtain information on availability of social services in Matufa village, private sector and government support on community development projects. Both open ended and closed ended questionnaires were used to facilitate a collection of a wide range of data.



**Figure 1.1: A Researcher Instructing on How Questionnaires were to be Answered Before Distribution**

**Source:** Researcher 2013

#### **1.2.4.3.2 Interviews**

The researcher conducted interviews with selected respondents in obtaining data on rice packaging and marketing. The researcher used structured interviews where by he had pre-determined questions which helped to obtain required information. The researcher conducted interviews with 5 officials from Babati district agricultural offices, 5 MVIWATA CBO members, 10 paddy growers, and 5 rice sellers.

#### **1.2.4.3.3 Focus Group Discussion**

A list of questions were prepared and supplied to two groups of respondents for discussion. The groups comprised of 5 MVIWATA CBO members who are also paddy growers and rice sellers. And 5 rice sellers who were are not paddy growers but buy paddy from farmers, process and market rice. The tool helped to obtain information on major challenges facing paddy production in Matufa village, market

availability for produced paddy, community participation in village development activities, and environmental conservation.



**Figure 1.2: Respondents in a Focus Group Discussion during the Research**

**Source:** Researcher 2013.

#### **1.2.4.3.4 Observation**

The researcher observed local processes of packaging and marketing rice done by individual paddy growers and rice sellers who are in two categories. The first category is that of farmers who grows paddy, process, and sell rice. The other category is that of business men and women who purchases rice from farmers processed and unprocessed and sells it. The observation was made to understand already existing methods of packaging and marketing rice.

#### **1.2.4.3.5 Documentary Review**

This tool was used by the researcher to obtain secondary data from published and unpublished research findings related to the area of study. This tool was useful in collecting data on annual production of rice and other crops in Babati district by

reviewing various district documents including “District agricultural development plan” of the year 2012/ 2013.

## 1.2.5 Reliability and validity

### 1.2.5.1 Reliability

To ensure reliability questionnaires were pre-tested before the actual survey was undertaken. Also the use of various methods of data collection in collecting the same information ensured reliability.

### 1.2.5.2 Validity

Validity was ensured by the use of various methods of data collection and diverse sources of information. The collected information through documentary review was validated by the use of interviews, questionnaires, observations and focus group discussions.

## 1.3 Research Findings

### 1.3.1 Respondents Age and Sex

**Table 1.1: Respondent's Sex**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	16	45.7	45.7	45.7
	Female	19	54.3	54.3	100.0
	Total	35	100.0	100.0	

**Source:** Study findings 2013.

The majority (54.3%) of the questionnaire respondents were women as shown in the Table 1.1. The list of respondents was drawn from farmers group. This shows that women make up the majority of farmer’s groups due to their willingness and ability

to work in groups as compared to men. According to the study, the groups assists women in saving and credit services which are necessary for their agricultural production as well as for their petty business they run in Matufa and Magugu villages.

**Table 1.2: Respondent's Age**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Between 20 and 30 years	8	22.9	22.9	22.9
	Above 30 years	27	77.1	77.1	100.0
	Total	35	100.0	100.0	

**Source:** Study findings 2013

Majority (77.1%) of questionnaire respondents as shown in Table 1.2 were above 30 years old. This is because in Matufa village agriculture is mostly left to aged people as compared to youths who have escaped to towns and cities to look for other jobs. Most of youths who were found in Matufa village were engaged in brick making, rice milling, and motor cycle business.

### 1.3.2 Respondent's Marital Status

**Table 1.3: Respondent's Marital Status**

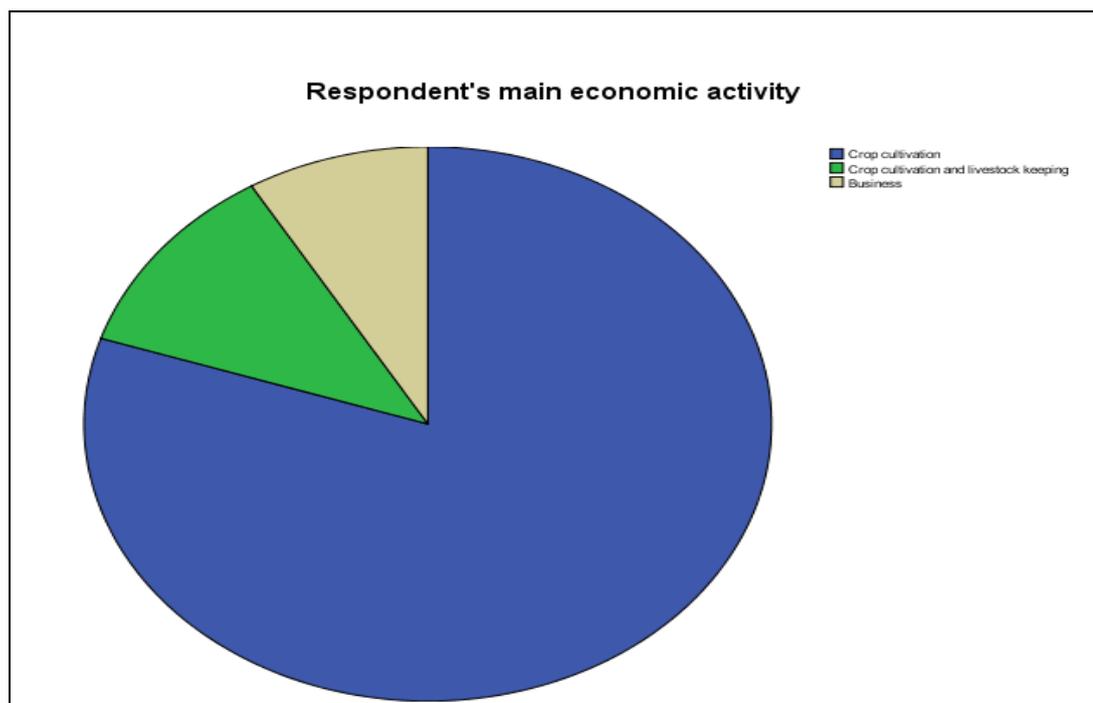
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Married	32	91.4	91.4	91.4
	Single	2	5.7	5.7	97.1
	Divorced	1	2.9	2.9	100.0
	Total	35	100.0	100.0	

**Source:** Study findings 2013.

Majority (91.4%) of questionnaire respondents were married compared to single and divorced who were 2% and 1% respectively as shown in Table 1.3.

### 1.3.3 Respondents Main Economic Activity

Most of questionnaires respondents (80%) were engaged in crop cultivation as their main economic activity as compared to crop cultivation and livestock keeping (11.4%), and business (8.6 %) respectively as shown in figure 1.3. Observation during the study indicated that the presence of wet land favorable for paddy cultivation in north western part of village, and good price of rice and groundnuts are among the factors which attract most of Matufa villagers to practice crop cultivation as compared to other economic activities.

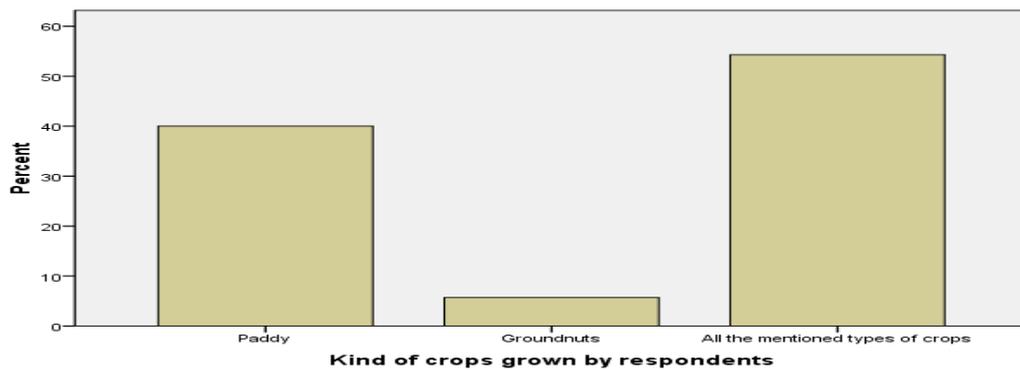


**Figure 1.3: Respondent's Main Economic Activity**

**Source:** Study findings 2013

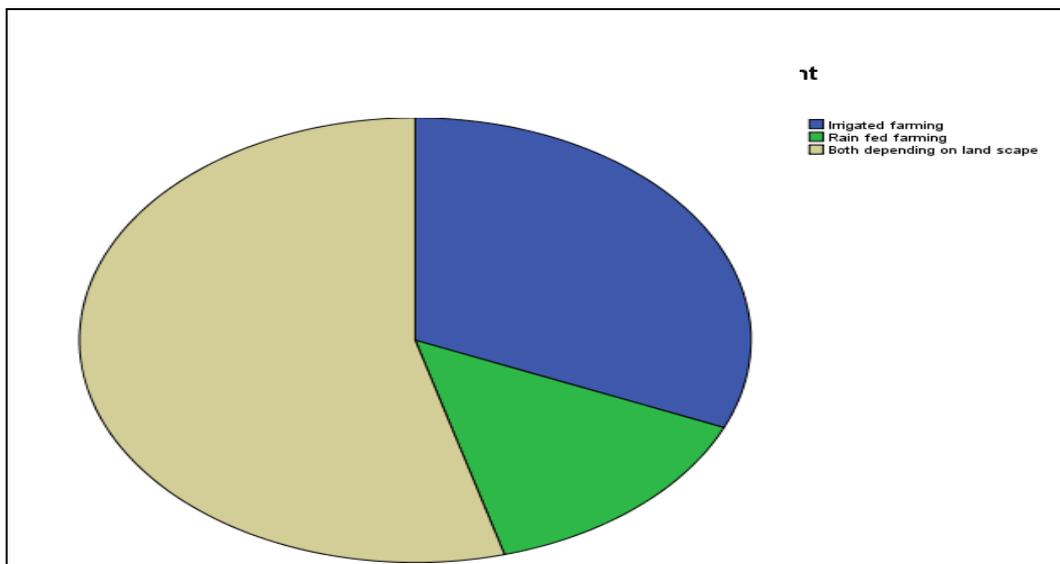
### 1.3.3 Kind of Crops Grown and Kind of Agriculture Practiced By Respondents

Paddy, groundnuts and maize are the main crops grown in Matufa village. 40% percent of questionnaires respondents grows paddy only, 5.7% of respondent’s grows groundnuts, and majority of respondents (54.3%) grows a wide variety of crops as shown in figure 1.4. The study observed that the fertile land of Matufa village and availability of water for irrigation supports cultivation of those crops.



**Figure 1.4: Kind of Crops Grown by Respondents**

**Source:** Study findings 2013.



**Figure 1.5: Kind of Agriculture Practiced by Respondent**

**Source:** Study findings 2013

Majority of questionnaire respondents (54.3%) as shown in Figure 1.5, practices both irrigated and rain fed farming depending on landscape. Respondents cultivating in northwestern part of the village (31.4 %) practices irrigated farming due to the wet land nature of the area and availability of streams for irrigation. Respondents having farm plots in other parts of the village practices rain fed farming (14.3%) due to unavailability of streams for irrigation and the nature of landscape. In wet lands were irrigated farming is practiced, most farmers cultivates paddy while in dry areas of the village farmers cultivate groundnuts and other crops resistant to drought.

#### **1.3.4 Number of Cattle Owned by Respondents, Respondent's Annual Crop Yield and Use of the Yield**

Most of questionnaires respondents (62.9%) as shown in Table 1.4. did not respond on the number of cattle they owned. Among those who responded to the questionnaire, (34.3 %) owned between 1 to 5 cattle while only few respondent's (2.9%) owned above ten cattle. The study identified that unavailability of pasture for cattle and other livestock due to dryness of most areas of the village from July to October apart from the wet land used for paddy production is the major factor discouraging livestock keeping in Matufa village.

**Table 1.4: Number of Cattle Owned by the Respondent**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 to 5	12	34.3	92.3	92.3
	Above ten	1	2.9	7.7	100.0
	Total	13	37.1	100.0	
Missing	System	22	62.9		
Total		35	100.0		

**Source:** Study findings 2013.

Majority of questionnaire respondents (45.7%) yields between 10 to 30 bags of their crops annually, (37.1%) yields above 30 bags annually of their crops, and (17.1%) of respondents yields below 10 bags of their crop production annually as shown in Table 1.5.

**Table 1.5: Respondent's Annual Yield**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 10 bags	6	17.1	17.1	17.1
	10 to 30 bags	16	45.7	45.7	62.9
	Above 30 bags	13	37.1	37.1	100.0
	Total	35	100.0	100.0	

**Source:** Study findings 2013

Majority of questionnaire respondents (97.1%) uses their annual yield for selling to earn income and as food for their families, (2.9%) of respondents' uses yield of their crops for selling to earn income as shown in Table 1.6.

**Table 1.6: Respondent's Use of Annual Yield**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Selling	1	2.9	2.9	2.9
	Both	34	97.1	97.1	100.0
	Total	35	100.0	100.0	

**Source:** Study findings 2013

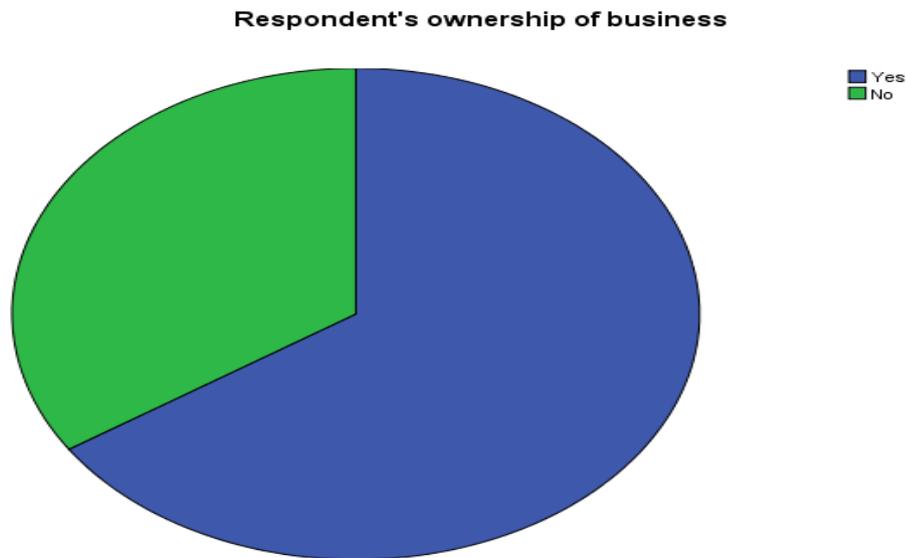
### 1.3.6 Respondent's Access to Financial Services and Ownership of Business

**Table 1.7: Respondent's Access to Financial Services Apart From Village Community Banks**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	18	51.4	51.4	51.4
	No	17	48.6	48.6	100.0
	Total	35	100.0	100.0	

**Source:** Study findings 2013.

Majority of questionnaires respondents (51.4%) have access to financial services more than the village community bank (VICOBA) and 48.6% of respondents have no access to financial services apart from the village community bank as shown in the Table 1.7. Interviews with some respondents with access to financial services more than the village community bank identified that they obtain financial services from PRIDE, SEDA, BRAC, and PAMOJA. Some of the respondents claimed of delay in credits from these organizations which leads to failure of their plans in utilizing the obtained credits. Others also claimed of high interest rates charged from credit services obtained from those organizations.



**Figure 1.6: Respondent's Ownership of Business**

**Source:** Study findings 2013.

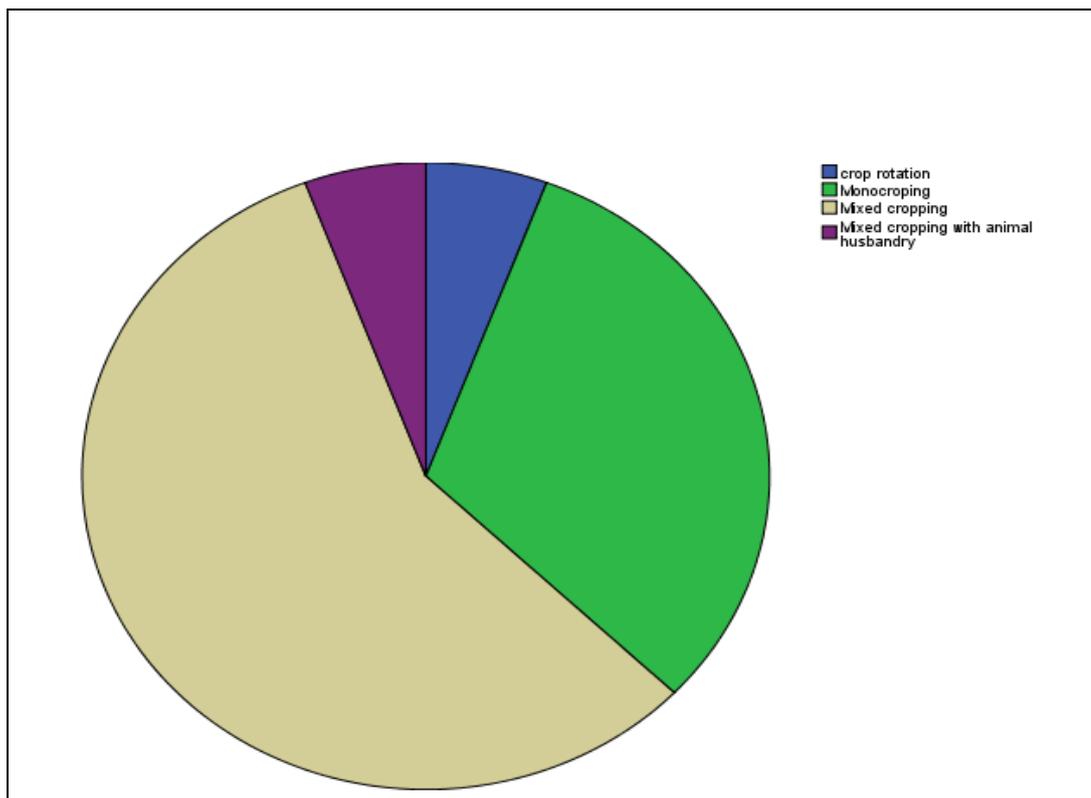
Majority of questionnaire respondents (65.7%) own business and 34.3% of questionnaire respondents do not own business as shown in Figure 1.6. Interviews with some respondents identified that most respondents especially women own petty business of selling groundnuts and rice in the nearby town (Magugu) bus stand and at the Matufa village. Others own small hotels in their village.

*“I own a mama lishe (small hotel) where I have decided to add value to my rice. At first I used to sell paddy from my farm but it was not profitable, I decided to process my paddy into rice but I was not too much satisfied with the earnings. I have finally decided to open mama lishe where I am now earning a reasonable income from my farm product. I get at least 4000 from 1 kilogram of rice after cooking and selling it at my mama lishe of which I could only earn 1400 per 1 kilogram of rice if I would sell it uncooked”.*

Interview with one respondent who owns a business at Matufa village on 10/06/2013.

### **1.3.7 Cropping System, Participation in Community Works, Decision Making, and Presence of Non-Governmental Organizations in Matufa Village**

Majority of questionnaires respondents (57.1%) practices mixed cropping system, 31.4% of respondents practices mono cropping, 5.7% of respondents' practices crop rotation, and 5.7% practices mixed cropping with animal husbandry as shown in Figure 1.7. Observations during the study indicated that mixed cropping is mostly practiced in dry areas where irrigation was not applied while mono cropping was practiced in wet areas where paddy was the only crop planted.



**Figure 1.7: Respondent's Cropping System**

**Source:** Study findings 2013

**Table 1.8: Respondent's Participation in Community Work**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	35	100.0	100.0	100.0

**Source:** study findings 2013.

All questionnaire respondents (100%) as shown in Table 1.8 participate in community development activities in their village. Respondents are participating in the construction of dispensary and classrooms in their village primary school and ward secondary school.

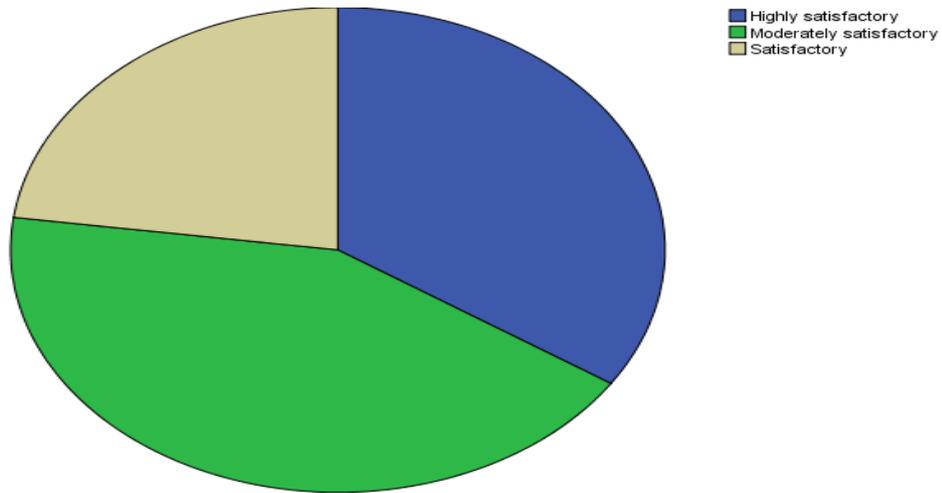
**Table 1.9: Decision making in Matufa village**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Leaders	2	5.7	5.7	5.7
	Village assembly	33	94.3	94.3	100.0
	Total	35	100.0	100.0	

**Source:** Study findings 2013.

Majority of questionnaire respondents (94.3%) answered that village decisions are made by village assembly and 5.7% answered that decisions are made by leaders as shown in Table 1.9.

### 1.3.8 Quality of Matufa Village Leadership, Presence of Village Development Plan and Social Services Provision in Matufa Village



**Figure 1.8: Quality of Village Leadership**

**Source:** Study findings 2013

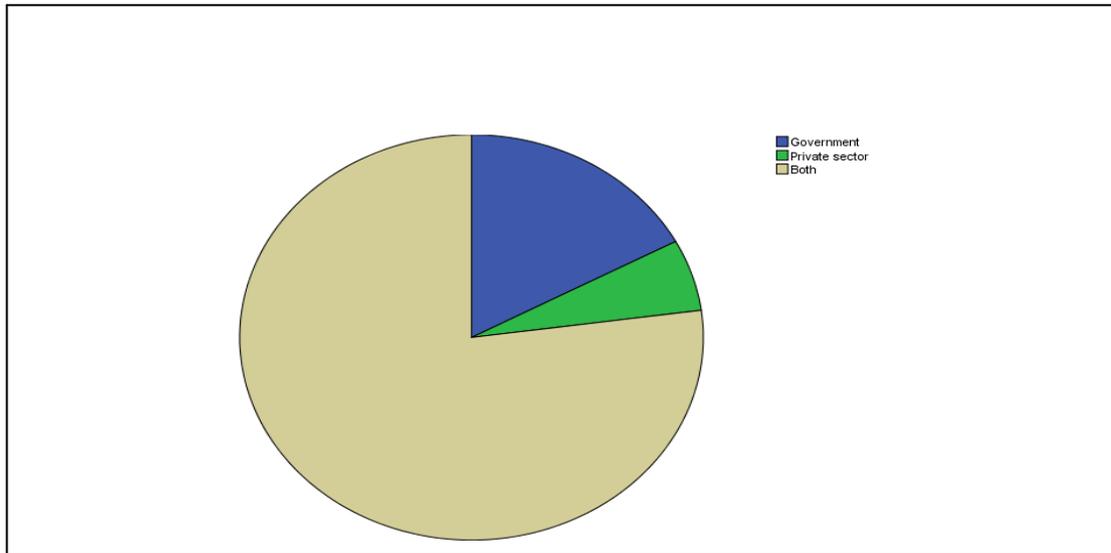
34.3% of respondents responded that their village leadership is highly satisfactory, 22.9% of respondents responded that their village leadership is satisfactory, and majority of respondents (42.9%) answered that their village leadership is moderately satisfactory as shown in Figure 1.8.

**Table 1.10: Presence of Village Development Plan**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	34	97.1	97.1	97.1
	3	1	2.9	2.9	100.0
	Total	35	100.0	100.0	

**Source:** Study findings 2013.

Majority of questionnaire respondents (97.1%) answered that there is a village development plan in Matufa village while the rest of respondents (2.9%) did not respond to the question as shown in Table 1.10.



**Figure 1.9: Social Services Providers in Mafuta Village**

**Source:** Study findings 2013.

Majority of questionnaire respondents (77.1%) responded that social services were provided by both the government and private sector, 17.1 responded that social services were provided by the government, and 5.7% responded that social services were provided by private sector as shown in the Figure 1.9. Observations during the study indicated that social services available in the village were provided by both the government and private sector.

**Table 1.11: Presence of NGO's in Matufa village**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	34	97.1	97.1	97.1
	No	1	2.9	2.9	100.0
	Total	35	100.0	100.0	

**Source:** Study findings 2013.

Majority of questionnaire respondents (97.1%) responded that there are non-governmental organizations operating in Matufa village and 2.9% of respondents as seen on Table 1.11, responded that there are no non-governmental organizations operating in Matufa village. Interview during the study indicated that there are non-governmental organizations such as Farm Africa, World vision and MVIWATA operating on various social-economic affairs in Matufa village.

### **1.3.9 Presence of Environmental Committee, Environmental by Laws, Access to Safe Drinking Water, Water Sources, and Access to Health Services, Respondent's Level of Education, Presence of Primary School, Secondary School, and Health Centre at Matufa Village**

All respondents as seen in Table 1.12 responded that there is an environmental committee in Matufa village. Interview during the study indicated that the committee is concerned with various environmental conservation activities such as preservation of water sources, advocating of a forestation and enforcing enacted bylaws on environmental conservation.

**Table 1.12: Presence of Environmental Committee in Matufa village**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	35	100.0	100.0	100.0

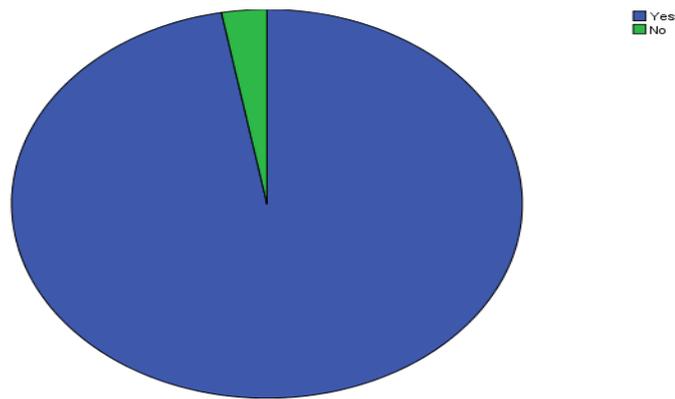
**Source:** Study findings 2013

**Table 1.13: Presence of Environmental By Laws in Matufa Village**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	35	100.0	100.0	100.0

**Source:** Study findings 2013.

All respondents as seen in Table 1.13 agreed that there are environmental by laws in Matufa village. Interviews during the study indicated that the presence of bylaws in Matufa village has been useful in conserving the village environment against harmful human activities such as cutting down of trees for fuel wood. It has also helped to preserve water sources.



**Figure 1.10: Access to Safe Drinking Water**

**Source:** Study findings 2013

Majority of questionnaire respondents (97.1%) have access to safe drinking water, and 2.9 % of questionnaire respondents have no access to safe drinking water as seen in Figure 1.10. Observations and interviews during the study indicated that the village has access to tape water and four water wells of which 1 is deep and the other 3 are shallow wells.

**Table 1.14: Water Sources in Matufa Village**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rivers/ Streams	1	2.9	2.9	2.9
	Water tapes	34	97.1	97.1	100.0
	Total	35	100.0	100.0	

**Source:** Study findings 2013

Majority of questionnaire respondents (97.1%) have access to water tape systems, 2.9 % of respondents get water from rivers and streams as seen in Figure 1.14.

**Table 1.15: Distance to the Nearby Health Centre**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 3 kilometers	17	48.6	48.6	48.6
	More than 3 kilometers	18	51.4	51.4	100.0
	Total	35	100.0	100.0	

**Source:** Study findings 2013

48.6% of questionnaire respondents live less than 3 kilometers from the nearby health centre which is in Magugu village while majority (51.4%) as seen in Table 1.15 lives more than 3 kilometers from the nearby health centre. Interviews during the study indicated that there are monthly maternal health clinics held at the village.

**Table 1.16: Respondent's Level of Education**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Primary school	35	100.0	100.0	100.0

**Source:** Study findings 2013

The education level of all questionnaire respondents was primary school level as seen in Table 1.16. This is because the respondents were from farmers groups of which most educated people have escaped to town to secure other jobs leaving agriculture to those with low education levels.

**Table 1.17: Presence of a Primary School at Matufa Village**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	35	100.0	100.0	100.0

**Source:** Study findings 2013

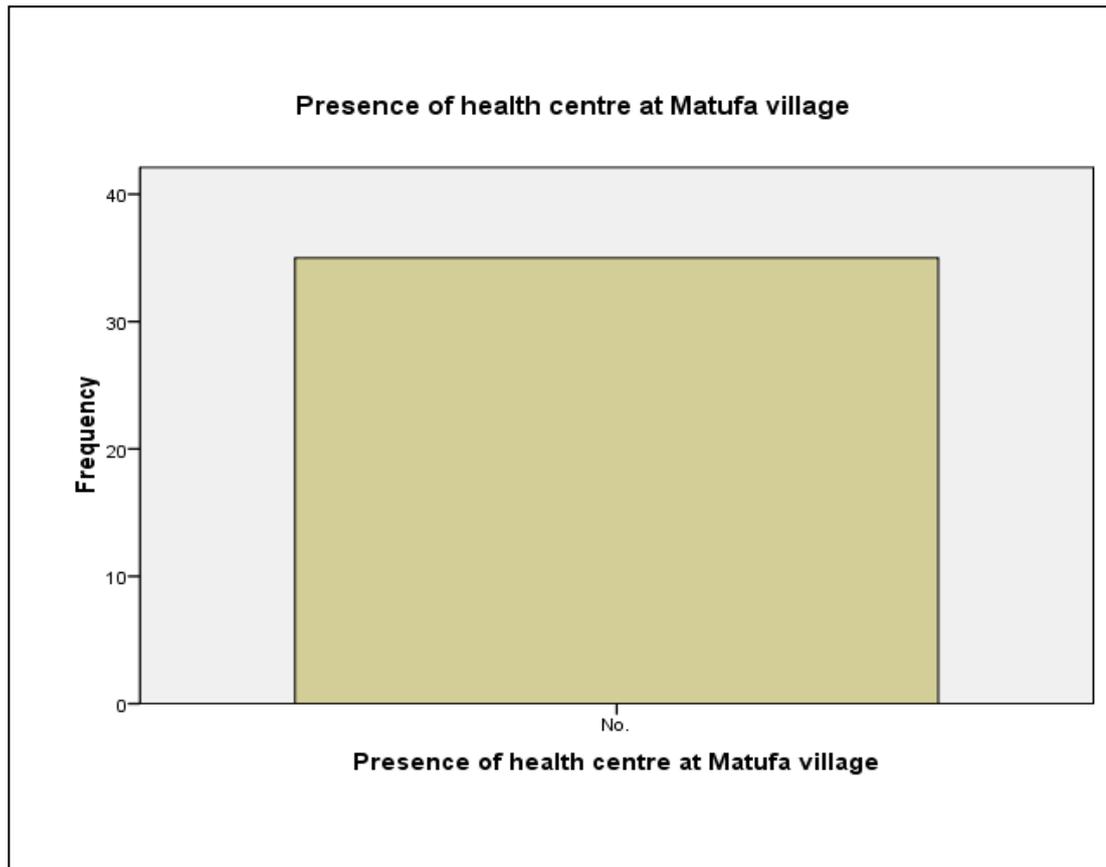
All questionnaire respondents (100%) responded that there is a primary school at Matufa village as seen in Table 1.17. Observation during the study indicated that the school is located at the village centre where it is accessible to pupils from all parts of the village. Interview with some respondents indicated that there were insufficient numbers of; class room buildings, desks, teacher's houses, teaching materials, and teachers. It was also identified that there was a poor relationship between teachers and parents.

**Table 1.18: Presence of Secondary School at Matufa Village**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	35	100.0	100.0	100.0

**Source:** Study findings 2013

All respondents (100%) as seen in Table 1.18 responded that there is no secondary school at Matufa village. Interviews during the study indicated that most of primary school leavers from Matufa primary school were selected to join Magugu secondary school which is a ward secondary school.



**Figure 1.11: Presence of Health Centre at Mafuta Village**

**Source:** Study findings 2013.

All questionnaire respondents (100%) as seen in Figure 1.11 responded that there is no health centre at Matufa village. Interviews during the study indicated that most of Matufa villagers obtain health services at Magugu health centre which is located about 2 to 3 kilometers from Matufa village.

## **1.2 Community Needs Prioritization**

Various identified needs through the community needs assessment conducted in Matufa village were discussed by farmers group so as to identify the need which

requires immediate intervention and whose intervention would lead into easily intervention of other needs identified. The ranking of the needs is shown in the table.

**Table 1.19: Problem Prioritization**

No.	Community problems	Scores	%
1.	Absence of village health centre	2	7.1
2	Poor irrigation infrastructures	3	10.7
3.	Lack of reliable saving and Credit services	6	21.4
4.	Poor markets for produced crops	10	35.7
5	Absence of a secondary school in the village.	4	14.3
6.	Unavailability of agricultural implements	3	10.7
7.	Total	28	100

### **1.5 Conclusion**

Community needs assessment conducted in Matufa village enabled to identify community strengths, weaknesses, opportunities, and threats. Among the strengths identified were the fertile land of Matufa village, presence of enough water for irrigation in the north western part of the village, satisfactory village leadership, and willingness of villagers to participate in community development activities. Among the challenges identified was lack of reliable markets for crops produced in Matufa village and hence the improving of marketing for produced crops was ranked as a need which requires immediate participatory intervention strategy.

## CHAPTER TWO

### 2.0 PROBLEM IDENTIFICATION

#### 2.1 Background to Research Problem

Lack of reliable markets for crops produced in Matufa village is one among the major problems facing small holder paddy farmers in Matufa village, it is also one among the major problems hindering small holder paddy farmers from benefiting from their farming efforts. Most of farmers sell their paddy soon after harvesting before processing into rice, others sell their paddy after processing into rice in so doing they add a value to their products. The value added through processing paddy into rice is still low as many farmers do not have knowledge on how to pack and market their rice in a good and attractive standard to their customers. Most of farmers also have little knowledge and ability to reach markets away from their home areas where they could earn higher prices compared to the one earned in their areas.

Paddy is grown in both Tanzania mainland and in the Islands in irrigated and rain fed farms. According to RIDC, (2009) nearly 71% of rice grown in Tanzania is produced under rain fed farming where as irrigated land presents 29% of the total production with most of it in small village level traditional irrigation systems. According to ACT, (2007) major regions that produce paddy in Tanzania mainland include Mbeya, Morogoro, Shinyanga, Mwanza, Rukwa, Tabora, and Ruvuma. These regions accounts for 78% of rice produced in the country. Apart from the seven regions there are also other regions producing rice although in small quantity as compared to the mentioned seven regions. URT, (2011) Paddy is also grown in

Kilimanjaro, Manyara, Arusha, Dodoma, Iringa, and Tanga. Babati district council, (2012) in its agricultural development plans estimated a production of 18, 130 tones of paddy from 1,935 hectares cultivated in the district.

Rice is an important crop for most of Tanzanian's livelihoods due to its economic potentiality and its usage as a food. RIDC, (2009) reports that rice is the second most important food and commercial crop in Tanzania following maize. Rice provides employment, income, and food security to Tanzania farming households. Kadiga, (2003) rice falls under category of "preferred staples" as it is one among the most important food grains widely produced and consumed in Tanzania. Due to its importance the government has made efforts to improve paddy farming which has led to increased production as reported by URT, (2011) paddy production trend has shown a significant increase over five years as follows; 1,239 tons in the year 2005/2006, 1,342 tons in the year 2006/2007, 1,346 tons in the year 2007/2008, 1335 tons in the year 2008/2009, and 2,615 tons in the year 2009/2010. URT, (2011) further reports that, the increase in production is attributed to factors such as increase in land irrigated, increase in rice yield particularly in irrigated rice and subsidy system where paddy farmers receive seeds and fertilizer package.

Despite the increase in production most small holder paddy farmers are still poor economically as they have failed to benefit from existing rice markets due to among other factors failure in storage due to insufficient storage facilities, poor packaging to reach markets away from their areas, and poor marketing skills.

## **2.1 Problem Statement**

Farmers in Babati district particularly in Matufa village rely heavily on agriculture as their main economic activity. They cultivate a wide variety of crops such as maize, groundnuts, beans, pigeon peas and paddy. Most of farmers in Matufa village cultivates paddy in small plots of farm in the north western part of the village where traditional irrigation systems are applied due to a good landscape and availability of water streams from the major river Kiru. Paddy is major commercial crop for most of farmers in Matufa village, the income obtained from selling paddy and rice are used to, pay for education for children, health services and other necessities.

Most of farmers (45.7 %) yields between 10 to 30 bags of their crops annually, (37.1%) yields above 30 bags annually of their crops, and (17.1%) of respondents yields below 10 bags of their crops annually as shown in the findings. Despite this yield Matufa village small holder paddy farmers are faced with a problem of lack of reliable markets for their yields. This leads them into losses in the capital they put in their fields for fertilizers, labor and other necessities for crop growth. Without having a reliable market for their produce, it will be difficult to alleviate poverty among Matufa village farmers.

Previously there has been various efforts made by the government and other development partners to improve market among Babati district farmers by linking them to the local and global markets through actors under first mile project (FMP) established by the international fund for agriculture development (IFAD) and the government of Switzerland, in collaboration with the united republic of Tanzania and the agricultural marketing system developing program (AMSDP). The project

aimed at increasing rural people's food security and incomes by improving structure, conduct and performance of the country's crop marketing system. Despite the efforts made through these projects, most small holder paddy farmers still sell their produce at low prices insufficient to meet inputs made in their farms.

Most farmers do not yet enjoy the fruits of the efforts made through previous projects as it had not enabled them to add value to their produce in order to earn higher profits. A project initiative starting from farmers themselves is very important as it can easily work on improving already existing systems of marketing their produce as well as improving their ability in entrepreneurial skills and improvement of the quality of their crops before marketing. For these reasons, a project on improving livelihoods of smallholder paddy farmers by enhancing their capacity in marketing and packaging rice was initiated in Matufa village.

## **2.2 Project Description**

A project on "Improving livelihoods of smallholder paddy producers through strengthening their capacities in marketing and processing rice" is located at Matufa village under the management of Umoja village community bank. The project was put under the management of this VICOBA owned by a farmers group for easy management and supervision and to encourage farmers to join in groups where they can easily be assisted and assist themselves. Also the Umoja village community bank was already working with the host CBO.

According to the study findings, farmers in Matufa village produce their crops in small scale and mostly for consumption and selling of excess to meet other needs.

Due to that nature most of the farmers were unable to meet the expenses required in adding value to their produce hence the group model was seen as the only way in which farmers could work together to improve the value of their rice after harvesting to meet higher prices. The project was implemented through trainings on entrepreneurial skills, governance, financial management, packaging, and marketing techniques. After the trainings farmers in their group were trained on how to pack their products using simple machines and labeling their produce.

Farmers were assisted with machines from the host CBO of which they were to use for a while before purchasing group machines under the direction of the host CBO. After packaging and labeling of their first products farmers distributed their packed products to various markets and later on they elected representatives who went with their products to various exhibitions including the national food exhibitions held at Hanang district from 14<sup>th</sup> October 2013 to 16<sup>th</sup> October 2013 where they marketed their products and received a great demand from consumers. However they were challenged by the packaging style in which the label was on a printed paper inserted within a transparent product bag. After the exhibitions, farmers decided to order for printed packaging nylon bags in which they were to pack their products with the label showing their ownership printed outside the product bag.

After the farmers participation in the national food day exhibitions in Hanang district they decided to make further improvements in their products by finding the authorization of Tanzania bureau of standards so that their customers will be assured of the quality of the products. The process was to be executed by MVIWATA field

officer who was willing to assist farmers in obtaining the recognition and authorization of TBS. As well the officer together with the group leaders find more markets in Babati and Arusha where the packed products were distributed. MVIWATA agreed to send group representatives to all exhibitions within and outside Manyara region for further marketing and selling of the packed products.

### **2.2.1 Target Community**

The project was intended to improve the livelihoods of small holder paddy farmers in Matufa village by increasing their incomes through improved quality of their produce. The project targeted to improve packaging techniques of the farmers' produce as well as their marketing skills. For this case the project was implemented with the group of Umoja VICOBA which its members are engaged in growing among other crops paddy as well as business. The group was taught on methods of packaging of their crops to improve their quality so as to attract customers and improve their incomes. Through the project farmers were taught how to use simple machines for packaging their products in bags having labels indicating that the products were owned by their group and contact details which may enable a customer to call for more supply.

Farmers in Umoja group were also trained on entrepreneurship skills, financial management skills and agro-business skills. Through the project, farmers were to bring yields from their farms which they were for sell for packaging and labeling before being sent to the markets. The prices were determined by the group by considering field inputs as well as packaging costs. Sales were then brought back to individual farmers according to his or her quantity of products sent to the market.

### 2.2.2 Stakeholders

As per findings in this study, the project on improving livelihoods of small holder paddy producers in Matufa village involved various people and organizations which in one way or another had a stake on the project. The stakeholders involved members of Umoja village community bank, Matufa village authority, MVIWATA, SIDO, paddy growers in Matufa village, Mills, and markets in Manyara and Arusha regions. Some of these stakeholders were directly involved in the implementation of this project while others were indirectly involved in the implementation of the project.

**Table 2.1: Stakeholders Analysis Matrix**

<b>Stakeholder</b>	<b>Main area of concern</b>	<b>Roles and responsibilities in the project</b>
Members of Umoja village community bank.	Production, processing, grading, packaging, and selling of rice to increase household income.	Major players in the project design and implementation process. Major actors in paddy production, packaging and marketing
Matufa village administrative authority.	Encouraging more production, packaging, and marketing of rice.	Community mobilization in adopting the introduced technology.
MVIWATA	Capacity building to farmers by organizing them in groups and providing trainings on governance, agro-business skills, packaging, marketing, and financial management skills.	Motivating farmers to increase production and adopt new methods of packaging and marketing their crops in order to improve their incomes. Provision of technology, trainings and the main coordinator of the project.
SIDO	Packaging of the products.	Main technical consultant in the packaging technology.
Paddy growers in Matufa village.	Production, packaging and marketing.	Suppliers of paddy to the Umoja village community bank.

Stakeholder	Main area of concern	Roles and responsibilities in the project
Mills.	Processing of paddy.	Processing of produced paddy from farmers fields into rice ready for packaging and marketing.
Markets in Manyara and Arusha region.	Marketing.	Major consumers of rice from Matufa village.

**Source:** Study findings 2013.

### 2.2.3 Project Goals

The overall goal of this project was to improve livelihoods of small holder paddy producers by strengthening their capacities in packaging and marketing. The goal was attained by training small holder paddy producer in Matufa village on marketing skills and packaging skills using simple and affordable technologies. As well farmers in their group were trained in financial management skills, governance skills, and agro-business techniques. Through the project packed products were sent to exhibitions in Hanang district by some representatives of farmers group and supplied to other markets as well. The demand for the product was higher even though the prices were a bit higher compared to the market prices. This enabled farmers to earn higher incomes and as well encouraged more farmers in Matufa village to join the group.

### 2.2.4 Project Objectives

In order to attain the major goal of this project and make an impact to the targeted community, the following specific objectives were set in implementation of this project;

- a) To improve small holder paddy farmers capacity in packaging and marketing skills using simple technology.
- b) To equip small holder farmers on marketing skills including labeling their products to indicate the quality and origin of their products.
- c) To equip small holder paddy producers in Matufa village with entrepreneurship and financial management skills to enable proper management of the capital and income obtained from the sales of their packed products.
- d) To equip farmers in Matufa village with agro-business techniques including grading their products before packaging in order to ensure that they get a sound profit from investments they make in their fields.
- e) To facilitate availability of markets for the small holder paddy farmers packed and labeled products by enhancing their participation in various exhibitions.

### **2.3 Host Organization/ CBO Profile**

A project on improving livelihoods of smallholder paddy producers through strengthening their capacities in marketing and packaging rice is aimed at improving knowledge and skills of small holder paddy producers in Matufa village, Babati district on marketing and packaging rice using simple technology and facilitates their participation in various exhibitions to market their products. The project is hosted by MVIWATA a national network of small- scale farmers groups in Tanzania. MVIWATA is a farmer's organization which unites small scale farmers in order to have a common voice in defending their economic, social, cultural and political interests. According to MVIWATA leaflet, (2010) the organization was founded in 1993, by 22 innovative farmers from Morogoro, Iringa, Kilimanjaro, Mbeya, Rukwa

and Dodoma regions for the purpose of creating a farmer-to-farmer exchange forum. The initial processes of its formation were guided by Sokoine University of Agriculture (SUA) through its Strengthening Communication Project (SUA-SCOM). It was registered in 1995 under the Society Ordinance Act (Reg. no. SO 8612), and in 2000 as the Trust Fund. In 2007 MVIWATA received a compliance certificate under the N GO Act of 2002(Reg. no 1930).

### **2.3.1 Organizational Structure of Host CBO**

The structure of MVIWATA provides for four categories; Annual General Meeting (AGM), a Council which comprises of representatives from middle levels and members of board of directors. The third category is a board of directors which is constituted by 9 elected members who are elected every three years by the Annual General Meeting (AGM) and the fourth category is management (Secretariate) headed by the Executive Director.

The Middle Level Networks is composed of farmers' networks at regional and district level, while the Grass root level are networks of farmers groups and local producers at village and ward level. 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. Through these networks farmers are empowered on decision making, and enabled to defend their interests and address their challenges with one voice. CBO structure gives much authority to farmers at grass root level than to the middle and national levels. This kind of structure is influenced by MVIWATA slogan which

is “Mtetezi wa Mkulima ni Mkulima Mwenyewe” literally meaning that a defender of the farmer is the farmer himself.

### **2.3.2 Vision, Mission, and Goals of MVIWATA**

The goal of MVIWATA is to unite small holder farmers (including all small producers whose livelihood depend on land such as pastoralists and fisher folk) in order to defend their interests and address the challenges of farmers with one voice. It has a mission to strengthen farmers’ groups and networks, facilitate communication and learning through exchange visits among farmers for the purpose of defending the interests of small scale farmers. Its vision is to become a strong farmers’ organization that will guarantee small-scale farmers’ participation and representation in socio-economic and policy dialogue process at various levels through learning, initiating, implementing and monitoring social and economic development processes. MVIWATA works under the following objectives in order to attain its goals, mission, and vision;

- i. To facilitate communication among small scale farmers in order to build collective strategies for defending farmers interests
- ii. To facilitate exchange of knowledge, experiences and ideas on farming and activities which aim at improving the livelihood of farmers.
- iii. To represent small holder farmers in matters and decision making bodies of interest to smallholder farmers.

MVIWATA has its main strategies which are; Capacity building of small-scale farmers on lobbying and advocacy through training and self organization in groups

and networks under one umbrella so as to influence decisions, economic empowerment of small scale farmers through creation of projects such as savings and credit, cereal banks, rural tourism and other rural enterprises. It has a strategy of affiliation with national and international networks and organizations for lobbying and advocacy purposes.

Key thematic areas of MVIWATA includes; building a lobbying and advocacy capacity of small-scale farmers, economic empowerment with the aim of enabling small scale farmers to become economically empowered through initiatives such as savings and credit, market linkages and development of entrepreneurship skills, strengthening of the farmers' groups and network for the purpose of self-organizing, and building knowledge of farmers on cross cutting issues such as HIV/AIDS, Gender and Climate change.

### **2.3.3 Activities Conducted by MVIWATA**

In forming and strengthening farmers' networks MVIWATA conducts a number of activities among them includes; Facilitating organization of small-scale farmers into groups, local and middle networks to form a sound and strong national farmers' organ, lobbying and advocacy for issues of interests to the small scale farmers and ensure representation of farmers' views in the policies that affect them. Also MVIWATA deals with capacity building of small-scale farmers on leadership, economic skills such as marketing, savings and credits and income generating activities and on cross cutting issues such as HIV/AIDS and Gender. As well it Collects and disseminate information on experiences and knowledge of farmers through its publications such as *Pambazuko* quarterly Newsletter 'The Voice of

Farmers’, weekly radio program *‘Voice of MVIWATA* and other publications. Furthermore it develops participatory economic projects for the purpose of economically empowering farmers. MVIWATA also deals with organizing farmers’ dialogue and forums such as workshops and meetings, study tours, exchange visits and facilitation of farmers’ participation in agricultural shows to market their products and enhance learning.

### **2.3.3.1 MVIWATA Intervention in Matufa Village**

MVIWATA has facilitated organization of small holder farmers in Matufa village into a group and link them to the local and middle networks as means of creating an organ which can help them raise their voices as one. MVIWATA through its paddy project at Matufa village has trained Matufa small holder farmers on agro-economic practices and manufacturing of local manure for paddy farming. As well Matufa small holder farmers through MVIWATA have managed to participate in several agricultural exhibitions to show their products and market them to earn a higher income than they could earn at their farms.

In Matufa village, MVIWATA has conducted trainings and activities aimed at capacity building to small-scale farmers especially on matters of leadership, economic skills such as marketing, savings and credits and income generating activities especially on value addition to crops produced at the village. Participatory economic projects on increasing paddy production and manure production using local technologies have been developed for the purpose of economically empowering farmers.

### 2.3.4 Institutional Analysis of MVIWATA

Before implementation of this project, a researcher conducted institutional analysis with the aim of identifying strengths and weaknesses of MVIWATA in relation to the implementation of planned activities and realization of expected results. During the analysis the researcher also identified opportunities within MVIWATA for smoothly implementation of the project as well as threats from outside the organization that requires further actions. The researcher used SWOT analysis technique during this analysis.

**Table 2.2: SWOT Analysis of the Host Organization (MVIWATA)**

Strengths	MVIWATA has membership in many parts of Tanzania and in most parts it has been working with small holder farmers hence developed a useful experience in running community development projects.
	The organization has its clear constitution which is well adhered among all of its activities.
	Presence of grass root and middle level networks facilitates dissemination of knowledge and experience among small holder farmers on various socio-economic activities.
	MVIWATA has a long time culture of leading small holder farmers in developing their own socio-economic projects.
	The organization has committed and hard working staffs whose performance brings efficiency in project implementation.
	The organization had already trained some farmers' representatives on some technical aspects necessary for this project implementation and it has allocated resources for this project implementation.
Weaknesses	Low level of education among most of network members inhibits their active participation in various project cycles.
	Absence of good communication network system among network members from different parts of the country for immediate exchange of information on various projects being implemented in different areas.
	Delay in dissemination of information on various projects implemented

	by the organization to the rest of the society inhibits immediate impacts.
	Some of group members are active only for the sake of going to various agricultural exhibitions.
Opportunities	Participation of network members in different exhibitions and trainings organized by the organization equips small holder farmers with knowledge necessary for implementation of various development projects.
	The organization has donor support for implementation of its various projects.
	Activities and projects implemented by this organization go hand in hand with government policies and priorities.
	Partnership with governmental and non-governmental organizations local and international facilitates easily exchange of various information for socio-economic development activities.
	Presence of grass root and middle level networks facilitates dissemination of knowledge and experience on various projects within the same ward, district, or region.
Threats	Restrictions by the government on exportation of food crops and increased importation of food crops inhibit market expansion for locally produced crops.
	Climatic hazards and natural calamities such as prolonged droughts reduce agricultural production.

### **2.3.5 Roles of MVIWATA and Researcher in the Project**

MVIWATA (the host CBO) was selected due to its mission, geographical location and various activities it has been conducting in the area of study. During the implementation of this project the organization provided an enabling environment to the researcher which resulted in the realization of expected outputs. MVIWATA was also responsible for identification of project activities carried out by the student. During the implementation of this project, the organization provided various resources required for implementation of the project and assigned an officer for

supervising the progress of various activities of the project. Matufa villagers received trainings on various activities of the project from the organization field officer.

The researcher in this project had a role of providing technical assistance in the planning and implementation of this project among them being preparation of questionnaires and other research tools for participatory needs assessment as well as analyzing and presenting obtained results to the community. The researcher also participated with farmers' group in preparation of a business plan for the project and in the monitoring of the project progress. The researcher also played a role of technical advisor to various stages of the project activities.

## **CHAPTER THREE**

### **3.0 LITERATURE REVIEW**

#### **3.1 Introduction**

This part covers a review of various researched reports both published and unpublished related to the area of study. In this part a review of government reports, policy documents, doctoral dissertations, masters' thesis and other researched documents both published and unpublished related to the area of study was done. This part is therefore divided into theoretical literature, empirical literature, policy reviews, and a summary on a reviewed literature.

#### **3.2 Theoretical Literature**

##### **3.2.1 Definition of Agriculture**

Agriculture is an economic activity that involves growing of crops and keeping of live stocks by utilizing natural resources such as soils and water to support a growth of crops and availability of foods for live stocks. Agriculture may be conducted for a purpose of obtaining food for a family, for commercial purposes or both. Most small holder farmers conducts agriculture for a purpose of obtaining food for their families and selling surplus of their yields to meet other needs of their families such as paying for schools fees, medication and other necessities.

##### **3.1.2 Agriculture in Tanzania**

According to the ministry of agriculture, food security and cooperatives 2010/11 annual report, agriculture is the foundation of Tanzania economy contributing significantly to employment, food production and export. The sector is comprised of crop production, animal husbandry, fishery and hunting sub-sectors. Tanzania

agriculture is mostly rain fed dominated by food crop production economy which occupies 5.1 million ha or 85% of cultivated area annually. According to ACT, (2007) basing on 2006 data agriculture contributed 44.7% of Tanzania GDP while other sectors of the economy in aggregate contributed 55.3%. As well agricultural contribution to employment in rural areas of Tanzania through processing factories and secondary activities such as livestock, packaging, transport and other activities make it the main stay of the economy with annual growth of 3.3%.

Eastern African agricultural productivity programme of 2011 reports that nearly 70% of Tanzania crop area is cultivated by hand hoe, 20% is cultivated by ox-plough, and 10 % by tractor. As well nearly 3.5 million farm families cultivate about 4.5 million hectares of Tanzania's arable land. These small holder farmers carry out mostly rain fed agriculture, producing a variety of crops mostly for subsistence. Agriculture sector development strategy of the year 2002 shows that crops from small holder farmers accounts for most of the food produced in the country while the large scale sub-sector is relatively small with about 1,000 holdings which accounts for some of the cash crops in the country such as coffee, tea, sisal, and sugar.

### **3.2.3 Agriculture in Relation to Poverty in the World**

Various reports indicate that there is a direct linkage between agriculture and people's livelihoods in various parts of the world. Thirtle<sup>1</sup> et al, (2001) in the DFID report indicated that for poorer countries growth is dependent on increase in agricultural productivity which provides enough food for a growing non-agricultural population. The report also shows that in areas where technology-led agricultural productivity has been introduced it has been proved that there has occurred wide

spread economic growth and poverty reduction as it has benefited poor farmers directly through an increase in their levels of own-farm production including production of more food and nutrients for their own consumption, and increasing the output of marketed products for increased farm income.

The impact of agriculture on poverty reduction varies across various countries for various reasons. As identified by Grewal B et al, (2012) the impact of agriculture on poverty reduction among various countries is as follows; in China agriculture has been the major source of poverty reduction in the early stages of the country's rural reforms in 1980's by reducing urban-rural income disparities. In India agriculture sector particularly livestock sub-sector has been helpful for poverty reduction, and gender and social equity.

The sub-sector employs about 21 million people and it has been an important source of livelihood for small holder and landless laborers. In Indonesia growth in urban services appears to out weigh growth in agriculture in poverty reduction as large numbers of rural poor may be able to engage in urban services without having to migrate longer distances. As well the neglect of agriculture in Indonesia may have contributed to its inability to contribute more to poverty reduction. On other hand a growth of 4.1 % of agriculture per annum in Vietnam has opened pathways out of poverty for farming households. Due to the fact that the high concentration of the World's poor is in developing countries and especially in rural areas, reduction in poverty needs lifting the growth of agriculture sector through increased agricultural productivity and improving access to markets for agricultural commodities.

According to IFAD, (2010); Grewal B, et al, (2012) agriculture remains the major employer of nearly 72% of those in poverty in developing countries. It is a well known fact that, there is a high concentration of the World's poor in developing countries and in rural areas hence reduction in poverty needs lifting the growth of agriculture sector through increased agricultural productivity in a social context that will best facilitate flow on to the poor.

Grewal B et al, (2012) many studies have concluded that growth in agriculture is highly beneficial for poverty reduction because the situation of poverty is high in developing countries which still rely heavily on agriculture for output and employment. Also as the poorest households have few assets and no skills they mostly rely heavily on agriculture and they generally face many barriers in connecting with the non-agricultural economy for income and employment

#### **3.2.4 Agriculture in Relation to Poverty in Tanzania**

A report on agriculture sector review and public expenditure review of the year 2008/ 2009 reports that, over 80% of Tanzanians lives in rural areas where agriculture and utilization of natural resources are crucial to their livelihoods. As well, traditionally the Tanzania economy depends heavily on agriculture which contributes significant share to the GDP and generates significant amount of the nation's foreign exchange earnings. According to poverty and human development report, (2012) in Tanzania agriculture has experienced an average growth rate of 4.3% over the period 2001- 2010 where as the growth of the year 2010 was 4.2% which is below the MKUKUTA I target of 10 % growth by the year 2010. This indicates that poverty which is highly concentrated in rural areas has declined only

marginally as a result of failure of agricultural sector to grow to a required level enough to reduce rural poverty and improve livelihoods. For this reason much more need to be done to address poverty in rural areas by addressing long-standing hindrances to rural development. The required efforts includes increasing agricultural productivity and labor in farm and non-farm rural activities by utilizing modern inputs, ensuring availability of extension services of good quality to small holder farmers, expansion of irrigation and making efforts to diversify rural economy.

### **3.2.5 Rice Sub-Sector in Tanzania**

As per ACT and TAP, (2010) rice is the second most important crop in Tanzania after maize and it is mostly used as a cash crop, also Tanzania is the second largest rice producer in Eastern Africa with its annual production as reported by ACT, (2007) referring to 1998/99 to 2004/05 data being an average of 893,000 million tons of rice per annum. Nearly 90% of rice production in Tanzania is produced by small holder farmers where as the rice sub-sector is highly fragmented with millers and brokers playing a great role in the trading process.

Kadigi Reuben M.J, (2003) reported that although in Tanzania a large quantity of paddy is mainly produced by small scale farmers there are also large scale farms in the country most of which have been under the ownership of the National Agriculture and Food Corporation (NAFCO). While large scale paddy farming is mostly done with irrigation water with more improved irrigation facilities, small scale farming is largely dependent on rainfall.

As further reported by ACT and TAP, (2010) the rice subsector in Tanzania is faced by some constraints such as limited production, insufficient distribution of improved seeds and other necessary inputs, low quality varieties of planted rice, inefficient chains, insufficient input suppliers and extension workers, insufficient storage capacity, high post-harvest losses due to poor post harvest techniques and use of inefficient milling machines, weak farmers organizations, high transport cost, lack of transparency, poor enforcement of regulations , lack of traceability and a conducive business environment. However there is a growing demand from urban medium-high consumers for quality and branded aromatic rice grown in Tanzania and also there is great demand from army barracks, hospitals, schools and mining companies. As well the neighboring countries have insufficient rice production which makes the regional block a highly attractive market if efficient and effective supply chains will be developed among producing areas.

### **3.2.5.1 Paddy Production Systems**

Paddy production in Tanzania is mostly dominated by small holder farmers producing mainly under rain fed condition. According to Eastern African agricultural productivity programme of 2011, rice production systems in Tanzania are dominated by low land rain fed rice which constitutes a large segment of categories. Other systems of rice production practiced in Tanzania include low land irrigated rice and upland rain fed paddy cultivation. Nearly 71 percent of rice produced in Tanzania is done under rain fed conditions; rice produced under irrigation system present 29 percent of the total rice with most of it in small village level traditional irrigations. The average yield is very low of about 1 to 1.5 tons per hectare as farmers grow a

number of traditional varieties with long maturity. As well yield is affected by irregular rainfall pattern and occurrence of pests.

### **3.2.5.2 Tanzania Paddy Production Trend**

According to ACT and TAP, (2010) basing on 1998/99 to 2004/2005 data Tanzania has an average yield of 893,000 million tons of paddy per annum with annual average standard deviation of 400,000 million tons or 45 % for the period. The production peaked in 2001/2002 when nearly 1.5 million tons of paddy was produced compared to 307,000 million tons recorded a year earlier which shows an increase of 293 %. Also the production trend shows that paddy output is more correlated to rainfall as compared to other crops like maize. According to Eastern African agricultural productivity programme of 2011 paddy production trend in Tanzania has shown a significant increase over the period of five years from 2005 to 2010 as follows; 1,239 tons in 2005/2006, 1,342 tons in 2006/2007, 1346 tons in 2007/2008, 1335 tons in 2008/ 2009 and 2,615 tons in 2009/ 2010. Such increase is the result of various factors including increase in land irrigated, increase in rice yield particularly in irrigated rice and the subsidy system where rice farmers have received seeds and fertilizer packages.

Eastern African agricultural productivity programme of 2011 further reports that paddy production in Tanzania is below local consumption demand which is about 668,100 million tons, the deficit is met by imports which are 132,300 million tons. Rice sub-sector has various opportunities expected with the increase in rice production such as the ; the organization of paddy farmers along irrigation schemes makes it easy to provide targeted extension services, the impact of change in rainfall

duration is less on paddy as compared to other crops like maize, domestically produced rice in Tanzania enjoys a favor of a higher degree of effective protection through tariff as compared to imported ones, also paddy farmers in irrigated areas have demonstrated a higher adoption of farming technologies especially mechanization due to higher return on investment.

### **3.2.5.3 Major Rice Producing Regions in Tanzania**

Agriculture sector development strategy of 2001 reported that the major paddy producing regions in Tanzania are; Shinyanga, Morogoro, Mbeya, Mwanza, Rukwa, Kilimanjaro, Manyara, Arusha, Dodoma, Iringa, and Tanga. However there are areas with remarkable production as compared to other rice producing areas, as shown by SAGCOT,(2001) small holder farmers and private farms in Usangu plains produces more than 200,000 tones of rice annually for the national market making the plain number one among other Tanzania's rice producing areas.

Kadigi, (2003) if rice farmers in Usangu plain will stop rice cultivation there will be un bearable risks to the nation such as; a shrinkage in the annual paddy supply both at local and national levels of nearly 105, 000 tones which is about 70% of annual Mbeya region rice production and 14% of Tanzania annual rice production respectively, also an opportunity cost of nearly Tsh 16.4 billion of gross revenue from irrigated paddy in Usangu will be incurred annually. The rice production in Usangu plain is however predominantly wet season activity where irrigation systems give supplementary water for irrigation. Usangu plain is followed by Shinyanga and the Kilombero valley among the major rice producing areas in Tanzania.

#### **3.2.5.4 Rice Varieties Grown in Tanzania**

According to the national rice development strategy Tanzania has traditionally grown local varieties of rice which are originated from the seeds brought by Arab traders before 1960. The varieties include Supa, Behenge, Kula na bwana, Kalamata and several others. These varieties are well adapted to the climatic condition and taste preferences of Tanzanians but they have a low yield ranging between 1 to 1.5 tons per acre. Despite the efforts being made by national research institutions to improve and release other varieties of rice seeds there is little use of those seeds by farmers.

#### **3.2.5.5 Rice Packaging and Marketing Systems Used in Tanzania**

After harvesting most farmers sell their produced rice by sack-loads to traders who come to buy crop directly from the field. Kadigi, (2003) the sack-load denies small holder farmers a greater return they could earn by selling processed, branded, weighed and well packaged rice. It is therefore a clear fact that absence of effective and efficient value chain is a major barrier to the improvement of livelihoods of small holder paddy farmers in various areas producing rice in Tanzania.

ACT and TAP, (2010) although there are various projects interventions by non-governmental organizations and the government they have not managed to sustainably improve the situation by creating effective and efficient supply chains in order to take full advantage of growing market opportunities. It is therefore necessary to improve the existing value chains by enabling farmers at grass root level to sell processed, well packed, weighed and branded rice in order to ensure a sound return.

### **3.3 Empirical Literature**

#### **3.3.1 Improving Productivity and Post-Harvesting Techniques in Paddy Farming: an Experience of Ghana**

A project implemented in Northern and Ashanti region of Ghana by Directorate of crop Services (DCS) under the ministry of food and agriculture aimed at sustainable development of rain fed low land rice production has a lesson to draw for other paddy growing areas. The project period is from July 2009 to July 2014 with an overall goal of ensuring increased productivity and profitability of rice farming in rain-fed low land areas. The project has a purpose of accelerating dissemination of the model for sustainable development of rain fed low land rice farming. The project has resulted to the adaptation of technical package including of land development and rice cultivation technology which are accessible to small holder farmers.

The project is implemented through various trainings to farmers groups, and contact farmers who play a major role of farmer to farmer technology exchange and value chain actors. During the project productivity has increased to 4.9 per hectare in Ashanti and 3.6 per hectare in Northern region in the year 2011. The increase is higher compared to the previous experience in yields. As well the project has introduced post-harvest technology including threshing, milling, and packaging which have improved the quality of rice produced. To improve marketing of produced rice the project has established quality rice promotion forum to enhance marketing. The project is currently in extension phase where as target districts have developed their extension plans in 2011 through which each district take initiatives

for implementation of project activities in a way that will enhance a transfer of those technologies to new priority areas.

### **3.3.2 Improving Processing and Marketing Skills among Paddy Farmers as a Means of Raising Farmers' Earnings: Experience of SNV Zambia**

In most African countries Zambia being among them, locally produced rice faces stiff competition from rice imported from Asia which is sold at low prices. Most Zambians being price sensitive have in long term being attracted by imported rice as compared to the locally produced one as it has been observed that locally produced rice is at least 30% more expensive than imported rice. Realizing this fact SNV-Zambia a non-governmental organization worked with farmers groups and managed to increase productivity from 0.9 tons per hectare in 2007 to nearly 2.5 tons per hectare in 2011.

The organization has also been working with Chambeshi rice farmers association by giving them capacity development services which included training on value chain governance and management, value chain financing, business planning, market intelligence, market linkages, farm business costing and warehouse receipt system from late 2007. SNV has also supported branding, linkage to trade finance and improvement of processing capacities at processors level. These intervention measures at different levels of value chain were intended to increase competitiveness of locally produced rice and over four years over their implementation there has resulted strengthened bargaining voice among farmers and improved access to markets.

### **3.3.3 Improving Paddy Post Harvest Technology among Small Holder Farmers in Senegal, an experience of Africa Rice**

Paddy farming in Senegal River valley experienced losses of up to 35 percent for a number of years due to use of haphazard harvesting and rudimentary post-harvest technology among farmers. An intervention of the situation was made by a partnership project between the Africa Rice centre, national agricultural research systems, and private sector organization through which an efficient rice thresher named ASI after the three partners was developed to serve the region.

The technology requires six people to operate the machine efficiently with a separation rate of 99 percent and no additional labor is needed for sifting and winnowing. The project was developed following a survey conducted by Africa Rice centre in 1994 which revealed that poor post harvest technologies leads to losses of up to 35 percent and low grain quality. Through this technology labor requirements has been minimized, back-breaking tasks for women has been eliminated, post harvest processes has been speeded up, rice of high quality is been produced, and the marketability of local rice over imports has been increased.

### **3.2.4 Experience of MVIWATA in Working with Small Holder Paddy Farmers in Improving their Livelihoods through Increased Production**

Through nafaka project MVIWATA has strengthened farmers associations and increased paddy productivity and marketing among small holder farmers of six villages of Dakawa ward in Mvomero district in Morogoro. The nafaka project focused on strengthening farmers associations, promotion of the application of improved agronomic techniques in production and marketing of the crops. In

facilitating access to credit among small holder farmers, MVIWATA linked farmers associations to SACCOS and established crop banking system.

Also ESAFF, (2011) reports that a project titled “improving rice profitability through increased productivity and better marketing” was implemented by MVIWATA in partnership with Dodoma based rural livelihood development company (RLDC). The project was implemented in four rice producing regions which are Tabora (Igunga district), Singida (Manyoni district), Manyara (Babati district) and Morogoro (Mvomero district). The project had four components; firstly, improving awareness and access of farmers to improved seeds. Secondly, provision of improved agronomic skills and enhancement of farmers organization. The third component was innovative marketing and business linkages with private market actors and fourth networking for synergies and cooperation with other facilitators.

Through the project about 25 new small holder rice farmers groups were formed and in total 78 such groups were trained on agronomy and good marketing skills. Also more than 500 small holder farmers were trained directly and 21 farmer field schools were established and benefited around 3,000 farmers in the four districts. In Igunga district the project was implemented in 21 villages including Itumba, Mwanzugi and Choma Chankole. In Manyoni district villages in Kintinku ward were trained. In Mvomero district farmers in villages of Dakawa and Hembeti wards were trained while in Babati district the beneficiaries were in Magugu ward. Through the project productivity per household has increased by an average of nearly 20 percent. A survey conducted during the project identified various shortcomings that requires to be addressed. The shortcomings included poor rice agronomic skills, poor

knowledge of farmers groups and their importance, poor leadership skills, poor access to improved rice seeds, insufficient entrepreneurship skills, low rice price and unavailability of market information and absence of reliable market.

### **3.4 Policy Reviews**

#### **3.4.1 Tanzania Development Vision 2025**

Tanzania through its 2025 development vision expects that by the year 2025 its economy will have been transformed from low productive agricultural economy to semi-industrialized economy led by modernized and highly productive agricultural activities which are effectively integrated and buttressed by supportive industrial and service activities in the rural and urban areas. Through this achievement the country will have laid a solid foundation for a competitive and dynamic economy, and it is therefore expected that the country will imbued with five main attributes which are; high quality livelihood, peace, stability and unity, good governance, a well educated and learning society, and a competitive economy capable of producing sustainable growth and shared benefits.

Through the 2025 vision it is also expected the quality of Tanzanians livelihoods should be raised by increasing the level of productivity in all sectors including agriculture. There should be high productivity in agriculture that generates reasonably high incomes and ensures food security and food self-sufficiency. The vision further explains that there should also be a diversification of the economy based on a dynamic industrialization programe focused on local resource-based industries (agro-industries) which will be able to meet the needs of other sectors while continuously developing activities that have dynamic comparative advantages.

### **3.4.2 National Strategy for Growth and Reduction of Poverty**

The strategy realizes agriculture as the leading productive sector which provides livelihoods to 82 percent of the population most of whom being rural dwellers. For that case, it identifies the barriers to rural growth as those which are greatly associated to agricultural sector. The barriers includes; low productivity of land, labor and production inputs, under developed irrigation potential, limited capital and access to formal financial services; inadequate agricultural technical support services, poor rural infrastructure acting as a barrier to effective rural-urban linkage. Other barriers to agricultural development as explained by the strategy includes; gender relations, weak producers organizations, poor coordination and limited technological capacity, depressed prices for primary commodities in global markets and insecurity in respect to property rights, to land and its use as a collateral for credit.

The strategy explains that for growth and poverty reduction among other efforts, Tanzania should increase productivity focusing on technological changes with particular attention to rural agricultural productivity and associated linkages with industry. It is also required efforts in addressing entrepreneurship development needs for rural private producers both on farm and non-farm, agro-based industries, formal and informal enterprises. There should also be an improvement in access to resources like finance, land, water, technological and managerial skills including marketing and marketing information. Further more there should be a facilitation of linking-up of domestic producers with local and foreign rural development institutions. As well an improvement in access to and ability to use productive assets

for the poor should be improved for broad based growth, equity and improved livelihoods.

### **3.4.3 Rural Development Strategy**

As per strategy because of the importance of agriculture to the economy of Tanzania poverty reduction trend and improvement of people's livelihoods are highly dependent on its growth and associated rural non-agricultural activities. The strategy is therefore aimed at improving agricultural sector the economic base of rural areas and other rural non-agricultural activities from the marked unsatisfactory performance, hence it proposes the following approaches for strengthening market linkages and promoting the participation of private sector in rural development;

- a) Creation of supportive environment for private sector to engage into commercial agriculture and commodities market.
- b) The removal of unnecessary regulations and taxes on agricultural commodities.
- c) The facilitation of private sector investment in market infrastructures such as processing and storage facilities.

The strategy also identifies the following as barriers for rural commodities access to reliable markets;

- i. Poor infrastructural services such as roads and communication services mostly in rural areas.
- ii. Unfair competition caused by imported cheap and dumped products against local products.

- iii. Failure of local products to penetrate foreign markets due to lack of capital and skills including failure to meet quality standards.
- iv. Lack of organized markets for small producers such as miners, horticultural, agricultural, livestock and fishing products.
- v. Poor processing and packaging technology for small holder producers' products.
- vi. Lack of effective and efficient marketing boards that adequately represent interest of producers.

#### **3.4.4 The national Poverty Eradication Strategy**

According to the strategy there were great achievements in poverty reduction from 1960's to early 1980's, however the achievements were negatively affected by economic problems that faced Tanzania from late 1970's to 1980's. The effects resulted from economic problems still hinders government efforts in alleviating poverty. Realizing the role of agriculture as the mainstay of the economy, the strategy outlines the following strategies for agricultural sector development;

- a) Identifying and increasing availability of new farm land by farmers and improving means of communication.
- b) Establishing food preservation at district and household level.
- c) Intensifying production on already cultivated land through improved technologies and inputs.
- d) Improving the availability of basic farm inputs and promote the use of organic fertilizers by farmers.
- e) Improving market services including marketing research for agricultural

products.

- f) Promoting and developing improved on-farm storage facilities to minimize post harvest crop losses.
- g) Promoting increased investment in small holder irrigation systems.
- h) Increasing the availability of financial support and credits to the agricultural sector.
- i) Improving and speeding up the process of land surveying and issuing title deeds to individuals and communities.
- j) Improving and setting aside grazing land.
- k) Improving the market research for agricultural and livestock products.

### **3.4.5 Agriculture Sector Development Strategy**

The strategy explains that about 50 per cent of Tanzanians can be defined as poor as they have a per capita income of less than US \$ 1 per day where as over 80 percent of the Tanzania population live and obtain a living in rural areas with agriculture as the mainstay of their living. The strategy is therefore aimed at focusing on the following areas so as to improve the performance of Tanzania agriculture and reduce rural poverty. Strengthening the institutional framework for managing agricultural development in the country, creating a favorable climate for commercial activities, elaborating public and private roles in improving support services, improving farm net returns and commercializing agriculture by giving attention to marketing inputs and outputs. The strategy is further focused on developing a private agribusiness sector support unit, promoting agro-processing and rural industrialization, increasing access to inputs in rural areas; strengthening market information collection and

dissemination, improving rural markets infrastructures, and promoting partnership between small holder farmers and agribusiness.

#### **3.4.6 Agriculture and livestock policy**

The ultimate goal of this policy is the improvement of livelihoods of people whose major occupation and way of life is based on agriculture. Majority of this people are small holder farmers and livestock keepers hence the policy is focused on commercializing agriculture so as to increase their income levels. Among the objectives of this policy is there fore to improve standards of living in rural areas through increased income generation from agricultural production, processing and marketing. The policy therefore sets strategies among others to provide small holder farmers and livestock keepers a new thrust in training in matters of tree crop nursery management, making and repairing ox-harnessing equipments, improvement of traditional irrigation, farm business management, group leadership and labour saving technologies. Also the policy promotes further conducting of farmers and livestock keepers training needs assessment so as to identify more areas of training.

#### **3.4.7 Agriculture marketing policy**

According to the policy small holder farming dominates agricultural production where as a large part is for subsistence. The policy therefore has set vision, mission and objectives aimed at crop marketing improvement. The policy has a vision to create a competitive and efficient marketing system for agricultural commodities leading to a rapid and broad based economic growth. The policy mission is to develop agricultural marketing system that influence agricultural production plans which responds to domestic and foreign markets dynamics. To attain the vision and

fulfill the mission, the policy has set objectives where as its overall objective 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 also set some specific objectives aimed at improving agricultural marketing as follows;

- a) To facilitate diversification and value addition in agricultural products following an increasing and dynamic market demand.
- b) To promote adherence to quality, grade and standards in agricultural products so as to meet domestic, regional and international market requirements.
- c) Changing the legal and regulatory framework that guides the agricultural marketing system to take advantage of the opportunities present in multilateral trading system and regional trading arrangements.
- d) Promote, empower and support the development of agricultural marketing institution.
- e) Encourage investments in agricultural marketing infrastructure and agrobusiness.
- f) Facilitate the development of efficient and effective agricultural marketing information, research and intelligence systems for development of existing and new agricultural markets.

According to the policy, Tanzania can enjoy a wide market opportunity available domestically, regionally and internationally if agricultural marketing system will be improved. Some of constraints to the effective utilization of available market opportunities are; inadequate value addition in agricultural produce, unsatisfactory

adherence to grades, standards and quality in agricultural products marketing, poor legal and regulatory framework on agricultural marketing, weak institutional set-up dealing with agricultural marketing, poor developed and improperly managed agricultural marketing infrastructure, inadequate marketing research and intelligence which hinders timely availability of data and information necessary for decision making. Others include; poor use of marketing risk management approaches, poor access to financial services for agricultural marketing activities, lack of marketing linkage, poor capacities to utilize emerging opportunities in the domestic, regional and international markets including preferential markets.

#### **3.4.8 National rice Development Strategy**

As per this strategy rice ranges among six main food crops grown in Tanzania others being maize, sorghum, millet, wheat, and legumes. Records shows that from 1985 the six main Tanzanian food crops have grown at 3.5 % per year where as export crops have grown at 5.4%. Among these six food crops rice is the second most important food crop basing on number of households, area planted, and production volume. The national rice strategy has a vision to transform the existing subsistence dominated rice sub-sector into commercially and viable production system. It is expected that if the strategy will attain its vision there will be an increase in the national food security and enhance income generation at household level through production of sufficient quantity and quality rice. The strategy implementation is therefore done by focusing on eight identified strategic areas;

- a) Improving seed systems and fertilizers distribution.
- b) Developing improved varieties, production and integrated crop management

options.

- c) Improving post harvest and marketing of rice.
- d) Improving irrigation and water harvesting technology.
- e) Enhance access to and maintenance of agricultural equipments.
- f) Improving capacity for technology development, training and dissemination systems.
- g) Access to agriculture finance.
- h) Promotion of medium and large scale processing industry.

### **3.5 Literature Review Summary**

As seen in all parts of literature reviewed above, there is a great linkage between agriculture and rural people's livelihoods in developing countries Tanzania being one among them. A large part of agriculture in these countries is done by small holder farmers and therefore efforts to increase agricultural production should focus mostly on increasing small holder productivity as they are the majority in the sector and the most affected by poverty situation existing in their countries. As well efforts aimed at poverty reduction, economic growth and improvement of livelihoods in developing countries like Tanzania should focus at increasing agricultural performance among smallholder farmers for such efforts to give viable outputs.

Further more, in the reviewed Tanzania research documents, policies, and government strategies, it has been observed that small holder farmers are greatly affected with a lack of marketing skills, governance skills, agribusiness skills and a proper packaging of their commodities to effectively utilize the available local and international market opportunities. It is due to this fact that a project on improving

livelihoods of smallholder paddy producers by strengthening their capacities in packaging and marketing rice is there to fill the existing gap as way of working toward the nation's 2025 vision of improving its people's livelihoods and as a part of implementing several governmental policies and strategies aimed at improving agriculture and rural livelihoods at large.

## **CHAPTER FOUR**

### **4.0 PROJECT IMPLEMENTATION**

#### **4.1 Introduction**

In this chapter an original plan and actual project implementation are presented together with the implementation made during the seven months of the project life span. The resident's of Matufa village through their farmers' group (Umoja farmers' group) were the owners and the main beneficiaries of the project. MVIWATA was the in charge of the project where by it facilitated availability of sealing machine, packaging bags, and farmers' participation in different exhibitions. The CBO also facilitated trainings aimed at capacity building to farmers on governance, natural resource management, packaging, marketing, and financial management skills. On the other hand the researcher was a technical facilitator who guided the process of needs assessment in Matufa village, analysed and presented the findings for ranking. Also the researcher provided training on agro-business skills, governance and management skills. This chapter is therefore summarized into project planning, project implementation and their sub-parts as presented hereunder.

#### **4.2 Products and outputs**

The project took place for a period of seven months from June 2013 to December 2013 where by during this period a number of products and outputs aimed at attaining project objectives were realized as shown hereunder.

##### **4.2.1 Products**

- a) 30 small holder paddy farmers were trained on simple technology of packaging products to enhance high marketability.

- b) 30 small holder paddy farmers were trained on marketing skills including labeling of their products to indicate the nature, and quality of the respective product.
- c) 30 small holder paddy farmers were trained on entrepreneurial skills and financial management skills to enable proper management of the capital and income obtained from the sales of the packed products.
- d) 30 small holder paddy farmers were trained on agro-business skills including grading of their rice before packaging to obtain a quality standard that will attract customers hence lead to high marketability of their products.
- e) 30 small holder paddy farmers were able to market their packed products in various places including various exhibitions such as the national food exhibitions held at Hanang district from 14<sup>th</sup> October 2013 to 16<sup>th</sup> October 2013.

#### **4.2.2 Outputs**

- a) The trained small holder farmers in Matufa village are now packing their products using the trained simple technology as a way of improving marketability of their products.
- b) The trained small holder farmers are now selling packed and labeled products, indicating the place of origin for the product and the quality of the product.
- c) The trained smallholder farmers in Matufa village are now putting into practice the trained entrepreneurial and financial management skills in preparing and marketing their packed products.

- d) The trained small holder farmers in Matufa village are now putting into practice the trained agro-business skills including grading their rice before packaging. This has enabled a rise in the marketability of their rice and they have managed to sell their graded and packed rice at Tsh. 1800/= compared to the market price of Tshs. 1400/=
- e) The small holder farmers have managed to increase markets for their products by marketing them in various exhibitions including the national food exhibitions held at Hanang district from 14 October 2013 to 16 October 2013.

**Table 4.1: A Summary of Activities and Outputs**

<b>Overall objective: To contribute in improving livelihoods of smallholder paddy farmers in Matufa village by strengthening their capacities in packaging and marketing</b>	
<b>SO 1: To improve small holder paddy producers' capacity in Packaging and marketing skills using simple technology.</b>	
<b>Output 1: The trained small holder farmers in Matufa village are now packaging their products using the trained simple technology as a way of improving marketability of their products.</b>	<b>Activities</b>
	1. Training smallholder paddy farmers in Matufa village on a simple technology of packaging their products.
	2. Facilitating the availability of a sealing machine to the small holder paddy farmers in Matufa village.
	3. Facilitating the availability of beam balance to the smallholder farmers group.
<b>SO2: To equip small holder farmers on marketing skills including labeling their products to indicate the quality and origin of their products.</b>	
<b>Output 2: The trained small holder farmers in Matufa village are now selling packed and labeled products indicating the place of origin for the product and the quality of the product.</b>	1. Training smallholder paddy farmers on marketing skills including labeling of their products to indicate the nature, and quality of the respective products.
	2. Training small holder paddy farmers in Matufa village on the need and importance of labeling their products.
	3. Facilitating the availability of labels for smallholder paddy farmers' products.
<b>SO 3: To equip small holder paddy producers in Matufa village with entrepreneurship and financial management skills to enable proper management of the capital and income obtained from the sales of the packed products.</b>	
<b>Output 3: The trained</b>	<b>Activities</b>

<b>Overall objective: To contribute in improving livelihoods of smallholder paddy farmers in Matufa village by strengthening their capacities in packaging and marketing</b>	
<i>smallholder farmers in Matufa village are now putting into practice the trained entrepreneurial and financial management skills in preparing and marketing their packed products.</i>	1. Training smallholder paddy farmers in Matufa village on entrepreneurial skills.
	2. Training smallholder paddy farmers in Matufa village on financial management skills.
<b>SO4: To equip smallholder farmers in Matufa village with agro-business techniques including grading their products before packaging in order to ensure that they get a sound profit from investment they make in their fields.</b>	
a) <b>Output 4:</b> <i>The trained small holder farmers in Matufa village are now putting into practice the trained agro-business skills including grading their rice before packaging.</i>	<b>Activities</b>
	1. Training smallholder farmers in Matufa village on agro-business skills including grading their products before packaging.
	2. Training smallholder paddy farmers on the need and importance of grading their rice before packaging.
<b>SO5: Facilitating availability of markets for small holder paddy farmers' packed products by enhancing their participation in various exhibitions.</b>	
a) <b>Output 5.</b> <i>The small holder farmers have managed to increase markets for their products by marketing them in various exhibitions including the national food exhibitions held at Hanang district from 14 October 2013 to 16 October 2013.</i>	<b>Activities</b>
	1. Training farmers on marketing skills.
	2. Facilitating farmers' participation in various exhibitions.
<b>SO6: Project implementation plans and strategies are in place to facilitate the research process.</b>	
<b>Output 6:</b> <i>Project management and implementation strategies developed and in place.</i>	<b>Activities</b>
	1. Conduct initial contact with MVIWATA for familiarization with the organization and for review of available literature.
	2. Identifying the target community, project site and then facilitate a participatory community needs assessment
	3. Facilitate mobilization and sensitization workshop for community members.
	4. Analyzing and presenting the findings to the community members for ranking.
	5. Facilitate participatory needs prioritization.
	6. Planning and implementing project activities with community members.
	7. Conducting periodic monitoring and evaluation.
8. Conduct end of project evaluation.	

## **4.2 Project Planning**

This part gives the framework of the project activities planned and implemented in attaining the project objectives. The implementation of project activities is elaborated by showing clearly how each activity was carried out in attaining the project objectives. This part also shows a description of activities planned and implemented, resources used and time management during the project implementation. Also key people and institutions participated in project implementation are indicated in this part. As well indicators used to measure the attainment of project objectives and means of verification used are elaborated. By considering the fact that the project implementation can be affected by various factors, this part also explains a number of assumptions and risks to be considered for project implementation.

### **4.2.1 Project Implementation Plan**

The implementation of this project followed a series of planned activities done in participation of the community, researcher, host CBO and other stakeholders. The project started with a formulation of community driven and participatory implementation plan that provided a road map for the implementation processes. In order to realize the planned goals and achieve objectives a total of five (5) outputs were achieved after an implementation of twelve (12) project activities.

The activities that were conducted in the implementation of this project included; training smallholder paddy farmers on a simple technology of packaging their products, facilitating the availability of sealing machines to the small holder paddy farmers, training smallholder paddy farmers on marketing skills including labeling of

their products to indicate the nature and quality of the respective products, training small holder paddy farmers on the need and importance of labeling their products. Also the project involved the implementation of other activities including; facilitating the availability of labels for smallholder paddy farmers products, training smallholder paddy farmers in Matufa village on entrepreneurial skills and financial management skills so as to enhance an entrepreneurial drive among the farmers in packaging and marketing their products. As well the small holder farmers in Matufa village were equipped with knowledge on agro-business skills including grading their rice before packaging, the need and importance of such grading. Also the farmers were trained on marketing skills and then they were facilitated to participate in various exhibitions. The project implementation is summarized in the following table which also shows, a logical framework which highlights key intervention areas, objectively verifiable indicators, means of verifying the achievements and possible assumptions predefined for the successful implementation of the project.

**Table 4.2: Project implementation Logical Framework**

<b>Intervention Logic</b>	<b>Objectively Verifiable Indicators</b>	<b>Means of Verification</b>	<b>Assumptions</b>
<b>Overall Objective</b>			
<i>To improve livelihoods of small holder paddy farmers in Matufa village by enhancing their capacity in packaging and marketing.</i>	<ul style="list-style-type: none"> <li>• Increased ability of farmers to pay for basic needs.</li> <li>• Increased price for the farmers' products.</li> </ul>	<ul style="list-style-type: none"> <li>• Survey and assessment reports</li> <li>• Periodic and end of the project evaluation reports.</li> </ul>	<p>The host CBO and other stakeholders are playing their role effectively in project implementation.</p> <p>The target community is cooperating effectively in project implementation.</p> <p>The local government is in support of the improvement of livelihoods of smallholder paddy farmers.</p> <p>The cultural environment is conducive for the project.</p>
<b>SO 1: To improve small holder paddy producers' capacity in Packaging and marketing skills using simple technology.</b>			
<b>Output 1</b>	<b>Objectively Verifiable Indicators</b>	<b>Means of Verification</b>	<b>Assumptions</b>
<i>The trained small holder farmers in Matufa village are now packaging their products using the trained simple technology as a way of improving marketability of their products.</i>	<ul style="list-style-type: none"> <li>• Farmers packaging their products by the end of project.</li> <li>• Presence of a sealing machine and other materials by the end of the project.</li> </ul>	<ul style="list-style-type: none"> <li>• Project progress reports.</li> <li>• Project evaluation reports.</li> </ul>	<ul style="list-style-type: none"> <li>• Farmers are willing to pack their products so as to increase their marketability.</li> <li>• The local government is in support of the project.</li> </ul>
<b>Activities</b>			
1. Training smallholder paddy farmers in Matufa village on a simple technology of packaging	<ul style="list-style-type: none"> <li>• At least 30 small holder paddy farmers are trained on packaging their products.</li> </ul>	<ul style="list-style-type: none"> <li>• Training reports.</li> <li>• Project progress reports.</li> </ul>	<ul style="list-style-type: none"> <li>• The host CBO and other stakeholders are willing to provide respective trainings.</li> <li>• The local government is in support</li> </ul>

Intervention Logic	Objectively Verifiable Indicators	Means of Verification	Assumptions
<b>Overall Objective</b>			
their products			of such trainings.
2. Facilitating the availability of sealing machine to the small holder paddy farmers in Matufa village.	<ul style="list-style-type: none"> <li>• Presence of the sealing machines and other necessary materials for packaging.</li> </ul>	<ul style="list-style-type: none"> <li>• Project progress reports.</li> <li>• Project evaluation reports.</li> </ul>	<ul style="list-style-type: none"> <li>• The host CBO (MVIWATA) and the farmers are willing to contribute in buying the packaging machine and other materials necessary for packaging.</li> </ul>
<b>SO2: To equip small holder farmers on marketing skills including labeling their products to indicate the quality and origin of their products.</b>			
<b>Output 2</b>	Objectively Verifiable Indicators	Means of Verification	Assumptions
<i>The trained small holder farmers in Matufa village are now selling packed and labeled products indicating the place of origin for the product and the quality of the product.</i>	<ul style="list-style-type: none"> <li>• Farmers are labeling their products by the end of the project.</li> <li>• Farmers are able to design and order labels for their products by the end of the project.</li> </ul>	<ul style="list-style-type: none"> <li>• Project evaluation report.</li> <li>• Project progress reports.</li> </ul>	<ul style="list-style-type: none"> <li>• Farmers are willing to label their products.</li> <li>• The local government is in support of the project.</li> </ul>
<b>Activities</b>			
1. Training smallholder paddy farmers on marketing skills including labeling of their products to indicate the nature, and quality of the respective products.	<ul style="list-style-type: none"> <li>• At least 30 farmers are trained on marketing skills including labeling of their products.</li> </ul>	<ul style="list-style-type: none"> <li>• Training reports.</li> <li>• Presence of labeled products</li> <li>• Project evaluation reports.</li> <li>• Project progress reports.</li> </ul>	<ul style="list-style-type: none"> <li>• Small holder farmers are willing to label their products before marketing.</li> <li>• The host CBO and other stakeholders are willing to facilitate training and labeling of the farmers' products.</li> </ul>

Intervention Logic	Objectively Verifiable Indicators	Means of Verification	Assumptions
<b>Overall Objective</b>			
2. Training small holder paddy farmers in Matufa village on the need and importance of labeling their products.	<ul style="list-style-type: none"> <li>At least 30 farmers are trained on the need and importance of labeling their products.</li> </ul>	<ul style="list-style-type: none"> <li>Training reports</li> <li>Presence of labeled products.</li> <li>Project evaluation reports.</li> </ul>	<ul style="list-style-type: none"> <li>Small holder farmers are willing to participate in the training.</li> <li>The local government is in support of project.</li> </ul>
3. Facilitating the availability of labels for smallholder paddy farmers' products.	The small holder farmers have access for labels of their products.	<ul style="list-style-type: none"> <li>Project progress reports</li> <li>Project evaluation reports.</li> </ul>	<ul style="list-style-type: none"> <li>The host CBO is willing to facilitate availability of labels for small holder farmers' products.</li> </ul>
<b>SO 3: To equip small holder paddy producers in Matufa village with entrepreneurship and financial management skills to enable proper management of the capital and income obtained from the sales of the packed products.</b>			
<b>Output 3</b>	Objectively Verifiable Indicators	Means of Verification	Assumptions
<i>The trained smallholder farmers in Matufa village are now putting into practice the trained entrepreneurial and financial management skills in preparing and marketing their packed products.</i>	At least 30 farmers are trained on entrepreneurship and financial management skills in packaging and marketing their products.	<ul style="list-style-type: none"> <li>Presence of a specific budget for every packaging and marketing of the farmers' products.</li> <li>Training reports.</li> </ul>	<ul style="list-style-type: none"> <li>The host CBO and other stakeholders are willing to facilitate the training.</li> <li>The farmers are in need of the training.</li> </ul>
<b>Activities</b>			
1. Training smallholder paddy farmers in Matufa village on entrepreneurial skills.	<ul style="list-style-type: none"> <li>At least 30 smallholder farmers in Matufa village are trained on entrepreneurial skills.</li> </ul>	<ul style="list-style-type: none"> <li>Project evaluation reports.</li> <li>Project progress reports.</li> <li>Training reports.</li> </ul>	<ul style="list-style-type: none"> <li>The local government is in support of the project.</li> <li>The smallholder farmers are willing to participate in training.</li> <li>The host CBO and other stakeholders are willing to facilitate</li> </ul>

Intervention Logic	Objectively Verifiable Indicators	Means of Verification	Assumptions
<b>Overall Objective</b>			
			the trainings.
2. Training smallholder paddy farmers in Matufa village on financial management skills.	At least 30 farmers are trained on financial management skills.	Training reports. Project progress reports. Project evaluation reports.	The local government is in support of the project. The smallholder farmers are willing to participate in training. The host CBO and other stakeholders are willing to facilitate the trainings.
<b>SO4: To equip smallholder farmers in Matufa village with agro-business techniques including grading their products before packaging in order to ensure that they get a sound profit from investment they make in their fields.</b>			
<b>Output 4</b>	Objectively Verifiable Indicators	Means of Verification	Assumptions
<i>The trained small holder farmers in Matufa village are now putting into practice the trained agro-business skills including grading their rice before packaging.</i>	Presence of willingness and ability of farmers to grade their products before packaging.	<ul style="list-style-type: none"> <li>• Presence of graded products.</li> <li>• Project evaluation reports.</li> </ul>	Farmers are knowledgeable and willing to grade their products before packaging.
<b>Activities</b>			
1. Training smallholder farmers in Matufa village on agro-business skills including grading their products before packaging	At least 30 small holder paddy farmers in Matufa village are trained on agro-business skills including grading their products before packaging.	Presence of graded products. Project progress and evaluation reports.	Farmers are willing to grade their products as trained. The local government is in support of the project. The host CBO and other stakeholders are willing to support the trainings.
2. Training smallholder paddy farmers on the need and	At least 30 farmers are trained on the need and importance of	Presence of graded products.	The host CBO and other stakeholders are willing to support the trainings.

<b>Intervention Logic</b>	<b>Objectively Verifiable Indicators</b>	<b>Means of Verification</b>	<b>Assumptions</b>
<b>Overall Objective</b>			
importance of grading their rice before packaging.	grading their products before packaging.	Project progress and evaluation reports.	The host CBO and other stakeholders are willing to support the trainings. The local government is in support of the project Farmers are willing to grade their products as trained.
<b>SO5: Facilitating availability of markets for small holder paddy farmers' packed products by enhancing their participation in various exhibitions</b>			
<b>Output 5.</b>	<b>Objectively verifiable indicators</b>	<b>Means of verification</b>	<b>Assumptions</b>
<b>Activities</b>			
<b>Intervention Logic</b>	<b>Objectively verifiable indicators</b>	<b>Means of verification</b>	<b>Assumptions</b>
1. Training farmers on marketing skills.	At least 30 smallholder farmers are trained on marketing skills.	<ul style="list-style-type: none"> <li>• Training report.</li> <li>• Project progress report</li> </ul>	The host CBO and other stakeholders are willing to facilitate the training. Farmers are willing to participate in the training. The local government is in support of the training.
2. Facilitating farmers' participation in various exhibitions.	At least 30 farmers have participated in various exhibitions.	<ul style="list-style-type: none"> <li>• Project progress report.</li> <li>• Project evaluation reports.</li> </ul>	<ul style="list-style-type: none"> <li>• The host CBO is willing to facilitate farmers' participation in various trainings.</li> <li>• Farmers are willing to participate in various trainings.</li> </ul>

Intervention Logic	Objectively Verifiable Indicators	Means of Verification	Assumptions
<b>Overall Objective</b>			
<b>SO6: Project implementation plans and strategies are in place to facilitate the research process</b>			
<b>Output 6:</b> <i>Project management and implementation strategies developed and in place</i>	Majority of the targeted community and other stakeholders participated in the project implementation.	<ul style="list-style-type: none"> <li>• Project report</li> </ul>	<ul style="list-style-type: none"> <li>• The host CBO (MVIWATA) has provided maximum cooperation in the project implementation.</li> </ul>
<b>Activities</b>			
<ol style="list-style-type: none"> <li>1. Conduct initial contact with MVIWATA for familiarization with the organization and for review of available literature.</li> <li>2. Identifying the target community, project site and then facilitate a participatory community needs assessment</li> <li>3. Facilitate mobilization and sensitization workshop for community members.</li> <li>4. Analyzing and presenting the findings to the community members for ranking.</li> <li>5. Facilitate participatory needs prioritization.</li> <li>6. Planning and implementing</li> </ol>	<p>At least three MVIWATA staffs were contacted and leaflets and reports were reviewed in the CBO offices.</p> <p>The target community and project site were identified.</p> <p>Sensitization workshop conducted.</p> <p>Findings summarized and</p>	<p>Project progress reports.</p> <p>Project progress reports.</p> <p>Project progress reports.</p>	<p>Timely implementation of field works and allocation of resources from the organization.</p> <p>Timely implementation of field activities including participatory community needs assessment.</p> <p>Members of the community are supporting the project activities.</p> <p>The community members understand the findings.</p>

Intervention Logic	Objectively Verifiable Indicators	Means of Verification	Assumptions
<b>Overall Objective</b>			
<p>project activities with community members.</p> <p>7. Conducting periodic project monitoring and evaluation.</p> <p>8. Conduct end of project evaluation.</p>	<p>presented to the community members.</p> <p>Needs ranked and a priority need identified.</p> <p>Participatory project implementation and evaluation strategy developed.</p> <p>Periodic and participatory project monitoring and evaluation conducted.</p> <p>End of project evaluation was to be conducted.</p>	<p>Project progress report.</p> <ul style="list-style-type: none"> <li>• Project evaluation report.</li> <li>• Project progress report.</li> </ul> <ul style="list-style-type: none"> <li>• Project evaluation reports.</li> <li>• Project progress reports.</li> </ul> <p>Final evaluation report.</p>	<p>The community reaches a common understanding on a prioritized need.</p> <p>The target community and other stakeholders are willing to participate in project implementation and evaluation.</p> <p>The community members and other stakeholders are willing to conduct periodic project monitoring and evaluation.</p> <p>All project stakeholders are willing to conduct end final evaluation for the project.</p>

#### **4.2.2 Project Inputs**

The implementation of this project through its various activities utilized various inputs which are; sealing machine, nylon bags for packaging, beam balance, printed labels, technical staff with required expertise, time and financial resources. It also utilized various training materials such as ball pens, marker pens, notebook, flip chart, masking tapes, and venue for the training, refreshments, and writing pads. The inputs were contributed by the host CBO (MVIWATA), the community, and the researcher where as MVIWATA contributed 52.9%, the community contributed 38.8% and the researcher contributed 8.3%.

#### **4.2.3 Staffing Pattern**

The project did not recruit any staff but instead it was facilitated by the field officer of MVIWATA who was knowledgeable and capable of managing various parts of the project. Also there were some community members who had knowledge on the project and hence they managed most parts of the project. As well researcher's knowledge on various matters facilitated some parts of the project.

#### **4.2.4 Project Budget**

The total budget for the project was Tshs. 1,957,000 which was contributed by the host CBO (MVIWATA) which contributed 52.9%, the researcher who contributed 8.3% and the community which contributed 38.8 %. The money were to be used to pay for various project input such as the sealing machine and other packaging necessities including nylon bags and labels, training facilities, allowances and transport costs. Also the expenses facilitated farmers' participation in various exhibitions for marketing their products. The budget flow is further elaborated in the

Table 4.3.

**Table 4.3: Total Project Budget**

S/N	Activities	Total Budget	Contribution by MVIWATA	Contribution by the Researcher	Contribution by farmers
1	Training smallholder paddy farmers in Matufa village on a simple technology of packaging their products.	25,250	20,000	5,250	0
2	Facilitating the availability of a sealing machines to the small holder paddy farmers in Matufa village.	400,000	200,000	0	200,000
3	Facilitating the availability of beam balance to the smallholder farmers group	50,000	30,000	10,000	10,000
4.	Training smallholder paddy farmers on marketing skills including labeling of their products to indicate the nature, and quality of the respective products.	25,250	20,000	5,250	0
	Training small holder paddy farmers in Matufa village on the need and importance of labeling their products.	25,250	20,000	5,250	0
	Facilitating the availability of labels for smallholder paddy farmers' products.	20,000	5,000	5,000	10,000
	Training smallholder paddy farmers in Matufa village on entrepreneurial skills.	25,250	20,000	5,250	0
	Training smallholder paddy farmers in Matufa village on financial management skills.	25,250	20,000	5,250	0
9.	Training smallholder farmers in Matufa village on agro-business skills including grading their products before packaging.	25,250	20,000	5,250	0
10.	Training smallholder paddy farmers on the need and importance of grading their rice before packaging.	25,250	20,000	5,250	0
11	Training farmers on marketing skills.	25,250	20,000	5,250	0
12	Facilitating farmers' participation in various exhibitions.	700,000	300,000	0	400,000
13	Conduct initial contact with MVIWATA for familiarization with the organization and for review of available literature.	5,000	0	5,000	0

S/N	Activities	Total Budget	Contribution by MVIWATA	Contribution by the Researcher	Contribution by farmers
14.	Identifying the target community, project site and then facilitate a participatory community needs assessment	20,000	10,000	10,000	0
15	Facilitate mobilization and sensitization workshop for community members.	20,000	10,000	10,000	0
16	Analyzing and presenting the findings to the community members for ranking.	20,000	0	20,000	0
17	Facilitate participatory needs prioritization.	20,000	10,000	10,000	0
18	Planning and implementing project activities with community members.	200,000	160,000	10,000	30,000
12	Conducting periodic and end of project monitoring and evaluation.	100,000	50,000	20,000	30,000
13.	Miscellaneous expenses	200,000	100,000	20,000	80,000
<b>Total budget</b>		<b>1,957,000</b>	<b>103,5000</b>	<b>162000</b>	<b>760,000</b>

### 4.3 Project Implementation

The implementation of this project began effectively in June 2013 where as a total number of 20 activities were planned for implementation in order to achieve the project objectives. However up to December 2013 only 18 activities representing 90 % of all activities were implemented. The remaining two activities representing 10 % were delayed after some agreements between the community, host CBO and the researcher. The remaining activities were; facilitation of availability of sealing machines, and end of project evaluation. The stakeholders agreed that the purchasing of the machine for the farmers' group will be delayed as that machine was already in place under the ownership of the host CBO. The host CBO agreed with the farmers that they will be using the host CBO's machine for two harvesting seasons with a routine exchange with the CBO at times when the CBO will be in need of using them before purchasing other machines under the group ownership as long as the

machine was not regularly used at the CBO's office. End of project evaluation was not conducted as the project was still in progress.

Following the above results the budget that has been utilized for implementation of project activities up to December 2013 is Tshs.1, 557,000 representing 79.6% of the total budget where as 400,000/= representing 20.4% of the total budget was left for the remaining activities. This part therefore provides a project report with explanation of activities that were implemented and outputs obtained. It also compares the planned activities against the actual implemented activities with remarks on efficiency and effectiveness in utilization of resources. This part also provides a project Ghant chart which indicates how the project was managed in terms of time management and sequence of activities.

#### **4.3.1 Project Implementation Report**

During the implementation of this project various activities were implemented to achieve the planned objectives, the activities included among others; training for 30 small holder paddy farmers of Matufa village on packaging and labeling their products using simple technology. The farmers were also trained on marketing skills and agro-business skills including grading their products as a means of improving quality and attracting customers. As well the project facilitated smallholder farmers' participation in various exhibitions for marketing their product. Other activities implemented in this project are those related to preparation processes of the research to enable the researcher prepare and design appropriate mechanism that lead to the realization of this project. The project implementation progress and obtained outputs are further explained below;

#### **4.3.1.1 Output 1: The Trained Small Holder Farmers in Matufa Village are Now Packing their Products Using the Trained Simple Technology as a Way of Improving Marketability of Their Products**

This output was realized after implementation of three activities which included training 30 smallholder paddy farmers on how to pack their products using a simple sealing machine, also the 30 smallholder farmers were facilitated with a sealing machine by the host CBO for an agreement of using the machine with the host CBO for two harvesting seasons before a purchasing of the group machine is made, and lastly the group was facilitated with a beam balance to enable proper weighing of their products before packaging. The technology can be operated even by a single person as it is less labor intensive. It requires connecting the sealing machine to the electrical circuit for heating regarding the type of nylon to be sealed, and then sealing one side, put the product in the bag, then fixes the label and then seals the other side. The process takes not more than two minutes for an experienced person.



**Figure 4.1: Packed Rice and Other Products from Matufa Village Small Holder Farmers Using the Trained Simple Technology**

**Source:** Researcher 2013.

The activities were efficiently implemented as two farmers among the group were given prior training and facilitated training to other farmers in collaboration with the CBO field officer. The host CBO also linked the farmers to the nylon packaging bags producers in Arusha where the nylon bags were available at a price of Tshs. 6,600/= per kilogram. One kilogram of packaging nylons could be used to pack up to 80 bags of 1 kilogram each. This means that a farmer incurred Tshs. 82.5/= to pack a bag of one kilogram.

Due to the affordability and efficiency of the packaging technology it was easy for most farmers to understand and adopt it. At the initial stage the farmers decided to begin with 140 kilograms of packaging nylons which cost Tshs. 924, 000/=. The machines and other packaging materials were left under the group leadership management following agreement of the farmers that they will be contributing to the costs of the packaging materials as per quantity of the product to be packed by an individual farmer.

#### **4.3.1.2 Output 2: The Trained Small Holder Farmers in Matufa Village Are Now Selling Packed and Labeled Products Indicating the Place of Origin for the Product and the Quality of the Product**

This output was realized following an implementation of three activities which included; training of 30 smallholder paddy farmers on marketing skills including labeling of their products to indicate the nature and quality of respective products, training those smallholder farmers on the need and importance of labeling their products, and the last activity was to facilitate the availability of labels for small holder paddy farmers products. The host CBO (MVIWATA) linked the farmers to

label printers in Arusha where as 1000 labels were available at Tshs. 10,000. The labeling was made so as to facilitate communication between the producers and consumers through which consumers can use to order for more products or comment on the quality of the product for further improvement or maintenance of the quality.

#### **4.3.1.3 Output 3: The Trained Smallholder Farmers in Matufa Village Are Now Putting Into Practice the Trained Entrepreneurial and Financial Management Skills in Preparing and Marketing their Packed Products**

This output was realized after implementing two project activities aimed at improving farmers' knowledge and capacity on entrepreneurship and financial management so as they will be able to run their business with an entrepreneurial drive and be able to manage careful the capital and profits obtained in their business. In the first activity 30 small holder farmers were trained on entrepreneurship skills by the field officer of MVIWATA. Among the things taught were on the role of value addition in improving marketability of farmers' products, producing for commercial purposes, and farming records to maintain a sound link between inputs and outputs.

On the second activity 30 smallholder paddy farmers of Matufa village were trained on financial management skills. In this activity the researcher and the CBO field officer trained the farmers on how to prepare simple business plans which will act as the guide in producing, processing, packaging and marketing their crops. Through the business plan the farmers could easily monitor farming inputs and forecast earnings from their sales. Also the business plans helped farmers to monitor and control any divergence from the predetermined goals.

#### **4.3.1.4 OUTPUT 4: The Trained Small Holder Farmers in Matufa Village Are Now Putting into Practice the Trained Agro-Business Skills Including Grading Their Rice Before Packaging**

This output was obtained after conducting two activities aimed at improving farmers' knowledge on agro-business skills and the importance of that knowledge in increasing their earnings from their farming activities and in making the project successful. In the first activity 30 smallholder farmers of Matufa village were trained on agro-business skills by the CBO field officer. Among the trained skills was grading of their rice before packaging as means of ensuring that the packed rice is of uniform quality. In the second activity the farmers were trained on the need of grading their products and its importance. In this activity a demonstration of graded and ungraded rice was made and the farmers realized how attractive the graded rice was to customers, compared to ungraded one. After these trainings the farmers ensured that they grade their rice before packaging so as to obtain the price they agreed to sell their products as a group. Through this skill farmers managed to obtain the desired price of Tshs. 1800/= per kilogram compared to the existing market price of Tshs.1400 per kilogram.

#### **4.3.1.5 OUTPUT 5: 30 Small Holder Paddy Farmers Were Able to Market their Packed Products in Various Places Including Various Exhibitions Such as the National Food Exhibitions held at Hanang District from 14<sup>th</sup> October 2013 to 16<sup>th</sup> October 2013 for Marketing**

The host CBO (MVIWATA) facilitated the participation of the farmers' representatives in the exhibitions prepared by Small Industries Development Organization (SIDO) in Manyara region in September 2013. Also farmers were facilitated to participate in the national food exhibitions held in Hanang district from

14<sup>th</sup> October 2013 to 16<sup>th</sup> 2013. Through these exhibitions the farmers were able to market their products in a large quantity. Also the farmers had an opportunity to learn from other stakeholders involved in both exhibitions and in their return from exhibitions they always had something to improve in the appearance of their products.

The host CBO and the small holder farmers made an agreement of participating in as many exhibitions as possible in and outside the region. The farmers were to select two to four representatives to participate in each exhibition held by the host CBO or other stakeholders. The representatives had a role to market the products from their fellow farmers and in their return give training to their fellow farmers on any necessary improvements. The host CBO had a role to maintain constant participation of the small holder farmers in all exhibitions by collecting and disseminating information to farmers about the exhibitions.



**Figure 4.2: A Farmer Marketing the Packed Rice in the National Food Exhibitions held at Hanang District in October 2013**

**Source:** Researcher 2013

#### **4.3.1.6 Project Management and Implementation Strategies Developed and in Place**

Before the beginning of the project the researcher conducted prior communication with some MVIWATA staffs at their Manyara regional office. The purpose of this communication was to understand the CBO priority areas of operation and to identify together the main area of intervention and the target community. They reached an agreement for a researcher to work with the CBO field officer in conducting prior visit to the target community and identify strengths, weakness, threats and opportunities for the research and project implementation. Also during this prior communication and on the ongoing processes of the project, the researcher had an opportunity of reviewing available literature and getting familiar with the organization.

After identifying the target community and the project site, the researcher and the CBO field officer facilitated mobilization and sensitization workshops for community members to have knowledge on the objective of the research. The researcher then facilitated participatory community needs assessment, analyzed the results and presented the findings to the community members for participatory needs ranking. Among other needs the need for improving access to markets was ranked as a priority among Matufa smallholder paddy farmers. After identifying the priority need the researcher, CBO field officer, and the farmers planned and implemented project activities and periodic monitoring and evaluation of project progress.

### 4.3.2 Project implementation Gantt chart

**Table 4.4: The Project Implementation Plan Matrix**

Output	Planned activities	Implementation time frame (months) from June 2013 to December 2013						
		JN	JL	AG	SP	OC	NV	DC
<b>OUTPUT 1:</b> The trained small holder farmers in Matufa village are now packing their products using the trained simple technology as a way of improving marketability of their products.	1. Training smallholder paddy farmers in Matufa village on a simple technology of packaging their products.							
	Facilitating the availability of a sealing machine to the small holder paddy farmers in Matufa village.							
	Facilitating the availability of beam balance to the smallholder farmers group.							
<b>OUTPUT 2:</b> The trained small holder farmers in Matufa village are now selling packed and labeled products indicating the place of origin for the product and the quality of the product.	Training smallholder paddy farmers on marketing skills including labeling of their products to indicate the nature, and quality of the respective products.							
	Training small holder paddy farmers in Matufa village on the need and importance of labeling their products.							
	Facilitating the availability of labels for smallholder paddy farmers' products.							
<b>Output 3:</b> The trained smallholder farmers in Matufa village are now putting into practice the	Training smallholder paddy farmers in Matufa village on entrepreneurial skills.							

Output	Planned activities	Implementation time frame (months) from June 2013 to December 2013						
		JN	JL	AG	SP	OC	NV	DC
		trained entrepreneurial and financial management skills in preparing and marketing their packed products.	Training smallholder paddy farmers in Matufa village on financial management skills.					
<b>Output 4:</b> The trained small holder farmers in Matufa village are now putting into practice the trained agro-business skills including grading their rice before packaging.	Training smallholder farmers in Matufa village on agro-business skills including grading their products before packaging.							
	Training smallholder paddy farmers on the need and importance of grading their rice before packaging.							
<b>Output 5.</b> The small holder farmers have managed to increase markets for their products by marketing them in various exhibitions including the national food exhibitions held at Hanang district from 14 October 2013 to 16 October 2013.	Training farmers on marketing skills.							
	Facilitating farmers' participation in various exhibitions.							
<b>Output 6:</b> Project management and implementation strategies developed and in place.	Conduct initial contact with MVIWATA for familiarization with the organization and for review of available literature.							
	Identifying the target community, project site and then facilitate a participatory community needs assessment							
	Facilitate mobilization and sensitization workshop for community members.							

Output	Planned activities	Implementation time frame (months) from June 2013 to December 2013						
		JN	JL	AG	SP	OC	NV	DC
		Analyzing and presenting the findings to the community members for ranking. Facilitate participatory needs prioritization						
Planning and implementing project activities with community members.								
Conducting periodic and end of project monitoring and evaluation.								

#### 4.4 Challenges Encountered During Project Implementation

The implementation of this project was not easy especially at its initial stages as farmers group had time to meet only in week days in which the researcher was occupied with work tasks in Hanang district and it had to take time for permission from his employee some hours earlier before the time of meeting with farmers. After the commencement of the project, most project activities together with monitoring and evaluation were implemented by the farmers and the host CBO field officer and hence reduced a busy routine to the researcher. There was also a challenge of financial resources for the researcher to travel from his work place which is located in Hanang district to Matufa village. As well the project faced a scarcity of financial resources at its beginning for buying some necessary equipment such as sealing machines and hence the farmers and the host CBO agreed to use the host CBO machine at the beginning while collecting funds from the farmers and the host CBO for purchasing a sealing machine for the farmers group.

## **CHAPTER FIVE**

### **5.0 PROJECT PARTICIPATORY MONITORING, EVALUATION AND SUSTAINABILITY**

#### **5.1 Introduction**

Participatory monitoring and evaluation (PM&E) is an information system used to examine progress of a project, its performance and impact to the targeted community. It enables project staff, target community and other stakeholders to understand what worked and why worked or not worked throughout the project lifespan. Participatory monitoring and evaluation acts as a guide for collecting monitoring and evaluation information for facilitating making of timely management decisions and is also a strategy for ensuring accomplishment of project activities to attain the desired objectives.

PM&E includes developing indicators, collecting data based on indicators, analyzing those data, presenting results, and using the results to improve project implementation activities. To ensure effective participatory monitoring and evaluation a sufficient budget was allocated by the host CBO to enable its field officer and other stakeholders' participation in the monitoring and evaluation processes. This system has enabled the host CBO staff, researcher, target community and other stakeholders to develop the project properly throughout its lifespan.

To ensure participatory monitoring and evaluation, project indicators were developed jointly by the host CBO, target community, and other stakeholders basing on output, outcome and impact of the project. All primary stakeholders had a common agreement on key indicators, target level and frequency of data to be

collected. The researcher and host CBO developed a baseline survey tools including questionnaires and focus group discussion checklist on the basis of pre-determined indicators. These tools were used to collect data before, during, and after project activities so as to monitor progress and impact of those activities in relation to project objectives.

The project development team (host CBO, target community, and the researcher) developed a log frame for the project where as to ensure sound results for that log frame the team further developed key indicators, its target levels and frequencies of data collection at impact, outcome, and output level. This chapter therefore explains how the project was monitored and evaluated as a way of learning from changes resulted from the project implementation, achievements obtained and obstacles faced. It also shows project sustainability and strategies undertaken to ensure its continuity after phasing out and being left under the ownership of the target community.

## **5.2 Participatory Monitoring**

Participatory monitoring is the process of routinely gathering information about all aspects of project from and through collaboration of primary stakeholders. It enables primary stakeholders to obtain information required in analyzing the current project situation, understand problems and find solutions, discover trends and patterns, so as to maintain project activities on schedule, measure progress toward objectives, and decide on human, financial, and material resources. Before the commencement of this project the researcher and the host CBO collected information on the real needs of the Matufa village small holder farmers. The information were collected using

focus group discussion, interviews, checklist and observation where as the results were used to decide on various aspects on project progress. As well, regular field visits were made to monitor the progress of the project and its output and impact to the smallholder farmers' livelihoods. The researcher, host CBO, and farmers used handsets communications, meetings, and reports to inform each other on the plan for, progress, and output for each project activity. Participatory monitoring facilitated availability of necessary information for improvements in various project activities in relation to project objectives.

### **5.2.1 Relationship between Monitoring and Evaluation**

Evaluation is a periodic activity that attempts to assess systematically and objectively the relevance, performance and success of ongoing and completed project activities. There is a close relationship between monitoring and evaluation as both are managerial functions which works to support each other. Evaluation supports monitoring as it serves as a source of lessons that can be used in the development of conceptual or methodological innovations for use in refining the monitoring activities. As well monitoring may give quantitative and qualitative data using selected indicators, data that can serve as inputs to evaluation exercises. For that case, the relationship between monitoring and evaluation is interactive as neither function should be considered as a substitute for the other.

In a situation where there is a lack of effective monitoring and evaluation it is not easy to know whether the intended objectives are being realized as planned. It will also be difficult to know what corrective actions may be required to facilitate achievements of the required results, and whether the project intervention is making

positive contributions toward improvement of people's livelihoods. Monitoring and evaluation are always driven by the need to account for the achievement of pre-determined goals and gives a fact base to inform corrective decision making. In this project monitoring was ongoing process which was undertaken throughout the project from the beginning to its end while evaluation was conducted periodically after every month, at the middle of project life span, and at the end of the project (final evaluation).

### **5.2.2 Monitoring Information System**

A monitoring information system is a system created for collection and reporting of information on project activities to enable project management team to plan, monitor, and evaluate the operations and performance of the project. The major aim of monitoring information system is to enable project team to capture data, process and disseminate information in a systematic way. Monitoring information system has enabled the project team to measure trend of various indicators based on the information received from the field.

The monitoring of this project gone hand in hand with the routine activities of MVIWATA the host CBO and for that case the collected information were categorized into two; Information pertaining to the organization as an operational unit, and information related to the reaction of small holders, customers of their products and other stakeholders on project activities. Monitoring information system was established as way of ensuring access to complete, timely, and accurate information which would facilitate decision making on corrective and improvement strategies on the quality of packed products.

### **5.2.2.1 Monitoring System used in the Project**

The project used participatory monitoring system which employed participatory monitoring tools and methods. The system was used in monitoring implementation of the packaging technology introduced and marketing skills trained to small holder farmers. Quantitative and qualitative information obtained from different project activities facilitated corrective actions and improvements.

A monitoring conducted during and after the first farmers' participation in exhibition for marketing their packed products led to the change in the labeling style as most customers did not like labeled card placed within the product bags but instead they were more attracted to the products with printed labels outside of the packed product bags. Due to this farmers decided to order for bags which were printed outside instead of cards placed within the product bags. The change resulted into improved marketability of their products as the quantity of rice sold in the second exhibition participated by the farmers were higher compared to the first one.

There were also information collected from farmers on their improved performance in marketing their rice and their application of wide knowledge obtained from various trainings conducted during the project in their other economic activities. Information were also collected on the extent to which project has contributed to the improvement of farmers' abilities to meet their basic needs. The collected information facilitated decision making to correct and improve various aspects of the project in relation to the project objectives.

### **5.2.3 Participatory Monitoring Methods Used to Engage Community in the Project Monitoring Process**

Monitoring information were obtained through various participatory methods including; regular field visits, meeting among primary stakeholders, routine reports during and after every project activity, observation, interviews with beneficiaries and other stakeholders. Regular field visits helped to see the progress of the project and application of acquired knowledge and skills among small holder farmers in packaging and marketing their products along Babati -Arusha road. Meeting among primary stakeholders facilitated discussions on various matters pertaining to the progress of the project and any necessity for corrections or improvements.

On the other hand routine reports provided in primary stakeholders meetings during and after every project activity enabled them to know the effectiveness of each activity. As well observation helped to monitor the ability of farmers group to pack and market their products with little or no external assistance and their ability in training each other. Further more interviews with small holder farmers helped to obtain information on the effectiveness of the project in improving their livelihoods. Both formal and informal interviews were conducted with small holder farmers and other stakeholders and in both cases the information obtained were useful in assessing project progress.

### 5.2.4 Participatory Monitoring and Evaluation Plan

**Table 5.1: Participatory Monitoring and Evaluation for the Project**

What was Monitored	Performance indicator	Results/ achievements observed	Remarks
Implementation of planned activities	At least 30 small holder paddy farmers are trained.	At total number of 30 small holder farmers of Matufa village were trained on a simple technology of packaging their products.	Done
	Availability of sealing machine and other necessities for packaging.	The host CBO and the farmers' group have agreed to facilitate the availability of sealing machine, packaging nylons, and labels.	Done
	At least 30 farmers are trained on the need and importance of labeling their products	30 small holder farmers were trained on labeling their products and they were knowledgeable by the end of the project.	Done
	At least 30 farmers are trained on entrepreneurship and financial management skills in packaging and marketing their products.	30 small holder farmers from Matufa village were trained on entrepreneurship skills in order to equip them with entrepreneurship skills so that the packaging and marketing skills will be useful.	Done
	At least 30 small holder paddy farmers in Matufa village are trained on agro-business skills including grading their products before packaging.	30 smallholder farmers from Matufa village were trained on agro-business skills including grading their products before packaging as a way of increasing marketability of their products.	Done
	At least 30 smallholder farmers are trained on marketing skills and have participated in various exhibitions.	a) 30 small holder farmers from Matufa village have been trained on marketing skills and have been facilitated to participate in various exhibitions including the nation food exhibitions held at Hanang district from 14 <sup>th</sup> October 2013 to 16 <sup>th</sup> October 2013.	Done

What was Monitored	Performance indicator	Results/ achievements observed	Remarks
	At least three MVIWATA staffs were contacted and leaflets and reports were reviewed in the CBO office.	During the preparation phase the researcher managed to have meeting with the MVIWATA executive director for Manyara region, MVIWATA field officer, and the leader of MVIWATA groups in Magugu ward.	The support provided to the researcher and the project by MVIWATA led to the accomplishment of the project.
	Target community and project site identified.	The target community and project are in the same location as agreed upon during preparation phase.	Done.
	Sensitization workshop conducted.	30 small holder farmers in Matufa village were contacted and sensitized on the project.	Done.
Stakeholders and community participation in the project	Participatory project implementation and evaluation strategy developed and contribution from all stakeholder received.	All stakeholders participated in the implementation and evaluation of the project. As well stakeholder provided their contributions on time.	Participation of all stakeholders in priority setting and in implementing and evaluating the project created a sense of belonging and commitment among stakeholders.
Finance: Effective utilization of resources.	Project financial report and the planned budget.	Instead of providing financial contribution MVIWATA agreed to facilitate availability of the sealing machine to the farmers group.	A good financial management system has been established among group leaders and project management team to ensure effective utilization of funds.
Time management:	Activity implementation report indicating time frame	The mid-term evaluation report indicated that all activities were implemented as they were planned.	Proper time management was facilitated by the commitment of stakeholders in implementing project activities.

### **5.3 Participatory Evaluation**

Participatory evaluation is a partnership approach to evaluation in which partners, project beneficiaries, funders and key decision makers actively engage in developing evaluation and participate actively in all phases of its implementation. Primary stakeholders participate in planning the evaluation design, identifying key relevant questions, deciding for appropriate measures and data collection methods, gathering and analyzing data on evaluation. This facilitates development of shared expectations among all stakeholders as they agree on decisions pertaining to evaluation.

During the project implementation a participatory evaluation was carried out by the host CBO, the researcher and the farmers' group leaders through interviews with beneficiaries, meeting with farmers group, and observation. The participatory evaluation was carried out after every month by using monitoring data to assess the relevance of each project activity in attaining the intended objectives. Through participatory evaluation the attainment reached in the project objectives were realized. As well the challenges pertaining to the project implementation were identified and worked out.

### 5.3.1 Project Performance Indicators

**Table 5.2: Project Performance Indicators**

Level of Project Evaluation	Performance Indicators
<b>Overall Objective:</b> To contribute to improved livelihoods of small holder paddy farmers in Matufa village by strengthening their capacities in packaging and marketing.	<ul style="list-style-type: none"> <li>• Increased ability of farmers to meet their basic needs.</li> <li>• Increased sales and profits.</li> </ul>
<b>Output 1:</b> The trained small holder farmers in Matufa village are now packing their products using the trained simple technology as a way of improving marketability of their products.	<ul style="list-style-type: none"> <li>• Farmers' are packaging their products using the trained simple technology by the end of the project.</li> </ul>
<b>Activities</b>	
Training smallholder paddy farmers in Matufa village on a simple technology of packaging their products.	At least 30 farmers trained
Facilitating the availability of a sealing machine to the small holder paddy farmers in Matufa village.	A sealing machine is available to the farmers' group by the end of the project.
Facilitating the availability of beam balance to the smallholder farmers group.	A beam balance is available to the farmers' group by the end of the project.
<b>Output 2:</b> The trained small holder farmers in Matufa village are now selling packed and labeled products indicating the place of origin for the product and the quality of the product.	At least 70% of the trained small holder paddy farmers in Matufa village are selling packed and labeled products by the end of the project.
<b>Activities</b>	

Level of Project Evaluation	Performance Indicators
Training smallholder paddy farmers on marketing skills including labeling of their products to indicate the nature, and quality of the respective products.	At least 30 farmers trained.
Training small holder paddy farmers in Matufa village on the need and importance of labeling their products.	At least 30 farmers trained.
Facilitating the availability of labels for smallholder paddy farmers' products.	The farmers group is capable of purchasing labels for their products by the end of the project.
<b>Output 3:</b> The trained smallholder farmers in Matufa village are now putting into practice the trained entrepreneurial and financial management skills in preparing and marketing their packed products.	<ul style="list-style-type: none"> <li>• Application of the trained entrepreneurial skills in farmers' activities.</li> <li>• Farmers are preparing group financial report for each activity.</li> </ul>
<b>Activities</b>	
Training smallholder paddy farmers in Matufa village on entrepreneurial skills.	<ul style="list-style-type: none"> <li>• At least 30 farmers trained.</li> </ul>
Training smallholder paddy farmers in Matufa village on financial management skills.	<ul style="list-style-type: none"> <li>• At least 30 farmers trained.</li> </ul>
<b>Output 4:</b> The trained small holder farmers in Matufa village are now putting into practice the trained agro-business skills including grading their rice before packaging.	<ul style="list-style-type: none"> <li>• Farmers grading their products before packaging and marketing.</li> </ul>
<b>Activities</b>	

Level of Project Evaluation	Performance Indicators
Training smallholder farmers in Matufa village on agro-business skills including grading their products before packaging.	<ul style="list-style-type: none"> <li>• At least 30 farmers trained.</li> </ul>
Training smallholder paddy farmers on the need and importance of grading their rice before packaging.	<ul style="list-style-type: none"> <li>• At least 30 farmers trained.</li> </ul>
<b>Output 5.</b> The small holder farmers have managed to increase markets for their products by marketing them in various exhibitions including the national food exhibitions held at Hanang district from 14 October 2013 to 16 October 2013.	<ul style="list-style-type: none"> <li>• At least 10 farmers have participated in various exhibitions.</li> </ul>
<b>Activities</b>	
Training farmers on marketing skills.	<ul style="list-style-type: none"> <li>• At least 30 farmers trained.</li> </ul>
Facilitating farmers' participation in various exhibitions.	<ul style="list-style-type: none"> <li>• At least 10 farmers have participated in various exhibitions.</li> </ul>
<b>Output 6:</b> Project management and implementation strategies developed and in place.	Majority participation of the target community and other stakeholders in project implementation.
<b>Activities</b>	
Conduct initial contact with MVIWATA for familiarization with the organization and for review of available literature.	<ul style="list-style-type: none"> <li>• At least three MVIWATA staffs are contacted.</li> </ul>

Level of Project Evaluation	Performance Indicators
Identifying the target community, project site and then facilitate a participatory community needs assessment	<ul style="list-style-type: none"> <li>• Target community identified, project site located, and community needs assessment conducted.</li> </ul>
Facilitate mobilization and sensitization workshop for community members.	<ul style="list-style-type: none"> <li>• At least three sensitization workshops conducted.</li> </ul>
Analyzing and presenting the findings to the community members for ranking.	<ul style="list-style-type: none"> <li>• The findings analyzed and presented to the community members.</li> </ul>
Facilitate participatory needs prioritization	<ul style="list-style-type: none"> <li>• Participatory needs prioritization conducted.</li> </ul>
Planning and implementing project activities with community members.	<ul style="list-style-type: none"> <li>• At least majority of community members participate in planning and implementing project activities.</li> </ul>
Conducting periodic monitoring and evaluation.	<ul style="list-style-type: none"> <li>• Periodic monitoring and evaluation reports presented to stakeholders.</li> </ul>
Conduct end of project evaluation.	<ul style="list-style-type: none"> <li>• End of project evaluation report.</li> </ul>
<b>Other evaluated aspects</b>	
<b>Stakeholders and community participation in the project</b>	CBO and community members' have made timely contribution.
<b>Finance:</b> Resources utilization and effectiveness	<ul style="list-style-type: none"> <li>• Budget and financial reports indicating expenditure for each activity.</li> </ul>
<b>Time management:</b> Proper utilization of project time.	<ul style="list-style-type: none"> <li>• Activity implementation report indicating time of implementation</li> </ul>

### **5.3.2 Participatory Evaluation Methods**

Evaluation for this project was conducted in a participatory manner where as the researcher, host CBO field officer, and the target community participated in the evaluation process using various evaluation methods and tools. The methods used were observations, and interviews with the project beneficiaries whom the project had direct and indirect effects. Through evaluation stakeholders had a chance to review past and ongoing performance of the project, achieved results, failures encountered and make important decisions pertaining to the progress of the project.

The evaluation of this project was carried out monthly in combination with monitoring activities and at the end of the project. Evaluation was also carried out in CED terms where as impact of the project to the target community in terms of increase in incomes and knowledge gained by the small holder farmers were evaluated in relation to how the knowledge obtained had contributed to increase of farmers' incomes and improvement of their livelihoods. Also during evaluation, monitoring data were used to recommend on the long-term development of the project by considering achievements realized, challenges encountered and their solutions. As well monitoring reports, checklist and observation were the tools used during the evaluation process.

Monitoring reports provided information on the performance of the project in relation to the planned objectives, checklist were used during interviews with the project beneficiaries, and through observation information on the application of the knowledge obtained from trainings conducted during the project in various farmers' activities and improvement attained were obtained.

### 5.3.3 Project Evaluation Summary

**Table 5.3: Project Monitoring and Evaluation Summary**

What Was Monitored	Performance Indicator	Results/ Achievements Observed	Remarks
Implementation of the planned activities	At least 30 farmers are trained	A total of 30 small holder farmers from Matufa village were trained on a simple technology of packaging their products.	
	Farmers' group facilitated with a sealing machine and a beam balance.	The trained farmers have been facilitated with a sealing machine to enable packaging and beam balance for weighing their crops before packaging.	
	Farmers' products labeled.	Smallholder paddy farmers from Matufa village have been trained on marketing skills including labeling of their products to indicate the nature and quality of the respective products and they are putting into practice the skills gained.	
	At least 30 farmers are trained.	A total of 30 small holder paddy farmers have been trained on the need and importance of labeling their products.	
	Access to labels among farmers.	Small holder paddy farmers from Matufa village have managed to access labels for their products.	
	At least 30 farmers have been trained.	A total of 30 smallholder paddy farmers from Matufa village have been trained on entrepreneurship skills.	
	At least 30 farmers have been trained.	A total of 30 smallholder paddy farmers from Matufa village have been trained on financial management skills.	
	At least 30 farmers have been trained.	A total of 30 smallholder farmers from Matufa village have been trained on agro-business skills including grading their products before packaging.	
	At least 30 farmers have been trained.	Smallholder paddy farmers from Matufa village have been trained on the need and importance of grading their rice before packaging.	
	At least 30 farmers are trained.	Small holder paddy farmers from Matufa village have been trained on marketing skills.	
	At least 10 farmers participated in various	10 farmers from Matufa village have been facilitated	

	exhibitions.	to participate in various exhibitions for marketing their products.	
	At least 3 MVIWATA staffs contacted.	Initial contact with MVIWATA for familiarization with the organization and for review of available literature was conducted.	
	Target group and project location identified	The target community and project site were identified, and then a participatory community needs assessment was conducted.	
	At least one sensitization workshop conducted.	Mobilization and sensitization workshop for community members on the project were conducted.	
	A priority need identified.  Massive participation in project activities.	The findings were analyzed and presented to the community members, a participatory ranking was conducted and a priority need was identified. Project activities were planned and implemented with the community members.	
	Periodic project monitoring and evaluation reports.	Periodic project monitoring and evaluation were conducted.	
	End of project evaluation report.	End of project evaluation was planned to be conducted early in the coming year.	
Stakeholders and community participation in the project	Timely contribution of all stakeholders in the project activities.	All contributions have been provided as per planned budget.	The participatory approach used in the project implementation created a sense of belongingness among the project stakeholders.
Finance: Resources utilization and effectiveness	Budget and financial reports indicating expenditure for each activity.	The contribution made was managed by the group leaders and they provided expenditure reports to the group meeting after every project activity.	After trainings on financial management skills the group created a sound financial management system to ensure proper utilization of funds.
Time management: Proper utilization of project time.	Activity implementation report indicating time of implementation	The monthly and mid-evaluation report shows that activities were implemented as per planned timeframe.	Timely implementation of the project activities was facilitated by active participation of all stakeholders.

## **5.4 Project Sustainability**

This part explains a sustainability plan which has been developed to ensure long term continuity of the project at Matufa village even after the end of external technical and financial support from the host CBO, researcher and other stakeholders apart from Matufa village residents. The sustainability plan indicates the precautionary measures which have been taken to ensure that the project is sustainable and it will not be affected by economic, social or environmental changes and any other changes that may occur in relation to the project operations in Matufa village. Both long term and short term precautions has been taken in relation to the following sustainability elements; Economic sustainability, social sustainability, environmental sustainability, and institutional sustainability as are further explained as follows;

### **5.4.1 Economic Sustainability**

The major objective of this project was to contribute in improving livelihoods of smallholder paddy farmers in Matufa village by strengthening their capacities in packaging and marketing. This was done through training 30 farmers from Matufa village on marketing skills and simple packaging technology using a sealing machine and special nylon bags. The trainings on marketing skills included themes like entrepreneurship skills, financial management skills, grading of products to improve their value, and labeling of the products.

After acquiring these skills farmers were able to send their packed products to various exhibitions through their representatives for marketing and they managed to obtain higher prices compared to the market price. Although the target crop for the

project was rice, farmers also used the same skills to pack and label other crops like groundnuts as seen in Figure 1.12 and market them in exhibitions and in various markets where they received high demand and higher prices compared to the market prices. It is expected that farmers will go on using the obtained knowledge and skills to improve the marketability of other crops produced in Matufa village. Through such transfer of knowledge, farmers' livelihoods will be improved to a great extent and the continuity of the project benefits will be unlimited.

#### **5.4.2 Social Sustainability**

Improvement of people's livelihoods is a core area for social development and sustainability. It is a fact that the income raised as a result of improvement of products quality will be used to meet families' basic necessities such as food, good houses, clothes, medical services, payment for education for the farmers' children and other social necessities. The continuity of this project activities and the using of the acquired skills by farmers to improve other areas of production will mean further social development and sustainability. As well, the rise of farmers incomes through the project will enable them acquire better social services such as better health care, education, improve their housing conditions and other social necessities.

#### **5.4.3 Environmental Sustainability**

The project was carried out on an environmental friendly manner and there was no production of environmental harmful substances. Nylon bags are considered to be among environmental harmful substances but in the case of this project the bags used were hard and could be re-used for other purposes like planting of trees in the nursery bed before transplanting to the field. As well the improvement of incomes as

a result of improvement in packaging of farmers' products will enable farmers to have a satisfactory income from their farm outputs and hence reduce their involvement in other income generating activities such as charcoal burning which is harmful to the environment. It is also expected that as the farmers are adapting the packaging technology and the marketing skills they will have a sufficient income enough to abandon the currently popular red bricks which are burnt and instead they will be able to use their incomes to buy cement bricks which do not require any burning and hence encourage environmental conservation.

#### **5.4.4 Institutional Sustainability**

To ensure institutional sustainability the project was placed under the ownership and management of the farmers group which was already in existence for more than two years and it was already within the ward and district farmers' group network under the host CBO. Due to the strength of this group by its own and its link to the network, the institutional sustainability for the project is assured.

## **CHAPTER SIX**

### **6.0 CONCLUSION AND RECOMMENDATION**

#### **6.1 Introduction**

This chapter summarizes the whole report from the participatory needs assessment, problem identification, literature review, project implementation, and participatory monitoring, evaluation and sustainability. Through this part the method used and lesson learned from each part are clearly described to enable other researchers and development practitioners who may wish to go for the same or similar projects in other areas capitalize from what has been learnt in this project. This part therefore provides a summarized conclusion of the whole work and recommendations which may act as a way forward for other studies or projects.

#### **6.1 Conclusion**

The Improving livelihoods of smallholder paddy producers by strengthening their capacities in packaging and marketing is a research project which was carried out in Matufa village located in Magugu ward in Babati district from June 2013 to December 2013. The major objective of the project was to contribute in improving livelihoods of smallholder paddy farmers in Matufa village by strengthening their capacities in packaging and marketing. Matufa small holder paddy farmers are among many small holder farmers who are faced with among other problems lack of market for their products. Due to this problem most farmers end up selling their products at low prices in their farms and concentrate much on subsistence agriculture. As a result most farmers can hardly meet the expenses for quality seeds, fertilizers and their social and economic basic necessities.

This problem was identified following participatory needs assessment carried out in Matufa village in June 2013 by the researcher, host CBO and the target community aimed at understanding the social and economic conditions of the village and identifying the priority social and economic needs of the village. Participatory research methods were used in collection of both primary and secondary data. Primary data were collected through interviews, questionnaires, focus group discussions, and observations. As well documentary review was conducted to obtain secondary data where as previous project reports, policy documents and other materials both published and unpublished were reviewed.

The collected data were then synthesized and analyzed to obtain a meaningful interpretation of the findings. To ensure accuracy qualitative data were analyzed using thematic analysis and comparative analysis where as quantitative data were analyzed using a software package for statistical science (SPSS). As well testimonies and narrations from respondents were taken to support discussion and conclusion. Through the assessment it was clear that the Matufa village residents had a clear knowledge on the problems that they are currently faced with. The identified needs included the need for village health centre, improvement of irrigation infrastructures, need for reliable saving and credit services, need for market for produced crops, a need for a secondary school in the village, and a need for agricultural implements.

After the analysis of the findings results were presented to the target community meeting for discussion. Through the discussion the members voted for the priority need and the priority need was then identified to be “the need of markets for produced goods”. A priority intervention measure was developed and implemented

in a participatory manner. Through this all it was clear that the community members if given priority and a chance of participating in projects aimed at their improvements, they clearly know what they need, how to get it and how to implement an intervention measure of their choice. The community needs assessment helped the researcher, the target community and the host CBO identify the real needs of Matufa village and plan for appropriate intervention measures.

The obtained information through participatory needs assessment was complemented by available theories in different literature. The empirical literature supported the hypothesis that a need for market is a priority among many rice producing regions. Through the empirical literature it was learned that there were great attainments in areas where farmers have been facilitated with among others, packaging technology and marketing skills. These proved to improve marketability of local farmers' rice over competition from imported rice. As well through marketing skills bargaining power of farmers on their products is improved and hence their life can improve as a result of increased productivity and incomes.

Another lesson drawn from the policies and government documents reviewed is that if we are to improve rural livelihoods we need first to improve agricultural performance as it's the main employer of rural societies and it is in rural areas where majority are living under poverty situation as compared to urban areas. For that case the government of Tanzania has developed a conducive policy environment for transformation of rural activities to semi-industrialized and industrialized activities as a means of improving agricultural performance and improving the livelihoods of those who are employed in the sector as well. The government policies also

encourages investments in improving marketing infrastructures, grading and improvement of quality as means of adhering to the local and international market demands and hence facilitates marketability of farmers products and hence improve their livelihoods. It is for this case the improvement of small holder farmers livelihoods in Matufa village by enhancing their capacities in packaging and marketing skills goes hand in hand with the government policies and the same skills will be valuable in improving small holder farmers' livelihoods if applied in other areas.

Participatory approaches used during the project implementation created a sense of belonging among the local community and hence enabled them not only to identify the key problems, needs and intervention measures but also enabled them to properly utilize the available resources in their localities for their own improvements. These reduced costs and time for project implementation as farmers were willing to share knowledge, skills and resources and contribute them for the project development. Due to the participatory nature of the implementation activities farmers also had a common say on each project activity and any opposing view was received friendly and discussed until a common agreement was reached among them. The same case was for the monitoring and evaluation activities where as all stakeholders could easily reach to a common agreement in working with any challenge encountered and make efforts for the improvements and continuity of realized benefits.

The project was implemented in a period of 6 months and a budget of a total cost of Tshs. 1,957,000/= was planned for utilization. The money were obtained from a contribution made by the host CBO, researcher and the farmers where as the host

CBO (MVIWATA) contributed Tshs. 103,5000/= representing 52.9% of the total budget, the researcher who contributed Tshs 162,000 representing 8.3% of the total budget and the community which contributed 760,000/= representing 38.8 % of the total budget. Out of this only Tshs. 1,557,000/= representing 79.6% of the total budget were utilized and the remaining Tshs. 400,000/= representing 20.4 % of the total budget planned for utilization of sealing machines was not utilized following an agreement between the target community and the host CBO of using the available CBO' sealing machine. During this period a total number of 20 activities were planned for implementation in order to achieve the project objectives. However up to December 2013 only 18 activities representing 90% of all activities were implemented. The remaining two activities representing 10 % were delayed following agreements between the community, host CBO and the researcher.

During the implementation of the 18 activities 30 small holder farmers from Matufa village were trained on a way of packaging their products and they were facilitated with a sealing machine and a beam balance to facilitate weighing before packaging. The farmers were also connected to the nylon bags supplying businessmen to facilitate easily and timely availability of the bags. As well the project trained farmers on marketing skills including grading and labeling of their products before packaging so as to indicate the origin and quality of their products and hence increase marketability.

To ensure effectiveness of the project to individual farmers' trainings on entrepreneurship skills and agro-business skills were given so as the farmers will aim at maximizing profits in their production and hence earn enough income to improve

their livelihoods. The farmers were also trained on financial management skills so as to ensure proper utilization and management of the income increased as a result of the project. After the farmers were well knowledgeable on marketing skills and capable of packaging their products at their own under the group leadership, the host CBO facilitated their participation in various exhibitions for marketing their products.

Following proper packaging, labeling and marketing skills among farmers they received a greater demand and higher prices of Tshs. 1700/= per kilogram of rice compared to the then market price of Tshs. 1400/= per kilogram of rice. Due to the increased incomes small holder paddy farmers in Matufa village livelihoods have been improved as they can easily meet their social and economic needs as a result of increased earnings from their products. Matufa village small holder farmers also managed to use the same skills and knowledge in packaging and marketing other crops produced in their village such as groundnuts as seen in Figure 1.12 where as they also received a higher demand and higher prices compared to previous prices received for unpacked products.

It is expected that more crops will be packed and labeled to improve their marketability using the same skills and knowledge obtained during the implementation of this project. As a result farmers are expected to receive higher prices as compared to market prices and hence they will earn sufficient income to meet their social and economic needs hence their livelihoods will be more improved. During the implementation of project activities various methods and tools were used for monitoring and evaluation as a way of ensuring that the project activities are

going hand in hand with project objectives and to avoid any divergence. To ensure effectiveness of the monitoring and evaluation activities participatory approaches were used. Through the use of participatory approaches stakeholders had a common agreement on performance indicators for each project activity. Observation and interviews with project beneficiaries are the methods used for monitoring of the project progress.

Among the tools used for monitoring and evaluation included monitoring reports, checklist and observation. While checklists were used during interviews with the project beneficiaries' observation was used in obtaining information on how the farmers were applying the knowledge acquired from various trainings conducted during project implementation. Evaluation was conducted every month using monitoring reports which helped to assess the extent to which each project activity has contributed to the attainment of project goals and objectives. Monitoring reports were also used to decide on the long term development of the project by considering achievements obtained, challenges encountered and then decide on their appropriate solutions.

There were also precautionary measures taken to ensure sustainability even after the end of external financial and technical support from the host CBO, the researcher and other stakeholders. For that reasons sustainability elements including; economic sustainability, social sustainability, environmental sustainability, and institutional sustainability were considered. In terms of economic sustainability the project had influenced initiation of packaging and marketing of other crop products produced in Matufa village and hence it was expected that the adaptation will go further. On the

part of social sustainability the project had contributed to improvement of small holder paddy farmers livelihoods as their incomes has raised and they were using that income to meet their social and economic needs. As well the project proved to be environmentally sustainable as there were no release of environmentally harmful substances and even the nylon bags used for packaging could be re-used for other purposes like planting trees. As well the increased income is expected to reduce small holder farmers' involvement in environmentally harmful activities such as charcoal burning for commercial purposes. In terms of institutional sustainability, the project was initiated in one among the farmers' group belonging to the district farmers' group network working with MVIWATA.

### **6.3 Recommendations**

In order to improve livelihoods of small holder paddy farmers by strengthening their capacities in marketing and packaging technology the following recommendation should be considered among others;

- i. The packaging technology used in this project could work only in villages with electrical supply as the sealing machine requires electrical power for its operation. For that case the project was possible in Matufa village only because the village had electricity supply. Considering the fact that most Tanzanian villages are not supplied with electricity, efforts should be made to ensure that rural areas are supplied with electricity so as to facilitate processing and value adding technologies which will increase marketability of farmers products at good prices enough to improve their livelihoods as compared to products sold before value addition.

- ii. There should be more efforts to improve productivity among small holder paddy producers so as they can produce enough quantity to meet local demand as a means of reducing rice importations. This is because it has been observed that despite the packaging and marketing skills required by small holder farmers, their rice is facing stiff competition from imported rice which is sold at low prices and hence limits marketability of locally produced rice.
- iii. More cheap packaging technologies need to be introduced among small holder paddy farmers so that they can pack their products individually due to the fact that production in the fields is done individually and hence every farmer need enough time to stay with the packaging equipments at his or her place so that he or she can pack a quantity his or her desire as per individual production. The expenses of technology introduced in Matufa village limits individual ownership among small holder paddy farmers.
- iv. A researcher intending to conduct similar study should ensure effective time management and planning so as to allow for implementation of all project activities and hence ensure full assessment of the project impacts. This is because it was learned from this project that, there was no enough time to allow for the end of agreed two harvesting seasons before the completion of the remained two project activities.

## REFERENCES

- ACT, (2007) *Report on output market support*. Dar es Salaam
- AfricaRice, (2013) *Improving post-harvest technology in Senegal*. Africa rice centre.
- ACT and TAP, (2010) *Value chain analysis of rice and maize in selected districts in Tanzania*. Volume 1: Introduction, context analysis and recommended way forward. Match maker associates limited.
- Babati district council, (2012) *District agricultural development plans (DADPs)*. Babati.
- Grewal Bhajan, Grunfeld Helena, and Sheehan Peter, (2012) *The contribution of agricultural growth to poverty reduction*. ACIAR Impact assessment series 76. Elect printing, Canberra ACT 2601, Australia.
- ESAFF, (2011) Tanzania; *Four regions for bumper rice harvest*. Eastern and southern Africa small scale farmers' forums (ESAFF). News letter.
- Israel Glenn D and Ilvento Thomas W, (1995) *Every body wins: Involving youth in community needs assessment*. Journal of extension Vol. 33 N(2), Extension Journal Inc.
- Kadigi Reuben M.J, (2003) *Rice production economics at the local and national levels: The case of Usangu plains in Tanzania*. Soil-water management research group, department of agricultural engineering & Land planning. Morogoro, Tanzania. Sokoine University of agriculuture.
- Kanaskar M.P.K and Kulkarni, (2012) *Methodological considerations in community needs assessment*. Indian streams research journal. Vol 2. Issue 10. Solapur-413005 Maharashtra, India.

- McCaslin N.L and Tibeziinda J.P, (1997) *Improving agricultural extension*. A reference manual. FAO Corporate Document Repository. Roma, Italy.
- MVIWATA, (2010). Leaflet of Mtandao wa Vikundi vya Wakulima Tanzania (MVIWATA)
- Mfula Chola, (2011) *Enhancing competitiveness of the Zambian rice value chain through pricing transparency and accountability*. SNV Netherlands Development organization. Case studies.
- RIDC, (2009) Rice sector strategy. *Improving rice profitability through increased productivity and better marketing focusing on Tanzania's central corridor*. Rural livelihood development company.
- SAGCOT, (2001) *Irrigation and Usangu- A case study*. Southern agricultural growth corridor of Tanzania.
- Thirtle<sup>1</sup> Colin, Iriz<sup>2</sup> Xavier, Lin<sup>1</sup> Lin, Mc Kenzie-Hill Victoria and Wiggins Steve, (2001) *Relationship between changes in agricultural productivity and the incidence of poverty in developing countries*. DFID report No.7946. London, Imperial College of science, Technology and medicine.
- URT, (1997). *Agriculture and Livestock Policy 1997*. Ministry of agriculture and Cooperatives, Dar es Salaam.
- URT, (2008). *Agricultural Marketing Policy 2008*, Ministry of Industries and Trade, Dar es Salaam.
- URT, (1996). *The Tanzania Development Vision 2025*. Planning Commission, Dar es Salaam
- URT, (1998) *The national poverty eradication strategy*. Vice-President's office, Dar es salaam-Tanzania. Printed by the government printer

- URT, (2005) *National strategy for growth and reduction of poverty (NSGRP)*. Vice president's office. Dar es salaam.
- URT, (2009) Ministry of agriculture, food security and cooperatives; *National rice development strategy*, Final draft. Dar es salaam, Tanzania.
- URT, (2011) Eastern African agricultural productivity programme (EAAPP); *List of potential rice stakeholders and their roles*. Ministry of agriculture food security and cooperatives. Dar es salaam, Tanzania.
- URT, (2012) MKUKUTA; National strategy for growth and reduction of poverty; *Poverty and human development report 2011*. Research and analysis working group MKUKUTA monitoring system. Ministry of finance. Dar es salaam, Tanzania.
- URT, (2001) *Agriculture sector development strategy*. Dar es Salaam.
- URT, (2008) *Agriculture sector review and public expenditure review 2008/2009* Final report;. Ministry of agriculture, food security and cooperatives. Dar es salaam.
- URT, (2011) *2010/11 Annual report*. Ministry of agriculture, food security and cooperatives. Dar es salaam.
- URT, (2002) *Agriculture sector development strategy* (Practical experience in designing policy). Ministry of agriculture and food security. Dar es salaam
- UNDP, (2000) *Tanzania human development report*. The state of human resource development.
- [http://en.wikipedia.org/wiki/Babati\\_District](http://en.wikipedia.org/wiki/Babati_District)
- [www.wcmcaa.org/wiki/needs-assess.php](http://www.wcmcaa.org/wiki/needs-assess.php)
- [http://ctb.ku.edu/en/tablecontents/chapter\\_1003.aspx](http://ctb.ku.edu/en/tablecontents/chapter_1003.aspx)

**APPENDICES****Appendix 1: Community needs assessment for Matufa village in Babati district.****Household questionnaire number.....**

Interview date.....

1. Respondent's sex.....
  - a) Male
  - b) Female
2. Respondent's age.....
  - a) Under 20 years
  - b) Between 20 and 30 years.
  - c) Above 30 years.
3. Respondent's marital status.....
  - a) Married
  - b) Widow
  - c) Single
  - d) Divorced
4. Respondent's major economic activity.....
  - a) Crops cultivation
  - b) Livestock keeping
  - c) Crop cultivation and livestock keeping
  - d) Business
  - e) Employed in government/ private sector
5. Respondents major crop.....
  - a) Paddy

- b) Groundnuts
  - c) Maize
  - d) All the mentioned crops
6. Which kind of crop cultivation do you practice?.....
- a) Irrigated farming.
  - b) Rain fed farming
  - c) Both depending on landscape.
7. How many cattle do you keep?.....
- a) Between 1 and 5
  - b) 6 to 10
  - c) Above 10.
8. Respondent's average annual yield.....
- a) Below 10 bags
  - b) Between 10 and 30 bags
  - c) Above 30 bags.
9. How do you spend the yield from your field?.....
- a) Family consumption
  - b) Selling
  - c) Selling and family consumption
10. Respondent's access to financial services apart from VICOBA.....
- a) Yes
  - b) No
11. Do you own any business?.....
- a) Yes

- b) No
12. Do you conduct any other economic activity apart from agriculture? If any mention.....
13. What type of crop cultivation do you conduct?.....
- a) Crop rotation after every season
  - b) Crop mixing
  - c) Crop cultivation and animal rearing
  - d) Agro forest
14. Do you participate in community work?.....
- a) Yes
  - b) No

Explain the reason for your answer above.....

15. Who makes decision for your village development activities?.....
- a) Leaders
  - b) Village assembly
16. How do you perceive the quality of you village leadership?.....
- a) Highly satisfactory
  - b) Moderately satisfactory
  - c) Satisfactory
  - d) Unsatisfactory
  - e) Very unsatisfactory

Explain the reason for your answer.....

17. Do you have a village development plan?.....
- a) Yes

- b) No
18. What are your village development priorities?.....
19. Who provides social services in your village?.....
- a) Government
  - b) Private sector
  - c) Both
20. What are financial services available at your village? .....
21. What are the challenges to financial services provision at your village?.....
22. Are there any NGOs operating in your village?
- a) Yes
  - b) No
- If there are any mention them.....
23. Is there an environmental conservation committee in your village? ...
- a) Yes
  - b) No
24. Are there environmental conservation by-laws in your village? .....
- a) Yes
  - b) No
25. Do you have access to clean and safe water in your village? .....
- a) Yes
  - b) No
26. What is the source of domestic water in your village? .....
- a) Rivers/ streams.

- b) Ponds
  - c) Tapes
27. What is the distance from your home to the nearby health centre?.....
- a) Less than three kilometers
  - b) More than three kilometers
28. What are your village development challenges? (mention them).....
29. What is your highest educational level? .....
- a) Primary education
  - b) Secondary education
  - c) College
30. Do you have a primary school at your village?.....
- a) Yes
  - b) No
31. Do you have a secondary school at village?.....
- a) Yes
  - b) No
32. Are there any challenges facing provision of quality education at your village? If there are any please mention.....
33. Is there a health centre at your village?.....

Thank you for your cooperation.

**Appendix ii: Focus group discussion for community needs assessment in Matufa village.**

1. What are the challenges facing paddy cultivation in your village?  
.....
2. What are the reasons which influenced you to join Umoja village community bank group?.....
3. In what ways are villagers involved in development activities in your village?.....
4. How do you conserve environment in your village?  
.....
5. What are the development challenges facing your village?.....
6. How have you benefited from your group membership?.....
7. Do you have access to reliable markets for your produced crops?  
.....

Thank you for your cooperation.

**Appendix iii: A Request Letter For Working with Small Holder Paddy  
Producer's Umoja Group in Matufa Village**

BarakaelTerevaeli

S.L.P 234,

Katesh -Manyara.

**06/07/2013**

MWENYEKITI,  
KIKUNDI CHA UMOJA,  
S.L.P,  
**BABATI**

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 kikundi chako.

Katika mafunzo hayo ya vitendo, nitapenda kushiriki pamoja nanyi katika kutambua mahitaji ya maendeleo ya kijiji cha Matufa 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

Barakael Terevaeli.

**Nakala:**MkurugenziMtendaji MVIWATA – Manyara.

**Appendix iv: Estimate Budget for Training Sessions Involved in the Project For 30 Participants**

<b>Event/ item</b>	<b>No. of participants/ items</b>	<b>No. of days</b>	<b>Cost per unit</b>	<b>Total cost (Tshs.)</b>
Printing and photocopying of training materials	30	3	500	15,000
Transport cost	3	3	5000	15,000
Refreshments	90	3	500	45,000
Writing pads	30	3	1000	30,000
Marker pens	6	3	1000	6,000
Ball pens	32	3	500	16,000
Flipcharts	3	3	5000	15,000
Trainer's allowance	3	3	30,000	60,000
<b>Total budget</b>				<b>202,000.</b>

**Appendix v: Estimate Budget For the Project in its Initial Stages in September 2013**

<b>Items</b>	<b>Quantity of item</b>	<b>Costs</b>
<b>1. Permanent assets</b>		
a) Packaging nylon bags	140kg	924,000
b) Printed labels	2000	20,000
c) Sealing machine	2	300,000
d) Beam balance	1	50,000
<b>Total for the permanent assets</b>		<b>1,394,000</b>
<b>2. Marketing costs</b>		
a) Transport to the markets in Babati and Arusha		500,000
b) Advertisements		36,000
<b>3. miscellaneous expenses</b>		200,000
<b>Total</b>		<b>2,660,000</b>

**Appendix vi: Estimate Budget for Participating in National Food Crop Exhibitions held in Hanang District From 14<sup>th</sup> October 2013 to 16<sup>th</sup> October 2013**

<b>Participants</b>	<b>Number of participants</b>	<b>Item</b>	<b>Cost per unit</b>	<b>Total costs</b>
MVIWATA staff	1	Accommodation and meals	30,000	60,000
Farmers	4	Accommodation and meals	30,000	240,000
Allowance for the staff	1	2	50,000	100,000
<b>Total</b>				<b>400,000</b>