

**CAPACITY BUILDING TO FARMERS FOR MAXIMIZING
AGRICULTURAL OUTPUT: A CASE STUDY OF ELAKUNOTO GROUP
AT MLANGARINI WARD IN ARUMERU DISTRICT**

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

The undersigned certifies that he has read and hereby recommends for acceptance by the senate of the Open University of Tanzania a dissertation titled: “*Capacity building to farmers for maximizing agricultural output; a case study of Elakunoto Group at Mlangarini Ward in Arumeru District*” in partial fulfillment of the requirements for the degree of masters in Community Economic Development (MCED) of the Open University of Tanzania.

.....
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.....
Date

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DECLARATION

I, Daniel Loiruck, 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

This work is dedicated to Jesus Christ and my beloved family.

ACKNOWLEDGEMENTS

This work is a product of joint efforts from different individuals and institutions that provided me with valuable support, encouragement and constructive criticisms during the period of preparing this report. So my sincere gratitude and appreciation should go to all of them.

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Special thanks should go to my family especially my elder brother Loishiye Daniel Singooi and my lovely wife for their wonderful love, support and encouragement for what turned out to be a far longer process than I had anticipated. Without Jesus and my family support, it would have been impossible to achieve my goal.

I would also wish to extend my appreciation to the Regional Administrative Secretary, Arumeru District Council Officials, Mlangarini Ward Officials, Elakunato group members, farmers and all individuals who in one way or another had spared their precious time to respond on the questionnaire for the data of this work. The financial institutions were urged to support the farmers as they have done in commercial agricultural production, by providing credits with favourable terms for the development of the agriculture sector.

ABSTRACT

The community needs assessment (CNA) was conducted at Mlangarini Ward in Arumeru District, Arusha. The goal of needs assessment was to enhance capacity building initiatives to farmers in order to maximize agricultural output. Quantitative and qualitative methods of data collection were used. A questionnaire was administered to 50 respondents, and Participatory Rural Appraisal methods were used to identify felt needs and rank the constraints and recommendations from the community. The CNA revealed that, the biggest problem within the ability of farmers was lack of knowledge on the agricultural output production, followed by unavailability of seed foundation farms and credit facilities. The training and capacity building for the farmers is expected to be achieved by 100%. This sparked an accepted response of farmers' interest in agricultural production. This acceptance response of farmers' interest in the agricultural production indicates the need to extend this project to the rest of rural areas in Arumeru District and to the whole country at large. It is recommended that the government and the development partners should continue supporting farmers in enhancement of agricultural production in terms of skills, technical and financial support. Also, farmers should learn more skills to update their knowledge on quality agricultural production.

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LIST OF ABBREVIATIONS

AAIDRO	-	Arusha Archdiocesan Integrated Development and Relief Office
ACT	-	African Conservation Tillage
ALP	-	Agriculture and Livestock Policy
ANGONET	-	Association of Non government Organization Network
AMP	-	Agricultural Marketing Policy
AMSDP	-	Agricultural Marketing Systems Development Programme
ASDP	-	Agricultural Sector Development Programme
AVRDC	-	Asian Vegetable Research and Development Center
ASDS	-	Agricultural Sector Development Strategy
CDP	-	Cooperative Development Policy
CAN	-	Community Need Assessment
DED	-	District Executive Director
FBO	-	Faith Based Organizations
FAO	-	Food and Agriculture Organization
GDP	-	Gross Domestic Programme
IFAD	-	International Fund for Agricultural Development
MCED	-	Community Economic Development
MDGs	-	Millennium Development Goals
NDV	-	National Development Vision
MKUKUTA	-	Mkakati wa Kukuza Uchumi na Kupunguza Umaskini Tanzania)
NRM	-	Natural Resource Management

NSGRP	-	National Strategy for Growth and Reduction of Poverty
PELUM	-	Participatory, Ecological Land Use Management
RDP	-	Rural Development Policy
RECODA	-	Research, Community, Organizational Development Associates
RIPAT	-	Rockwool Initiative for Poverty Alleviation in Tanzania
SARI	-	Selian Agricultural Research Institute
SIDP	-	Sustainable Industrial Development Policy
SMEDP	-	Small and Medium Enterprises Development Policy
SPSS	-	Statistical Package for Social Scientists
SSA	-	Sub Saharan Africa
SH	-	Stake Holder
VEO	-	Village Executive Officer
VSLA	-	Village Saving and Lending Association model
WEO	-	Ward Executive Officer

CHAPTER ONE

1.0 PARTICIPATORY NEEDS ASSESSMENT

1.1 Background Information

Needs assessment is a both a process and phenomenon which is very important in the initial stages of community project formulation and preparation and analysis thereafter in the subsequent stages of project implementation. In economic development process, needs are defined as the gap between what is the current situation or circumstances and what the community desire to achieve. Therefore, needs assessment is a process of identifying and measuring gaps between the current situation and the desired situation, prioritizing the gaps and determine ways of bridging them.

Development of this project is done to obtain information which are accurate, reliable and usable; information that reflects the needs of a specified community. These needs emerge directly from ideas articulated by the genuinely participation of the entire community and a project organizer which strengthen commitment and enthusiasm for a project. This assists to create community ownership of a project and it generates data to develop indicators for monitoring and evaluation.

In this regard community needs assessment was made by considering the main factors which were critically examined and analyzed during the assessment the community structure, economic status, social services and facilities and ecological diversity.

1.2 Community Profile

1.2.1 Geographical Area and Location

The Mlangarini community is situated in the North-East of Tanzania in Arusha that lies between 3° 00' to 3° 40' latitudes south of equator and 36° 15' longitudes east of Greenwich meridian. Mlangarini ward located in the Eastern side of the Arusha District 34 km away from Arusha town in between Arusha City and Usa River rough road (Arusha District Social Economic Profile, 2012).

1.2.2 Surface Access to the Project Area

The Ward is easily accessible by road transport that runs from Arusha to Moshi, by Old Moshi rough road.

1.2.3 Population

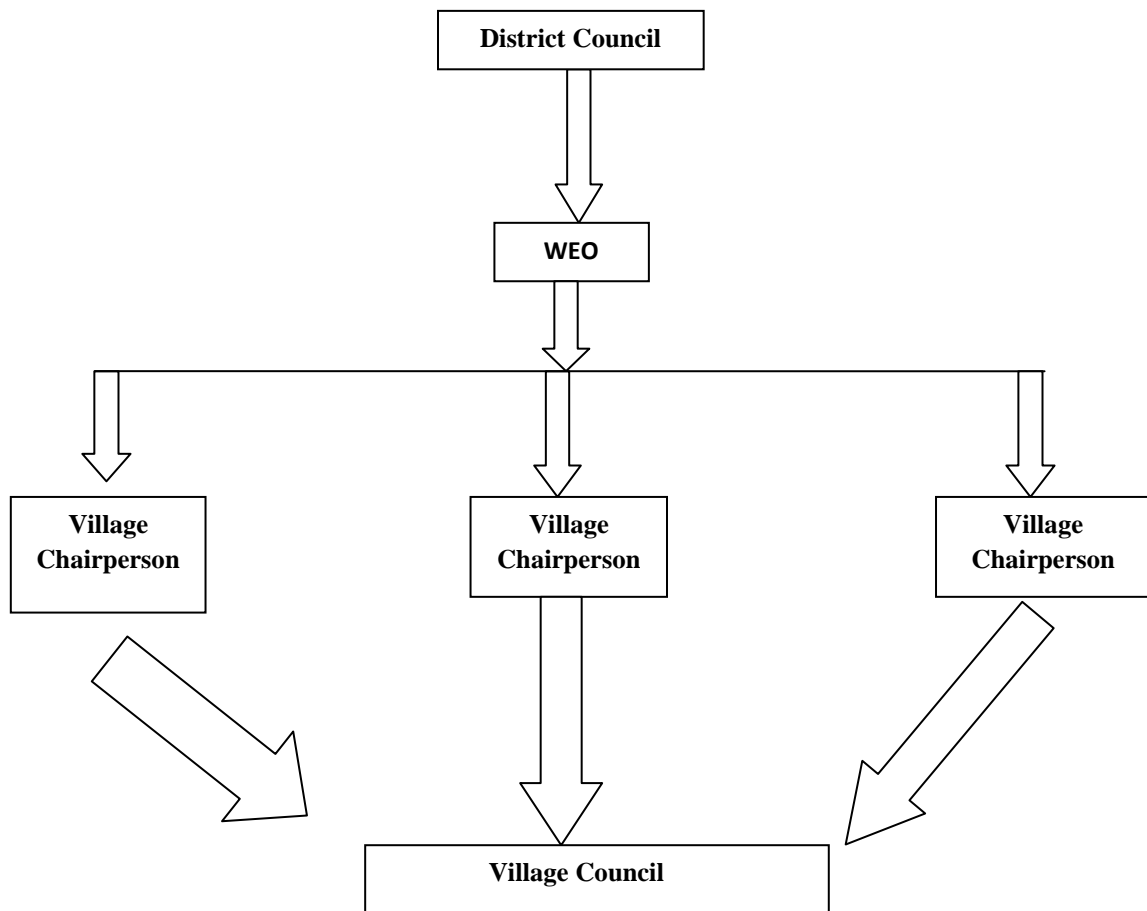
The ward has a total population of 15,762 people of which 7,788 men 7,974 women which means women occupies 50.59% and men occupies 49.41% of the population (Tanzania National Census 2002).

1.2.4 Climate, Topography and Vegetation

The area is mostly semi arid within the slope of Mount Meru. The temperate is relatively warm with variations depending to the seasons of year. Average temperatures range from 16°C to 28°C. The area has a bimodal rainfall pattern with short rains between November and January and long rains between March and May. However, the rainfall is unpredictable and not reliable. The area receives the average of 400mm to 900mm of rainfall. The altitude of Ward ranges from 1800 to 4500 above sea level (Tanzania Meteorology Agency report, 2012).

1.2.5 Administration

The Ward is lead by the Ward Executive Officer employed by the District Council who is an overall in-charge of all governmental responsibility. The Ward comprises of three villages which are Mlangarini, Manyire and Kiserian. Each village is governed by village chairperson and sub-villages chairperson who are democratically elected by the villagers from registered political party. Moreover, there are village members who are also elected democratically by villagers and they are representatives of villagers in the village council (Arusha District Council Plannig report, 2012).



Source: Arusha District Council Planning Report, (2012)

1.2.6 Institutions

The Ward is endowed with institutions including social services such as primary schools namely Mlangarini, Manyire, Kiserian, Muungano, and Chekereni, One Secondary school named Mlangarini, Mlangarini Health Center, Manyire and Chekereni Dispensaries, Luci Estate and Moshono Police Post Stations. Also there are religious institutions like Roman Catholic Church, Lutheran Church, Tanzania Assemblies of God, Pentecost Church and Muslims Institutions.

NGOs are supporting Health and nutrition, education, livelihood and food security interventions in community like ADP-Moshono, Global Service Corporation, AVRDC, Kitumusote, AAIDRO etc. There are local formed groups which in the name of “*VICOBA*” like Nduruma group, Upendo group, Mbarikiwa, Matutumoto, Manyito, Kilimo and Mshikamano. All are supporting its members financially in terms of soft loan with no complexity. These groups have been much of interest and support to the low income earners people as it has give them a way of accessing the their micro-finance capital for their micro enterprises.

1.2.7 Economic Activities

The economy of Mlangarini Ward is based on small scale agriculture and zero grazing animals keeping. The mountains around increase land scarcity per household and so adverse the intensification of agriculture and land use. Moreover, the ward has undeveloped infrastructure, negligible capital investment and less efforts put forth in social development thus contribute to per capital incomes (GDP) average of Tanzania shillings 240,000/= annually (Arusha District Council Financial report,

2011). In such a small income, it is only 28.3 percent of households that could meet their basic needs without incurring indebtedness (Arusha District Council Financial report, 2011).

1.3 Community Needs Assessment

Community need assessment for Mlangarini ward act as a means to undress the community and access its current situation, in order to make value based judgment regarding to the valuable concerns which are raised, resources available and desired output for the community development.

Researcher conducts focus group discussions with the community members and local leaders on the current situation on the agricultural activities taking into consideration that the community main economic activity is engagement into small scale farming.

The discussion revealed several issues in relation to farming production in its impact to economic activities. Many concerns are due to climatic change and other non human intervention situations. Particularly the agricultural production at the Mlangarini Ward is going down year after year compared to the past when the rain seasons were not scarce. The situation is worsening by drought condition which hitting the world currently whereby irrigation as an alternative of rainfall is also hampered by little water availability in rivers.

Despite of the initiatives that have been taken by the government and the launching of policies and strategies which address farming and agricultural issues; still farming and agricultural output is tremendously going down in the study area. This prompted

the researcher to prioritize in capacity building on agricultural production as one of the concern which needs urgent attention from individuals, institutions and government in order to rescuing the economic status of the people of Mlangarini Ward.

1.3.1 Objectives of Community Need Assessment

(i) General Objective

The overall objective of community need assessment is to enhance capacity building initiatives to farmers in order to maximize agricultural output.

(ii) Specific Objectives

The following specific objectives were examined in the assessment:

- (a) To identify areas for agricultural interventions based on community requirements.
- (b) To conduct training on capacity building based on the identified areas.
- (c) To evaluate challenges on capacity building on the enhancement of agricultural production.

(iii) CNA Research Questions

The CNA research questions were developed based on the specific CNA research objectives. It aimed at measuring the achievement of the CNA research objectives. Therefore the following were the CNA research questions based on the specific CNA research objectives:

- (a) Which areas need agricultural interventions in order to increase agricultural production?

- (b) To what extent does the capacity building trainings has enhanced of agricultural production?
- (c) What are challenges on capacity building on the on the enhancement of agricultural production?

(iv) Community Need Assessment Methodology

The CNA research methodology is a set of procedures which describes how the assessment was designed and the way it was carried out. It includes CNA research design, sampling techniques, data collection and analysis methods. Opinions and views from stakeholders in agriculture production were collected and analyzed. Both quantitative and qualitative CNA methods were used to explore qualitative and quantitative needs in the community.

(v) Research Design

Claire, (1962:50) quoted by Kothari, (2004:31) define research design as the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure.

CNA research design is essential as it permits conducting CNA research with minimum expenditure in terms of effort, time and money. The CNA research design is the arrangement of condition for collection and analysis of the data that aims to combine relevance to purpose with economy in procedure.

The case study approach was used because it was possible to explore a wide range of issues and also enabled the researcher to use available resources to gather data and

by doing so the assessment becomes rich in depth. In this case, the respondents were the members of Elakunoto who were direct targeted on agricultural production in Mlangarini Ward.

Both quantitative and qualitative data were gathered and analyzed to explore the farmers in Mlangarini ward. Here it includes perception of farmers about agriculture, economic situation of people who are doing agriculture and the type of agricultural interventions that is needed by the community. Quantitative data collected include the farm sizes occupied by the members in the community, the per capital income of the people in the community, average rainfall per year and the number of people who are practicing agriculture in the community.

(vi) Sampling Techniques

Sampling techniques refers to the part of statistic practices concern with the selection of a subset of individuals from within a population to yield knowledge about the whole population, especially for the purpose of making predictions based on the statistical inferences. (http://en.wikipedia.org/wiki/Sampling_%28statistics%29 accessed 27th May 2013).

In order to avoid high cost of conducting the research and incur high expenses on stationeries and travelling to meet the people under the study population, researcher decided to do sampling to get population which will be the representatives of the entire population under study.

In the assessment, one type of technique was applied to obtain respondents from farmers' category, which was purposive sampling technique. Purposive procedure is

a method whereby sample elements judged to be typical representative are chosen from the population (Kothari, 2004). The chance that a particular case will be selected for the sample depends on the subjective judgment of the researcher. In this case the active farmers who were engaged in farming activities at a time for conducting CNA and were shortlisted with the assistance of three village executive officers under the Mlangarini ward. Sum total of 466 farmers were listed down.

The precision sample estimates was based on the assumption that everything being equal; the larger the sample, the greater the precision. The effect of size represents the strength of the relationship among variables in the population (Baroudi and Orlowiski, 1989).

According to Babies (1983), a sample of between 10-12.5% is acceptable as good representative sampling. As a general rule, the sample size should be large enough to give confidence. In this case, researchers made a purposive sampling by picking 11% of the farmers' population which was 466 and get the average sample size of 42 farmers' respondents. Also researcher made another purposive sampling by including two executive leaders from the three villages and two officers from the ward level. This makes a total of 50 respondents to be included in this research.

Farmers who were obtained through Simple random sampling were later form a group known as Elakunoto group which means be released. This group of farmer is the one to act as a pilot group in this research where capacity building initiatives will be applied in order to bring the required change in their communities.

Table 1: Respondents Distribution

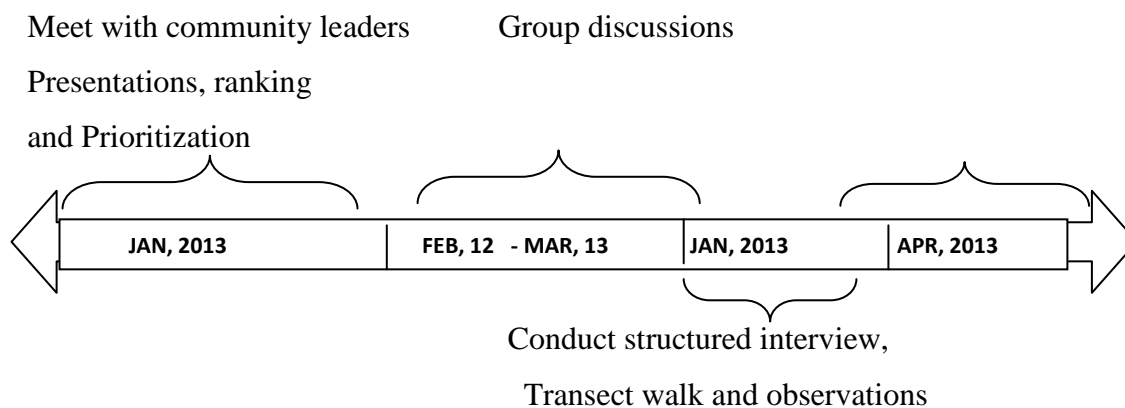
Respondents	Sub total
Farmers obtained by SRS	42
WEO office	2
VEO office: village 1	2
VEO office: village 2	2
VEO office: village 3	2
Grand Total respondents	50

Source: Research findings, (2013)

(vii) Data Collection Methods

Community Need Assessment was done between January 2013 and April, 2013. Several meetings were conducted between community leaders and then meetings with farmers group were organized to discuss issues concerned their wellbeing. Researcher, villages leaders and group leaders did a transect walk to visualize the community environment. In order to collect information from other respondents, personal/Self-administering questionnaire with structured closed and open-ended questions were used to explore quantitative and qualitative information of primary data. Researcher establish rapport with the respondents while introducing the assessment, provided clarifications sought by the respondents on the spot, and collect the questionnaires immediately after they have been completed.

The choice of using questionnaire in data collection was given a greater priority because of its advantages over the other methods and its efficiency or ability to capture more information from the source (Kothari, 2000).



Time table for CNA activities

Source: Research findings, (2013)

A total of 50 questionnaires were distributed to the respondents. Questionnaires captured information direct from the respondents hence exposing factors that respondents thought to have affected capacity building initiatives on maximizing agricultural output (Appendix I).

(viii) Data Analysis Methods

Data analysis is defined as a practice in which unorganized or unfinished data is ordered and organized so that entire information can be highlighted from it. It involves processing and working on data, in order to understand what all is present in the data and vice versa (<http://www.buzzle.com/articles/data-analysis-methods.html> accessed 29th May, 2013)). Usually data analysis methods are designed to polish and refine the data, so that the end users can reap interesting or useful information without any need of going through the entire data.

Statistical Package for Social Scientists (SPSS) was used to analyze questionnaires.

A descriptive part was involving the use of frequency tables and pie charts as well as

cross tabulations of variables of interest presented in the discussion of the results. To answer the research questions, the result of 50% and above were taken as the criteria of acceptance. Results of below 50% were taken as the criteria to rejection of the CNA research question. When the results were 50% each, the CNA research question was neither accepted nor rejected.

Reliability and validity are important aspects to assessment that link abstract concepts to empirical determinants (Kothari, 2000). Several measures were employed to ensure that the results were free from material errors from the design of the questionnaire to interpretation of the results. Such measures were included: pre-testing of the designed questionnaire and prior review of the questionnaire. Apart from reviewing the questionnaire, two people were used for pilot testing the questionnaires. Such measures were enabled to find out the time needed to complete a questionnaire, clarity of instructions, clarity of the questions, topic omissions, the layout of the questionnaire and other comments.

The need to safeguard confidentiality of the respondents was considered; hence the name was left out on the respondent profile. However the information from the respondents was given voluntarily without undue influence and duress.

1.4 Community Need Assessment Findings

The analysis and discussion were done in acceding to the research questions and objectives formulated earlier. The assessment was guided by three research questions supported by a number of indicators.

1.4.1 Respondents Analysis

(i) Respondents Rate

The assessment sampled 50 respondents which form Elakunoto group at the Mlangarini Ward. This came from 11% of the farmers population which were 466 and eight leaders from three villages of Mlangarini ward. The assumption was that, everything being equal, the larger the sample, the greater the precision.

(ii) Age Distribution of Respondents

The assessment analyzed the age distribution of the respondents. The reason being that, researcher was interested to the age distribution of members of Elakunoto group. He assumed that age matters on the understanding and commitment to issues.

Table 2: Age Distribution of the Member of Elakunato

Respondent's age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-30		3.8	3.8	3.8
	31-40	18	34.6	34.6	38.5
	41-50	22	42.3	42.3	80.8
	51-60	8	16.0	16.0	100.0
	Total	50	100.0	100.0	

Source: Assessment Finding, 2013

Table 1 and Figure 1 shows that, the group was dominated by people aged 41-50 years old by 42.3%, followed by people with 31-40 years old by 34.6%, then 51-60

years old by 16.0% and finally 21-30 years old by 3.8%. This trend shows that the middle age people are more active in the economic activities in the community than young adults and most senior members of community.

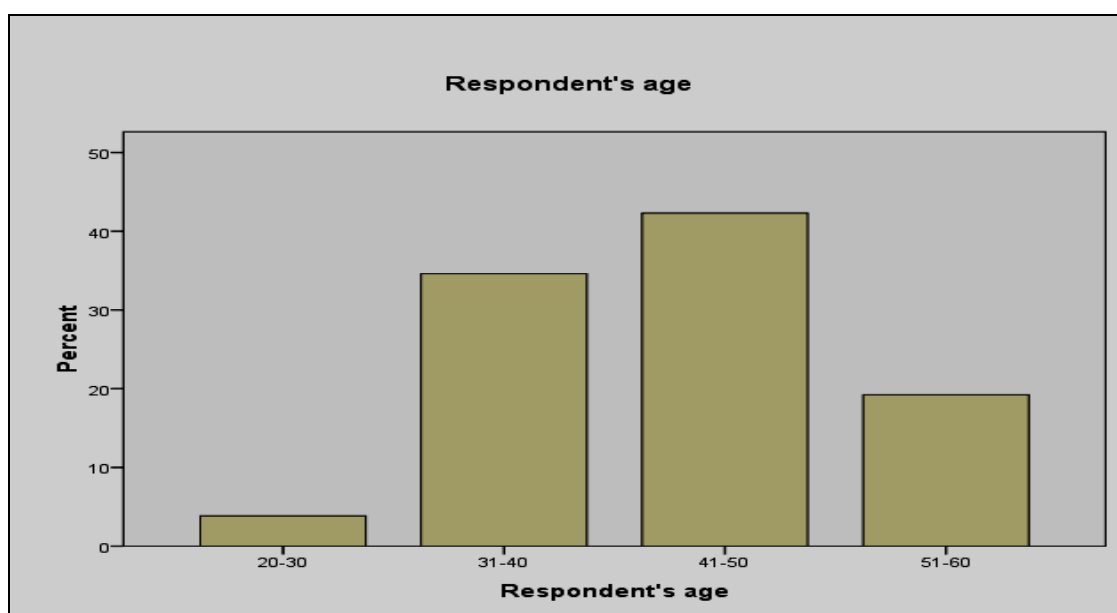


Figure 1: Respondents' Age Distribution

Source: Assessment Finding, (2013)

(iii) Sex Distribution of Respondents

The assessment captured the sex distribution of the respondents. The researcher considered the factor of dominance of female in the population and patriarchy system practiced by majority of African communities.

Table 3: Sex Distributions of the Respondents

Sex of respondent					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	42	80.8	80.8	80.8
	Female	8	19.2	19.2	100.0
	Total	50	100.0	100.0	

Source: Assessment Finding, (2013)

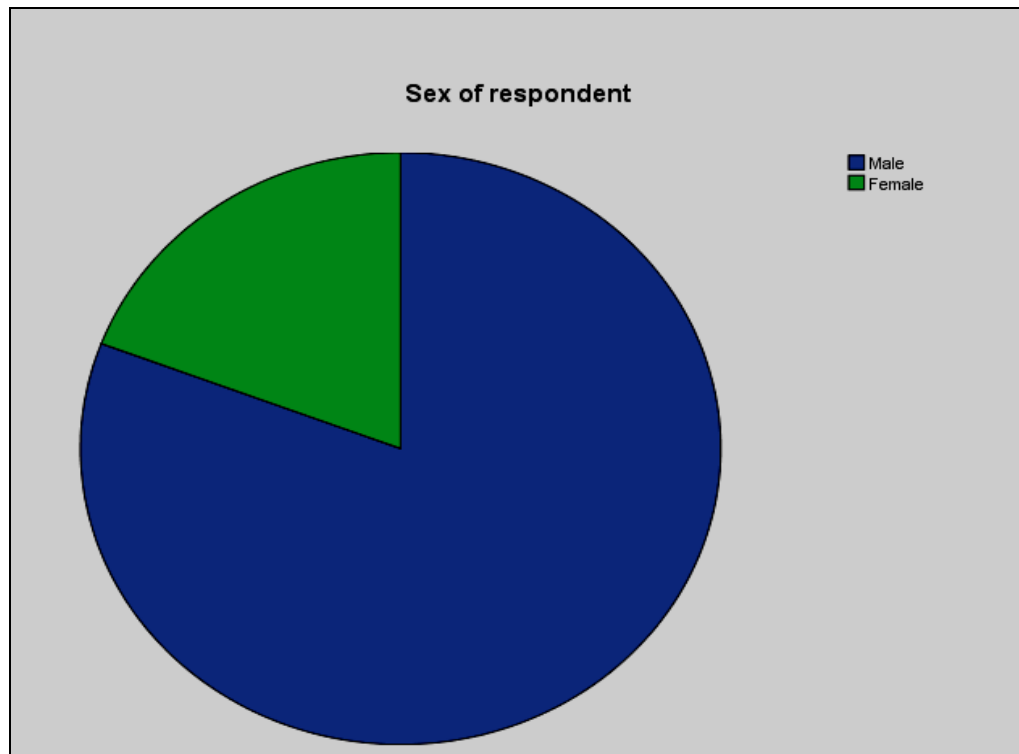


Figure 2: Respondents' Sex Distribution

Source: Assessment Finding, (2013)

Table 2 and figure 2 shows that the group was dominated by 80.8% of male. This is equivalent to the researcher's assumption that the patriarchy system in the African communities affects the involvement of female into economic activities. Despite the fact that the population of the Mlangarini Ward is dominated by female, the respondents for this assessment were dominated by male. This means that most of economic activities in the community are headed by males.

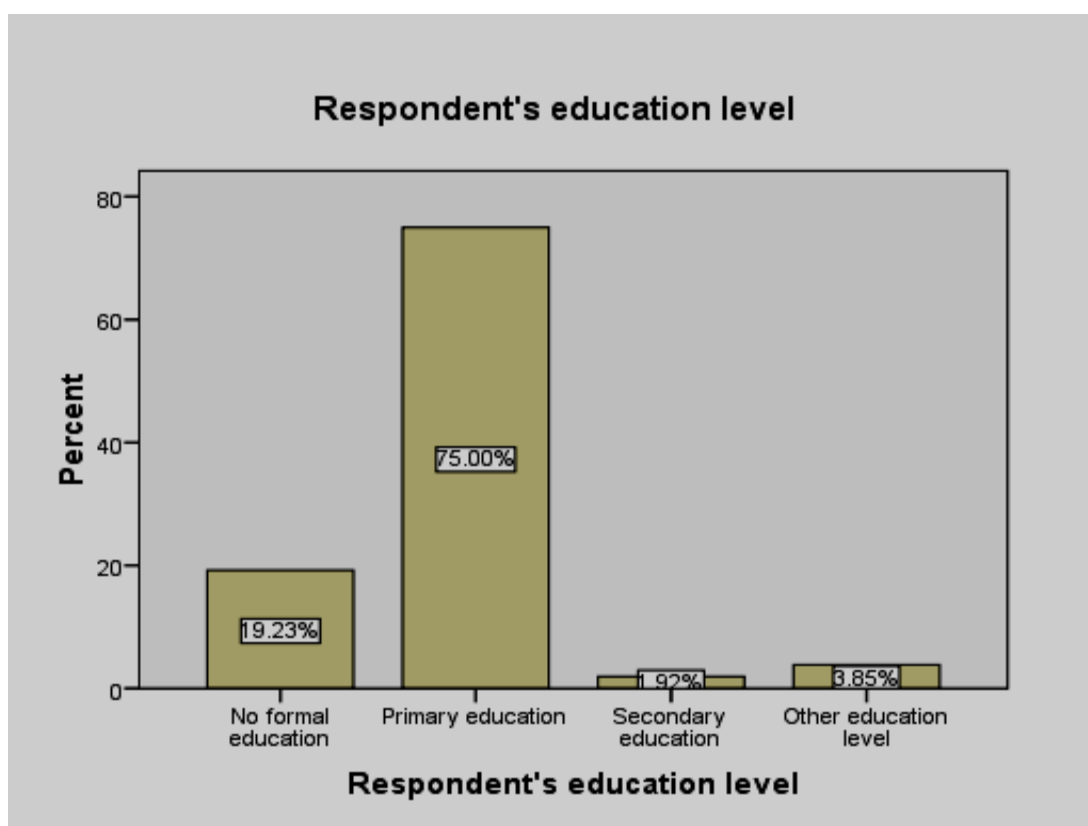
(iv) Respondents' Education Profile

Researcher wanted to measure the education of the members of the community basing on the fact that the higher the education the higher the understanding and commitment to serious issues.

Table 4: Respondents' Education Profile

Respondent's Education Level					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No formal education	10	19.2	19.2	19.2
	Primary education	39	75.0	75.0	94.2
	Secondary education	1	1.9	1.9	96.2
	Any other	2	3.8	3.8	100.0
	Total	50	100.0	100.0	

Source: Assessment Finding, (2013)

**Figure 3: Respondents' Education Profile**

Source: Assessment Finding, (2013)

Table 3 and Figure 3 shows that the group is dominated by primary education level by 75.0% followed by non-formal education by 19.2%. Secondary education was negligible represented by 1.9% in the group and other education was 3.8%. On the cross tabulations majority of respondents with no formal education were from 50-60 of age group. The education profile of Elakunoto group indicates that the community has low basic education. This implies that the mode of providing capacity building in terms of training requires the trainer to simplify the training modules so as to enhance understanding to the community. This is one of indicator that the level of education to the members of community is an influential factor for successive capacity building on enhancement of agricultural production.

1.4.2 General Observation

In this assessment three CNA research questions were presented to the respondents which are:

- (i) Which areas need agricultural interventions in order to increase agricultural production?
- (ii) To what extent does the capacity building trainings has enhanced of agricultural production?
- (iii) What are challenges on capacity building on the enhancement of agricultural production?

The assessment went on assessing one by one question by soliciting information from the respondents by responding to the questionnaire. The following are responses analysis:

(i) Agricultural Interventions Findings

Assessment discovered that; there is an irregularity in provision of agricultural interventions in this community. 60% of respondents indicate that most farmers are using local methods in doing agricultural activities in their areas. Most farmers do not use agronomic practices because they fear of damaging soil profile and so lead to the decreasing of crop production. Because of the poor acceptance of agricultural intervention; the crop production is very low.

(ii) Capacity Building on Agriculture Interventions

One of strategies for transforming the farming modalities so as to maximize output is by applying modernized farming techniques. For instance a group such as Elakunoto which was intervened during this assessment confirmed to have been undergone into capacity development in terms of training from Research, Community, Organizational Development Associates (RECODA) on enhancement of sustainable farming and poverty eradication strategies.

Table 5: Training vs Number of participants

S/N	Type of Training Conducted	Targeted Number of Participant	Participant Attended
	RIPAT farming programme,	466	167
	Establishment of SACO	466	154
	Economic Farming	466	148
	Conservation farming	466	170
	Genetic modified banana farming	466	155

Source: Research findings, (2013)

Despite those trainings conducted, community ability for adoption was very low.

There are a low number of participants on those trainings as compared to the total number of agricultural farmers in the community. Attendance was taken from the village officer and affirms that number of participants in those workshops is low.

(iii) Enhancement on Agricultural Production

The agricultural products which feature to have low production were 4 which included maize, sorghum, beans and vegetables. Product like bananas, coffee etc do not feature as having an agricultural production. This information is of great importance in strategic agricultural production planning.

1.5 Need Prioritization

The farmers' meeting, among other things, discussed the community needs assessment report and identified the obstacles, solutions and opportunities that were within the sphere of control of the farmers. The priority ranking of the needs was achieved after a presentation, discussion and voting using Self Associative, resourcefulness, action and responsibility techniques which comprised of creativity, investigation, analysis and informative techniques for informed decision making.

1.5.1 The Prioritization Method Used

The assessment meeting was used to discuss the community needs assessment report and identified the obstacles, solutions and opportunities that were within their capability of enhancing the agricultural production. The priority ranking of the needs was achieved after a presentation, discussion and voting using SARAR techniques

which comprised of creativity, investigation, analysis and informative techniques for informed decision making.

1.5.2 Ranking of Priority Needs

The 50 participants in the stakeholder's forum were divided into ten groups of 5 participants. Each group was given 5 cards each written one of the 5 solutions emanating from responses to the obstacles that made capacity building in terms of training inactive in agricultural production. They were instructed to discuss the suggested solutions and group the solutions into three categories through three pile sorting approach using cards;

- (i) Solutions that could be performed by training facilitators with less assistance from donors and government
- (ii) Solutions that needed more government or government assistance like training institutions and study tour organization
- (iii) Solutions that needed more contribution from members of community

The results were discussed and the exercise repeated, this time the groups were instructed to translate the solutions that were within the capacity of enhancing agricultural production to project components and rank the projects components with the objective of choosing four priority project components that provided the best solution to capacity building on enhancing agricultural production. Finally the stakeholders prioritized the following as the feasible projects that can be implemented by easily. The results showing priority 1, 2 and 3 are as presented in Table 6.

Table 6: Ranking Project Priorities

Project Component Priorities	1	2	3	Total
Training need: Identifying of agricultural production training gap within the members of community	26	11	13	50
Training packages: Identifying training packages that suits to fill the gap of agricultural production	25	12	17	50
Training methods: Survey for preferable training method which will be used to deliver the training package	22	14	14	50
Training organization meeting: Welcoming non member participant to the meeting of organizing training schedule	20	17	13	50
Reminder meetings: Organizing reminder meetings with the stakeholders before start capacity building training starts	18	15	17	50

1.6 Chapter Conclusion

Community Needs Assessment was done by visiting farmers in Mlangarini Ward at Arumeru Districts. A CNA report was prepared and presented in a forum of farmers. The farmers' forum scrutinized the needs assessment report and accepted that the report represented the exact concerns and problems as well as the suggested solutions to the existing agricultural production opportunities. The biggest problem within the ability of farmers was lack of knowledge on the agricultural output production,

followed by unavailability of farmers field centres and credit facilities. The problems demanded an empowering solution in the form of capacity building by training and awareness creation to enable farmers see other business opportunities, how to take up such opportunities and make them real in their business operations.

CHAPTER TWO

2.0 PROBLEM IDENTIFICATION

2.1 Background to the Research Problem

Supply of sufficient food to the world's population is a main concern globally by the Food and Agriculture Organization (FAO). As the world's population is growing rapidly while the limited land for farming encountered with climatic change whereby rainfall is becoming less and less as time goes on. For example, FAO's forecast for world cereal production in 2012 now stands at about 2013 million tonnes, almost 8 million tonnes down since the previous report in July and 1.6 percent less than the 2010 level (FAO, 2013).

However, Pratt (2013) reports that, agriculture productivity growth is growing due to technological changes just as fast as even faster than the population growth. In fact, since the 1970s, world agricultural production has been increasing at an average of 2.3 percent a year. While in 1961 the world was feeding 3.5 billion people by cultivating 1.3 million hectares of land, 50 years later with a world population that has doubled to 7 billion people, agricultural production has tripled, even though land under cultivation increased only 12 percent.

Contrary to the report of Pratt (2013), cereal crop output and productivity growth rates have been particularly low in sub-Saharan Africa over the last three decades. In many parts of the sub-Saharan Africa region, there is rapid population growth which is more food crop production. With relative land abundance, poor market infrastructure, and inward-looking trade policies in Saharan Africa region has

contributed to the reduction of performance of cereal crop sector. Farmers are faced with an inelastic demand for basic cereals and have little incentive to invest in productivity-enhancing technologies (Pingali and Heisey 2013).

Being productivity growth rates have been particularly low in sub-Saharan Africa, interventions need to be in place at some areas such as mechanization, fertilizers, irrigation, herbicides, pesticides control and increased plant density. As observed by Hounshell (1984) mechanization is one of the factors responsible for urbanization and industrial economies. Apart from improving production efficiency, mechanization encourages large scale production and improves the quality of farm produce. On the other hand, it replaces unskilled farm labour, reduces environmental degradation, deforestation and erosion.

Fertilization, irrigation, herbicides, pesticides control and increased plant density are among of ingredients necessary for enhancement of agriculture productivity. Increased use of various technologies such as pesticides, herbicides, and fertilizers has been advocated for more agricultural production. Specific programme such as high yielding rice enhanced production of about 5 tons per hectare (Jain, 2010).

Also agricultural productivity will increase if the capacity of farmers and other actors in the agricultural value chain is enhanced to assist them being innovating. Capacity of farmers can include new knowledge or technologies related to primary production, processing, and commercialization which in turn can positively affect the productivity, competitiveness, and livelihoods of farmers and others. By putting farmers and other operators in the agriculture value chain at the centre of innovative

practices and encouraging learning through the interchange of ideas, successes, and failures, they can develop the capacity to operate efficiently in the knowledge economy.

However, capacity building to promote the sustainable farmers' production occurs at different levels and at each level there its own challenges associated. For example, at the national level the challenge is to improve coordination and communication across sectors. At the local level, farmer organizations have challenges in facilitating access to resources especially land, water, credit and knowledge. Also small farmers have challenges of accessing to efficient and equitable markets, and financial incentives.

2.2 Problem Statement

As CNA reveals, the major challenge facing the agriculture productivity in the Mlangarini community is low productivity due to application of poor technology. Most farmers do not use agronomic practices because they fear of damaging soil profile and so lead to the decreasing of crop production. Because of the poor acceptance of agricultural intervention; the crop production is very low.

However, capacity development was used to intervene the above problem, still the problem persist. CNA reveals that, there was a training delivered by RECODA to the members of Elakunato for the purpose of developing capacity to enhance the farmers' ability to sustainable farming hence eradicates their poverty. However, it was revealed that, farmers did not apply the techniques from the training. Also, their participation to the training workshops was very low.

Having identified challenges in this community and despite of efforts done by RECODA to address these challenges by offering trainings to members of Elakunato group without much outcome has lead the researcher to center this study in capacity building on agricultural production as one of the concern which needs urgent attention from individuals, institutions and government in order to enhance the economic condition of the people of Mlangarini Ward.

2.3 Project Description

Government and non-government organization such as RECODA have put initiatives of transforming farming methods for the purpose of maximizing agriculture productivity of the individual in the community by applying modernized farming techniques but these initiatives have been backsliding because of some factors including lack of learning for modern techniques of agriculture methods. Introduction of technologies that ensure high productivity such as demonstrations on seed and fertilizer use, mechanization, pest control and safe use of chemicals will be counterproductive unless farmers are trained properly. This has been in the government, local government and stakeholders' agenda for enhancing agricultural productivity.

The project explores areas which need agricultural interventions in order to increase agricultural production; extent does the capacity building trainings have enhanced of agricultural production and challenges on capacity building on enhancement of agricultural production. The project is to be linked to the capacity building on agricultural production as one of the initiatives for maximizing agricultural

productivity which institutions and government need to look upon for poverty eradication in the communities.

The project covers 42 farmers from Elakunato group and two executive leaders from the three villages and two officers from the ward level. This makes a total of 50 respondents. The project centered in Elakunato group with estimate of 466 people. Elakunato group is farmers' association of members from three villages namely Mlangarini, Kiserian and Manyire from Mlangarini Ward.

2.3.1 The Project Components Include:

- (i) Establish training needs by the community on enhancing agricultural production
- (ii) Establishment training methodology for the community on enhancing agricultural production
- (iii) Establishment of training timing for the community on enhancing agricultural production
- (iv) Establishment of a coordination organ in the capacity building responsible for enhancing agricultural production.

2.3.2 Target Community

The project targets the farmers as the primary beneficiary of the project and the local government authorities as a secondary beneficiary. Farmers are targeted because they need to practice modernized agriculture in order to yield in abundance for their daily food subsistence and surplus for business. They need income for their daily life wellbeing such as for raising health families, education and other social needs. Being, the government target to implement the Millennium Development Goals

(MDGs), the Local government authorities were tasked to implement the National Strategy for Growth and Reduction of Poverty (NSGRP) whereby reduction of poverty by half of the population in 2015 is the ambition of the strategy. Therefore, local government authorities are keenly to enhance agricultural production at the grass root level. Thus, the major target communities are famers and local government authorities.

2.3.2 Stakeholders

The stakeholders in the project are many and each develops interest in the agricultural production depending how they are affected by benefits from the enhanced agricultural production. Among the most prominent stakeholders include the Government, NGOs, the development partners, farmers, and the end users of the products.

Table 7 Stakeholders impact assessment

Name of Stakeholder (SH)	Potential Benefits /costs to the (SH)	Project Discussed with the SH	SH Opinion on Project Goals	SH Opinion on the Project Design
Farmers Community	-Primary beneficiary of the Project will cooperate with capacity building institution in enhancing their skills	Was discussed with farmers and their representatives in selected villages under the project	Agreed on the project because it offers a reliable skills for their agricultural produce without compromising with soil nutrients	Their comment was on the use of available time when they are not much occupied with agricultural activities
District, council Government officials at all levels	-They support the project -Will provide technical support	Was discussed through a forum convened by the DED with all agriculture officials in the district	Agreed on the project goals because it will enhance the farmers skill for producing more and in turn will reduce poverty in the community	The comments were on food security and government strategy for implementing MDGs and NSGRP
RECODA the development partners	-They support the project as part of their grant -Provide coordination role	Was discussed with their representatives in its office	Project goals were accepted.	The project accepted since it furthers the work that RECODA has started.

2.3.3 Project Goals

The project main goal was to enhance production skills for agricultural products to farmers. This was achieved through three project components that set measurable targets that were used to assess the project achievements.

2.3.4 Project objectives

(i) Establish training needs by the community on enhancing agricultural production

This project component targeted at identifying training needs and capacity building need to the 42 farmers of the 466 Farmers, operating in Arusha Region, Arumeru District at Mlangarini Ward who indicated to have an agricultural production skills gap.

(ii) Establishment training methodology for the community on enhancing agricultural production

The participatory method was accepted as good means for disseminating skills to the farmers. The concentration of the establishment of the farmer groups for easier training meetings is currently encouraged by government, development partners, NGOs as they are collectively striving to implement the NSGRP on the way to achieve poverty reduction in the community.

(iii) Establishment of training timing for the community on enhancing agricultural production

The training component enables farmers to participate in the trainings effectively without interfered with other agricultural activities such as time for planting, weeding and harvesting.

(iv) Establishment of a coordination organ in the capacity building responsible for enhancing agricultural production

The establishment of a coordinating organ in the capacity building responsible for enhancing agricultural production was found necessary by farmers. The organization was intended to overcome structural and functional weaknesses observed in the present set up of the farmer groups.

2.4 Profile of the Host Organization

The host organization for this project was RECODA. RECODA is a local Non Governmental Organization established in 2000 and registered in 2001 with the view of bridging technical gap in development through research, consultancy, capacity building and facilitating community based projects geared toward poverty alleviation, food security and environmental conservation. It conducts her activities with the view of national interest especially focusing on National Economic Growth and Poverty Reduction Strategy (NGPRS) in swahili known as MKUKUTA (Mkakati wa Kukuza Uchumi na Kupunguza Umaskini Tanzania); and working on the researchable issues to make sure that the pressing problems of the community are jointly solved. A basket of option is always availed to communities to choose what is best. Participatory projects have been formulated for rural sectors development aiming at mobilization of locally available resources and enhancing the use of affordable technologies to improve environment and agricultural (Livestock/crop) production in ensuring poverty reduction and food security.

RECODA has conducted various consultancies and training of different NGOs, CBOs and grassroot communities through Farmers Field Schools (FFS). Some of the

training carried out includes training Local Resource Mobilizers (LRM) on fundraising and resource mobilizing, roles and responsibilities of NGO executive committees, training of development workers on project cycle management, training on lobbying and Advocacy, and general organizational development issues. The organization has also undertaken various socioeconomic researches conducting baseline, midterm and end term evaluations. This is done in partnership with the communities for further input and redesign of ongoing projects.

Under community economic development based projects and FFS approaches; trainings have focused on conservation agriculture (CA) technologies and practice, promotion of improved banana varieties, crop-livestock integration, agroforestry, dryland farming, food processing/utilization and marketing, agronomic practices to earmarked crops, cost benefit analysis in crop production, hygiene and sanitation under water projects (together with primary health care - PHC) and monitoring and time saving technologies (e.g. energy preservation stoves). Currently the organization is working with 41 villages in Meru, Arusha, Karatu, Babati, Hai and Korogwe districts targeting 82 groups of farmers where all the development initiatives are channeled in expectation of the groups up-scaling the initiatives to the rest of the communities.

RECODA academy has been established aiming at equipping Civil Society Organizations (CSOs) that include NGOs, CBOs and Faith Based Organizations (FBOs), government development staff and university/college graduates with rural economic development facilitation skills so that they establish and/or implement

RIPAT likeminded projects. The RIPAT ideas rely much on the main objective i.e. *offering proven skills and practices for poverty reduction, food security and environmental conservation to small scale farmers through community mobilization, sensitization, counselling and capacity building to utilize available resources and opportunities for livelihoods improvements leading to self support and reliance.*

RECODA is implementing her activities through diversified financial support; and mainly from Rockwool Foundation – Denmark. The organization also collaborates very closely with other organizations such as FAO-ROME, Ministry of Agriculture and cooperative, Foundation for Civil Society Organization, Selian Agricultural Research Institute (SARI), Horti/LITA – Tengeru, Local governments, African Conservation Tillage (ACT), Participatory, Ecological Land Use Management (PELUM), ICRAF, SADC – Soil and water management department, Compassion International (T), World Vision Tanzania and ANGONET.

2.4.1 Registration

The organization was established in 2000 and registered in 2001 under the companies' ordinance (CAP 212) as company limited by guarantee. The Organization's registration number is 40785 and with TIN 105-138-180.

2.4.2 Physical Address

The organization is based in Nanenane Themu ground entrance gate opposite to Fiber board Industry. Contact address; Executive Director, RECODA, Box 10633, Arusha; Tel. 027 2549350; Mob. 0768 524052; e-mail recoda11@gmail.com

2.4.3 RECODA'S Vision, Mission, Core Values And Objectives

(i) Vision

The vision of RECODA is to have a prosperous, strong, sustainable and enlightened community free of ignorance and poverty.

(ii) Mission

RECODA exists to bridge the technical gap in poverty reduction initiatives through socio-economic research, community based programmes (CBP), capacity building of CSOs and provision of consultancy services.

(iii) Core value

The core value for RECODA is accountability, creativity and teamwork (ACT).

(iv) Specific objectives of RECODA

To facilitate implementation of Community Economic Development Projects (CBP) geared towards poverty reduction, food security and environmental conservation.

- (a) To facilitate capacity building with grass-root communities and civil society organizations so that they can productively fight a multi-faceted problem of poverty in Tanzania.
- (b) To undertake socio-economic research with and for grass-root communities, local and international development agencies.
- (c) To equip community development workers and fresh graduates from institutions of higher learning with research, policy analysis, community and organizational development facilitation skills.
- (d) To advocate for favorable changes in development policy and practice.

- (e) To provide diverse management and development consultancy services to various development actors.

2.4.4 Department/Structure

The organization has four main departments

- (i) Community Economic Development
- (ii) Research and consultancy
- (iii) RECODA Academy
- (iv) Finance and administration

2.4.5 Source of Funds

RECODA is implementing her activities through diversified financial support; and mainly from Rockwool Foundation – Denmark who supports Community Economic Development projects. The organization also engages in consultancy work that has contributed significantly to the income of the organization. The organization has a professional accountant.

2.4.6 Stakeholders

The organization collaborates very closely with Ministry of Agriculture, Local government, grassroots communities, Help to Self Help Projects – Denmark, Foundation for Civil Society, Selian Agricultural Research Institute (SARI), Horti/LITI – Tengeru, World Vision Tanzania, Compassion International – Tanzania, Participatory Ecological Land Use Management (PELUM), Soil and water management department, World Vision and ANGONET.

2.4.7 Staff

RECODA has 15 competent and experienced technical staff where seven are females and eight are males. Based on qualifications there are four masters' degree holders, Six Bachelors and five experienced diploma holders. There are three supporting staff i.e. secretary, driver and watchman. However, through the process of networking/teaming-up with other likeminded NGOs and equipping community development workers and fresh graduates from institutions of higher learning with different skills; there are possibilities of soliciting untapped readily available and already tapped skills among those retired or within the working alliance.

Through the process of networking/teaming-up with other likeminded NGOs and equipping community development workers and fresh graduates from institutions of higher learning with different skills, there are possibilities of soliciting untapped readily available and already tapped skills among those retired or within the working alliance.

2.4.8 Community Economic Development Projects

Currently the organization is working with 41 villages in Meru, Arusha, Karatu, Babati, Hai and Korogwe district councils targeting 82 groups of farmers; where each group comprises an average of 30 households i.e. total of 2,460 households where at the average of six individuals per household results into 14,760 people. Through mainstreaming community economic development projects in government structure and solidarity chains under help to self-help philosophy; the number of beneficiaries tends to increase by three-four folds/times; hence forth the total household touched by this is $2,460 \times 3 = 7,380$ households totaling; and when

consider again each family with average of six people i.e. 44,280 individuals are directly benefiting to the project within a lifespan of the project.

The organization also implements Village Saving and Lending Association model (VSLA) within the established groups as part of their Microfinance initiatives. These initiatives go a long way to sustain community economic projects that have been initiated at household level. RECODA has extensive experience in VSLA training, mobilization, implementation and monitoring. This is an in built component within the community economic development projects regarding food security initiatives that are followed up on a very regular basis. At the community level, the organization trains farmer field school members (groups), establishes VSLA component and monitors the implementation progress. The model targets community members, para professionals and extension officers. RECODA'S areas of jurisdiction where VSLA has been trained and implemented are Karatu, Korogwe and Arusha.

3.4.9 RECODA Academy

RECODA Academy targets her training to equip Civil Society Organizations (CSOs) that include NGOs and Faith Based Organizations (FBOs), government development staff and agricultural graduates with rural economic development facilitation skills so that they establish and/or implement RIPAT likeminded projects i.e. rural development economic projects.

(i) RECODA Experience

RECODA has facilitated development projects/activities in rural sector as stipulated in the objectives. Among the activities/consultancy carried out by RECODA include:

Table 8: Training/Capacity Building

Year	Type of Consultancy/Work	Client/ Organization	Place
2011	RECODA academy course for Agricultural extension officers	Arusha district council	Arusha
2011	RECODA academy course for Agricultural extension officers	Karatu district council	Karatu
2008	Imparting community economic development facilitation skill based on RIPAT approaches to fresh graduates from agricultural universities	Rockwool Foundation – Denmark	Arusha
2008	Prepare and conduct short course to extension field officers on the facilitation skills to community economic development project; imitating RIPAT projects.	Meru district council	Arusha
2008	Training of trainers (ToT) to best proven farmers under RIPAT projects; i.e. prepare field auxiliaries	Denmark	Arusha
2008	Training and actual practices to group formation and development under Farmers Field Schools.	RIPAT Project – Rockwool Foundation Denmark	
	Leadership Training		
2008	Training of Ward Development Committee members on how to coordinate project activities and involve grassroots communities.	Meru district council and RIPAT project	Arusha
2007	Strengthening Capacity of CSOs so that they can Effectively Engage in Development Planning as well as Monitoring Programmes of Project Both at District and National Level	Arusha NGO Network - ANGONET	Arusha/M anyara Regions
2005	MUWASA Environmental Impact Assessment for environmental Management plan	World vision Northern Zone Mukulat Water and Sanitation Project (MUWASA).	Arusha
2004	Training of Inyuat E Moipo on their organization roles	TAPHGO – Tanzania Pastoralist Hunter and Gatherers Organization.	Simanjiro
2003	Facilitating project design and implementation of farming activities and environmental improvement for Faraja Seminary.	Help to Self help Project – Danish	Moshi
2002	Training on Lobbying and Advocacy.	Tanzania Health Consumers Association.	Arusha
2000	Training on project planning, management and fundraising	Catholic Diocese of Tanga, Arusha, Same, Moshi and Mbulu	Hai District

(ii) RECODA Organization Structure

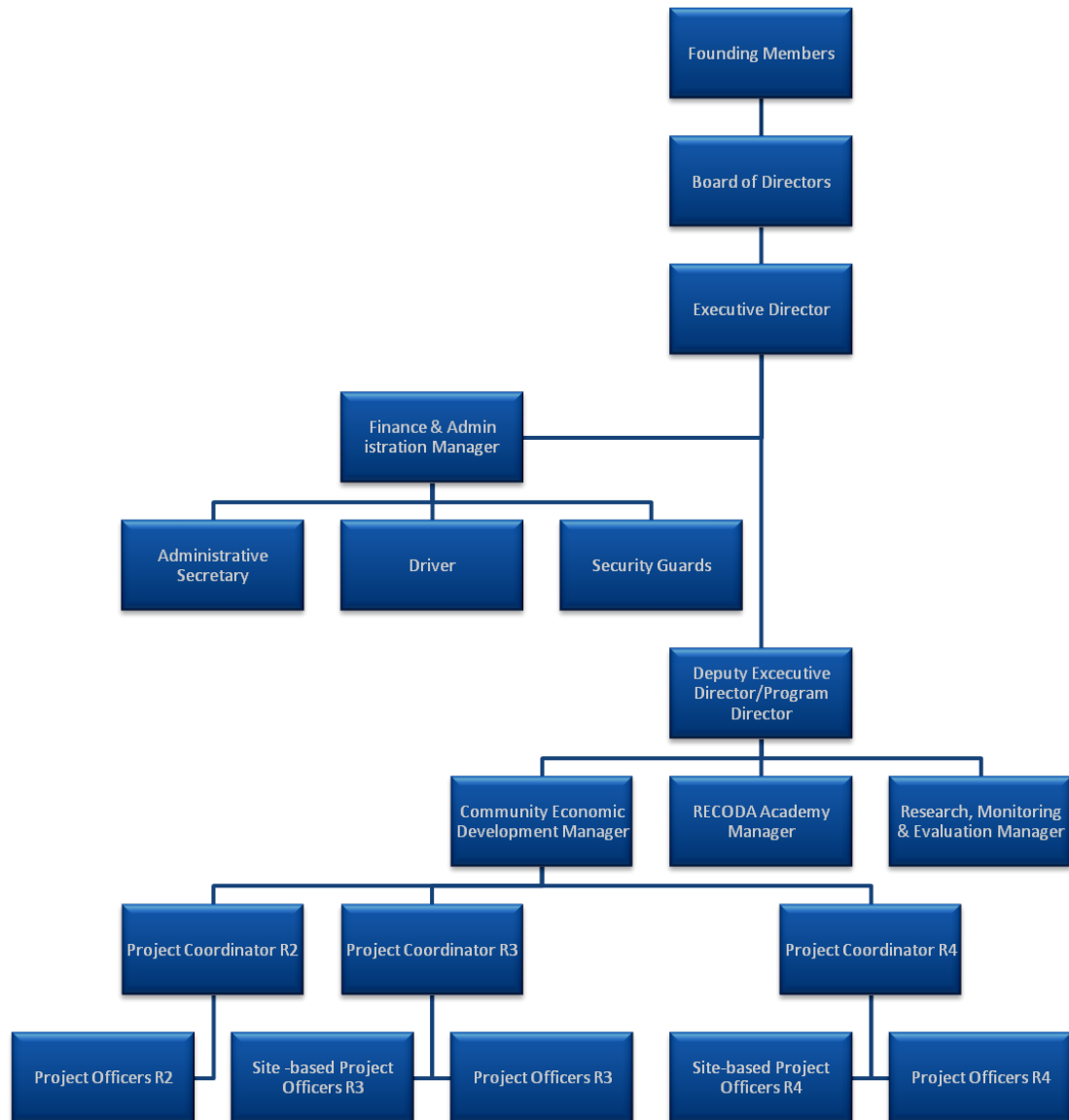


Figure 4: RECODA Organization Structure

(iii) Organization Capacity/Strength

The organization has well defined mission and strategies to achieve its vision. It has a well-equipped office with nine rooms, computers, printers, Scanner, Photocopy machines, furniture, file cabinets, telephone services and advanced (wireless) internet connection. File cabinets are full of reports and reference materials, which make the

office to be a mini-library that facilitates smooth implementation of work within different disciplines. There are committed, high qualified and experienced staffs. Also RECODA enjoys strong and visionary leadership, which contributes to the organizational performance and effectiveness. Members of the organization have expertise from different disciplines / backgrounds and are willing to share their knowledge and experiences. The organization has good network with other NGOs, which facilitate sharing of experiences and knowledge RECODA has credibility and required reputation to work with other organizations rooted from different disciplines and satisfies them thus they would always prefer to work with our organization. The organization has a qualified accountant who facilitates financial accounting systems as per the RECODA's financial manual. With the availability working facilities and qualified staff, RECODA produces quality and timely progress and final project reports.

CHAPTER THREE

3.0 LITERATURE REVIEW

3.1 Introduction

This chapter presents the concepts used in the research project and the work done by other researchers in empowerment with agricultural skills to farmers and other agricultural agencies.

3.2 Theoretical Literature Review

3.2.1 Definitions of Concepts

A number of concepts are used in this research and their interpretations in common literature needs more elaboration to bring about the intended meaning in this work. These include capacity building, training, empowerment, farmer, community, collective action and social capital. Also the Institutional framework covering institutions involved in capacity building and their associated functions are briefly explained.

(i) Capacity Building

United Nations (2006) defines capacity building as a conceptual approach to development that focuses on understanding the obstacles that inhibit people, governments, international organizations and non-governmental organizations from realizing their developmental goals while enhancing the abilities that will allow them to achieve measurable and sustainable results. The term is also referred as capacity development.

The term community capacity building emerged in the lexicon of international development during the 1990s. Today, "community capacity building" is included in

the programs of most international organizations that work in development, the World Bank, the United Nations (UN) and non-governmental organizations (NGOs). Wide usage of the term has resulted in controversy over its true meaning. Community capacity building often refers to strengthening the skills, competencies and abilities of people and communities in developing societies so they can overcome the causes of their exclusion and suffering (United Nations, 2006).

(ii) Individual Level

Capacity-building on an individual level requires the development of conditions that allow individual participants to build and enhance existing knowledge and skills. It also calls for the establishment of conditions that will allow individuals to engage in the “process of learning and adapting to change”.

(iii) Institutional Level

Capacity building on an institutional level should involve aiding pre-existing institutions in developing countries. It should not involve creating new institutions, rather modernizing existing institutions and supporting them in forming sound policies, organizational structures, and effective methods of management and revenue control.

(iv) Societal Level

Capacity building at the societal level should support the establishment of a more “interactive public administration that learns equally from its actions and from feedback it receives from the population at large.” Capacity building must be used to develop public administrators that are responsive and accountable.

(v) Training

Training is an organized activity aimed at imparting information and or instructions to improve the recipient's performance or to help him/her attain a required level of knowledge or skill (www.businessdictionary.com).

In designing a training programme there are steps involved in sequence which Miller, and Diana (2002) grouped into five phases namely need assessment, instructional objectives, design, implementation and evaluation. In order to be effective and efficient, all training programmes must start with a needs assessment. Prior to any actual training occurs, the training manager must determine who, what, when, where, why and how of training. To do this, the training manager must analyze as much information as possible about the following (Miller, and Diana 2002):

- (i) Organization and its goals and objectives
- (ii) Situation and related tasks that need to be learned
- (iii) Competencies and skills that are need to perform the situation
- (iv) Individuals who are to be trained.

In the first step of designing a training and development program according to Miller, and Diana (2002) the needs assessment must be conducted. The assessment begins with a "need" which can be identified in several ways but is normally described as a gap between what is currently in place and what is needed, now and in the future. Gaps can include discrepancies/differences between: What the organization expects to happen and what actually happens, Current and desired performance, Existing and desired competencies and skills. In so doing an

assessment will enhance Competencies and performance of work teams, Problem solving or productivity issues and the need to prepare for and respond to future changes in the organization or in the individual (Miller, et al., 2002).

From the results of the needs assessment the training manager always set the training objectives by answering basic questions such as whom, if anyone needs training and what training is needed. On the other time, training is not the solution (Wilson 2009). However, some performance gaps can be reduced or eliminated through other management solutions such as communicating expectations, providing a supportive environment, arranging consequences, removing obstacles and checking situation fit (Wilson 2009).

According to Miller, and Diana (2002), formerly the needs assessment is completed and training objectives are clearly recognized, the design phase of the training and development process will be initiated by selecting the internal or external person or resource to design and develop the training programme who will select and design the program content, Select the techniques used to facilitate learning (e.g. lecture, role play, simulation, etc), select the appropriate setting (on-the-field, classroom, etc), select the materials to be used in delivering the training (e.g. work books, videos, etc.) and identify and train instructors (if internal) .

Training implementation come after completing the design phase, the training candidates are ready schedule for classes, facilities and other participants, instructors, and deliver them to scheduled locations and conduct the training (Wilson 2009).

Lastly the training programme is evaluated to determine whether the training objectives were met. According to Miller, and Diana (2002) the evaluation process will include determining participant reaction to the training program, how much participants learned and how well the participants transfer the training back on their performance. The information gathered from the training evaluation is then included in the next cycle of training needs assessment.

It is important to note that the training needs assessment, training objectives, design, and implementation and evaluation process is a continual process for the organization (Miller, and Diana 2002).

(vi) Empowerment

Napier, (2006) defines empowerment as a multi-dimensional social process that helps people gain control over their own lives. It is a process that fosters power in people for use in their own lives, their communities and in their society, by acting on issues they define as important. According to Ward and Muller (1991 pp 23-24) The concept of empowerment literally means to give power (or authority), to give ability to, enable, to make powerful, give strength and validity, the process of gaining power, developing power, taking or seizing power. Empowerment is a process by which individuals and groups gain power, access to resources and control over their own lives. In doing so, they gain the ability to achieve their highest personal and collective aspirations and goals, (Robbins, Chatterjee, & Canda, 1998, p.91). The type of empowerment advocated in this work involves consciousness raising and skills training, facilitating clients to learn the needed skills, skills relating to individual aspect; assertive skill, problem solving ability.

According to Napier, (2006) the empowerment stays with the person, not the facilitator and addresses oppression, stratification, inequality and any barriers that hamper the achievement of any goal that is beneficial to the community. Empowerment increases intrapersonal and interpersonal power of individuals to take action that leads to the attainment of a personal or common goal. In its micro basics, it builds self-efficacy, personal consciousness and decreasing self blame, developing strengths, sharing power, equality and respect.

However, Rappaport (1981, 1984) defines empowerment as a construct that links individual strengths and competencies, natural helping systems, and proactive behaviours to social policy and social change. It focuses on identifying capabilities instead of cataloging risk factors. This involves also a process of obtaining basic opportunities and encouraging the development of skills for tapping such opportunities.

(vii) Communities

Wells *et al*, (2004) define communities as social groups with a collective identity or shared attitudes and experiences whether social, cultural, political, and occupational or based on affiliation through geography, institutions or communication channels. The farmer community is structured in their associations. At individual level each farmer carries out farming individually striving to produce crops for his/her family subsistence and surplus to earn extra income and profits so as to remain in agriculture occupation. At Institutional level the farmer is a member and part of the association of farmers who must have a common voice in the development agenda of

their association and demanding the government authorities to recognize their contribution in the development of the agricultural sector. The success of farmers' association is based on the farmers' activities and the interrelations that exist between themselves.

The Future Agriculture Policy brief No. 32 of 2009 analyzes the effectiveness of farmers' organizations by identifying seven habits that are necessary for a highly effective farmers' organization. These include:

- (i) Clarity of mission,
- (ii) Sound Governance,
- (iii) Strong, responsive and accountable leadership,
- (iv) Social inclusion and raising voice,
- (v) Demand driven and focused service delivery,
- (vi) High technical and managerial capacity and
- (vii) Effective engagement with external actors.

(viii) Collective Action Theory

As indicated by Meinzen-Dick, *et al* (2004), farmer associations are formed based on the concepts of collective action theory and practice. The literature on collective action in theory and practice emerged from dissatisfaction and failures of many of the rural development programs of the 1960s and 1970s. The development paradigms of this period assumed that communities would willfully engage in collective activities, with little time and scrutiny given to understand under what condition will this happen or on how these actions might be sustained. Olson (1965), Axelrod

(1984), Uphoff (1986), and Ostrom (1990), provides that, a body of collective action theory later developed into explaining the enabling conditions for successful collective action outcomes.

Wade (1988), Ostrom (1990, 1992) and Baland and Platteau (1996) empirically provide that, the subject of collective action have been found in the field of natural resource management (NRM). However, Agrawal (2001) synthesized these works in an effort to identify a common list of enabling conditions for successful collective action outcomes. These conditions include:

- (i) Small group size;
- (ii) Clearly defined boundaries;
- (iii) Shared norms;
- (iv) Past successful experiences;
- (v) Appropriate leadership;
- (vi) Interdependence among group members;
- (vii) Heterogeneity of endowments, homogeneity of identities and interests; and
- (viii) Low levels of poverty.

(ix) The Concept of Social Capital

Uphoff and Wijayaratna (2000) emphasize how structural forms of social capital - that is, roles, rules, procedures, social networks, facilitate mutually beneficial collective action and how cognitive forms of social capital - that is, norms, values, attitudes, and trust, are conducive for mutually beneficial collective action. Uphoff and Wijayaratna (2000) show how these forms of social capital brought about

successful collective action measures in management of irrigation schemes. Also, Pretty and Ward (2001) and Krishna (2001), have similarly shown how human and social capital formation, often represented in community-based groups, has been pivotal in solving many of the communities' development problems.

Despite the fact that there is substantial evidence behind the importance of social capital to maintain and improve natural capital, far fewer studies examine how social capital is utilized for the purposes of collective action to improve the marketing performance of groups. This is particularly apparent when examining the extent that group characteristics may influence or determine certain marketing outcomes. Thus, Jones (2004) shows how interpersonal trust and wealth heterogeneity among cooperative members were enabling conditions for the success of the cooperative, especially during the first stages of cooperative formation. Also, Johnson, Suarez, and Lundy (2002) show how social capital, as expressed through business firm relationships, contributed positively to firm productivity and performance.

(x) Farmers' Associations Framework in Tanzania

Agriculture is a foundation sector of the economy of Tanzania. Being so agriculture was mainly focused in the National Development Vision (NDV) 2025 and National Strategy for Growth and Reduction of Poverty (NSGRP), 2005. The Agriculture Market Policy of 2008 categorizes agricultural sector into crops, livestock, forestry and hunting sub-sectors. Smallholder farming dominates agricultural production and a large proportion is for subsistence. It contributes significantly in terms of aggregate growth, exports, employment and linkages with other sectors. It is a homestead to

approximately 80 percent of the population that is mainly engaged in farming activities for their livelihoods. Between 1999 and 2006 the crop and livestock sub-sectors contributed approximately 35 percent of foreign exchange earnings. In 2006, it contributed about 75 percent of total employment and 26.2 percent of the Gross Domestic Product (GDP) based on Revised National Accounts Estimates for Tanzania Mainland, using year, 2001 as a base (URT, 2008).

Recognizing the significance of the agriculture sector, the Agricultural Marketing Policy (AMP) was formulated. The overall objective of the policy was to facilitate strategic marketing of agricultural products that ensure fair returns to all stakeholders based on a competitive, efficient and equitable marketing system. The policy guides the operations of the agricultural marketing systems, ensures coherence, profitability and sustainability of activities by various market participants and promoting efficient marketing of agricultural products in the domestic, regional and international markets (URT, 2008).

Furthermore, AMP recognizes the necessity of improving the agricultural marketing capacities by facilitating financing, promoting cooperatives, associations and groups, improving marketing infrastructure, providing timely and adequate agricultural marketing information services and intelligence, management of risks, investing in agro-processing as well as marketing research and development. The policy takes cognizance of the major agricultural marketing constraints, including inadequate institutional, legal and regulatory framework; poorly developed and maintained marketing infrastructure; limited agro-processing and the need to enhance quality

and standards; weak entrepreneurial skills; limited access to finance as well as inadequate inter-institutional coordination. It is expected that AMP will adequately address these constraints and hence, improve competitiveness in the domestic, regional and international markets.

However, miserable prices for primary commodities in global markets and constraints to access local markets are some of the challenges to the Government in promoting the marketing of agricultural produce. The share of traditional exports in global markets has been shrinking, largely due to increasing competition from other suppliers, subsidized exports, and increasing consumption of substitutes and use of non-tariff barriers on traditional exports. Furthermore, quality, standards and labor conditions limit the marketing of agricultural produce within the region and internationally.

In order to encounter these challenges, producers' organizations were encouraged. Thus, such organizations exist in different forms and for different purposes in Tanzania. The most important ones include cooperative societies and other producer associations.

However, most of these organizations are weak managerially and financially and have limited capacity to attract professional staff, credit and related financial services. In view of this, most of produces organizations are unable to live up to the expectation of their members in terms of provision of financial, advisory and marketing services and a common voice on issues of common interest to their members, hence necessitating Government support in the short and medium term.

3.3 Empirical Literature Review

Extensive research work has been done in the agricultural produce, and institutions have been established in Tanzania to promote agricultural products covering aspects of infrastructural development (Gibson and Rozelle, 2003) market access (Barham, 2008, Dorward *et al*, 2003) and institutions of collective action (Kariuki and Place, 2005).

3.3.1 Policy Reforms and Participation of the Private Sector

Participation of private traders in agro activities has a long history that goes back to the colonial period. Their operations were governed by economic theories advocating free trade as the most efficient mechanism for attaining the objective function of the traders, which are the profits. The attainment of independence in most African countries was associated with the control of the economies and establishment of State institutions that traded in the agricultural produce. From 1980s reforms had taken place in Sub Saharan Africa as part of the Structural Adjustment Programmes with the objective of boosting the growth of economies of those countries. Facilitating agricultural activities included decontrolling input and output prices, eliminating regulatory control over input and output marketing, restructuring public enterprises and subsidizing board activities in production, pricing and marketing, (Kherallah et al, 2000, Eskola, 2005).

The expectation was that improving crop incentives and liberalizing input markets would be enough to induce supply response and well functioning markets. However, two decades after the structural adjustment reforms started, the expected outcomes

have not materialized, and the countries in SSA are still falling behind from the economic development in other developing countries, not to mention OECD countries. Kherallah et al, (2000) and Jayne et al, (2002) have explored the mechanism of food and input reforms in several countries in Southern and Eastern Africa arguing that “a major source of controversy stems from assumptions that countries have actually moved to a liberalized agricultural environment” whereas in reality the liberalization is not fully implemented or is even reversed (Eskola, 2005).

In its effort to support agriculture sector the Government has formulated a number of policies including the Sustainable Industrial Development Policy (SIDP), 1996 – 2020; Agriculture and Livestock Policy (ALP), 1997; Cooperative Development Policy (CDP), 2002; Rural Development Policy (RDP); National Trade Policy 2003; Small and Medium Enterprises Development Policy (SMEDP), 2003; National Livestock Policy, 2006; Agricultural Sector Development Strategy (ASDS) 2001; and, Agricultural Sector Development Programme (ASDP), 2005 (URT, 2008).

However, these policies did not adequately address issues of agricultural marketing which is influenced by liberalization and globalization forces. This called for the formulation of AMP that is more comprehensive and uses an integrated approach towards agricultural marketing.

3.3.2 Agricultural Marketing Systems Development Programme (AMSDP)

Between 2002 and 2009, Tanzania in collaboration with International Fund for Agricultural Development (IFAD), launched the Agricultural Marketing Systems Development Programme (AMSDP) worth \$ 42.3 million. The programme was to

develop the agriculture markets and solve the impediments that affected the smooth flow of produce from farms to the markets. (AMSDP Report March 2006). This was complemented by the work done by Kahwa and Kaitira, (2007) on how to enhance small farmer's market competitiveness in Tanzania. A lot of success stories were written and finally the programme after some extensions came to the end in 2010. The agricultural marketing problem remained unsolved.

3.4 Policy Reviews

3.4.1 Introduction to Policy Reviews

The policy framework covers the country policies that provide the baseline for involvement of agrodealers as a private institution in agricultural input supply and produce marketing.

3.4.2 Agriculture and Livestock Policy 1997

The enhancement of agricultural products is one of the functions of the Ministry of Agriculture. The private sector involvement in this venture started with the Agriculture and Livestock Policy 1997 which formed the transition from the previous system that was dominated by marketing boards and cooperatives. Most of these were driven to liquidation by the debts and stringent financial conditions or reorganization into new forms in which their ability to provide agricultural services to farmers had been severely curtailed.

In section 4 of the policy states that, the marketing systems of both agricultural and livestock commodities and inputs have mostly been liberalized and sub sections given below the foundation for marketing using the private sector is eminent as quoted below:

- (i) The Ministry will establish an effective market information system for inputs, in order to make markets transparent and inform traders, livestock keepers and farmers about supply shortage availability and prices.
- (ii) The Government will continue to encourage and promote private input supply channels, which should fulfill effective demand from farmers and livestock keepers at reasonable prices.
- (iii) During the transition period the Ministry will continue to strengthening the Input Trust Fund to facilitate availability of soft loans for local distribution of inputs.
- (iv) The Ministry will advocate and promote credit lines from commercial banks, financial institutions and rural savings and credit societies for traders, farmers and livestock keepers to finance, input supply.
- (v) The above policies are supplemented by the Agricultural Sector Development Strategy 2001, Agricultural Marketing and Access to Transport Services which look into the various methods of accessing the produce from the farms to the markets which are usually located in the urban centres.
- (vi) The agricultural and Livestock policies and their reforms are well written but the reality on the ground is not as impressive as envisaged. Policies governing production and marketing of agricultural produce have been left to the politicians whose objectives are to win the confidence of their voters. These players have not created conducive environment for well planned, smooth production and marketing of produce in the most professional way as set by the policies, but instead have created versatile environment that mostly lead the business community operate under uncertainty.

3.4.3 National Livestock Policy 2006

The National Livestock Policy was developed in the year 2006 to address special issues that pertain to the livestock sector. The Policy aims at stimulating development in the livestock industry in order to increase rural and national income, improve food security and environmental conservation. More specifically, this policy endeavors to increase national well-being of all stakeholders involved in the livestock industry. The policy deals with breeding of livestock, production, processing and marketing of livestock and livestock products.

The types of livestock and their products include dairy cattle for milk and milk products, beef cattle, sheep and goats, pigs, poultry for both eggs and meat. It also includes pets, draught animals, livestock feeds, diseases and their control and marketing of livestock products. This included the establishment of the Tanzania Dairy Board charged with the establishment and promotion of dairy organizations, producing, collecting, processing and marketing of milk and milk products.

3.4.4 The Rural Development Strategy 2001

The Rural Development Strategy developed in 2001 observed that the former government policies and strategies had failed to build up the necessary capacity that was needed to bring about a sustainable development in the rural areas. The created conducive environment for well planned, smooth production and marketing of produce in the most professional way as set by the policies, but instead have created versatile environment that mostly lead the business community operate under uncertainty.

3.4.5 The Rural Development Strategy 2001

The Rural Development Strategy developed in 2001 observed that the former government policies and strategies had failed to build up the necessary capacity that was needed to bring about a sustainable development in the rural areas. The strategy also had arisen from the unsatisfactory performance of the agricultural sector, the economic base of the rural areas. The performance of most food crops had remained poor, mainly due to extreme rainfall patterns and low technology used. As a result the food security situation has remained one of the major problems in the rural areas. There was need to increase agricultural productivity by improving markets, private sector investment, physical infrastructure, human capital, and demand-driven research and extension services.

Addressing the issue of improved marketing, the strategy states that, “Access to market perhaps is a single factor, which, if dealt with properly, can significantly contribute to rural development programme. Producers and service providers from all sectors; be it agriculture, manufacturing, fishing, livestock, mining, forestry, or tourism always need markets for selling their products or services on a competitive basis. Without markets, production and service rendering will be only made for subsistence. In this regard, economic ventures will cease to operate and the involved people will be disempowered”.

In order to enable different producers to benefit economically from their production and service rendering their products must fetch markets. Currently, many producers and service providers in the country are facing the problem of accessing markets for their products or services due to a number of factors such as:

- (i) Poor infrastructural services such as; roads and, communication services especially in rural areas,
- (ii) Unfair competition of local products against imported cheap and dumped products,
- (iii) Lack of capital and skills including failure to meet quality standards to penetrate foreign markets.
- (iv) Absence of organized markets for small producers including miners, horticultural, agricultural, livestock and fishing products,
- (v) Poor processing and packaging technology for the above,
- (vi) Absence of efficient and effective marketing boards that adequately represent the interest of producers.

The marketing of both agricultural and livestock commodities and inputs have been liberalized. Private companies participate alongside with cooperatives unions. The problems listed here to a greater extent comply with the findings of the Community Needs Assessment.

3.4.6 The National Poverty Eradication Strategy

The National Poverty Eradication Strategy resulted from the World Social Summit held in Copenhagen in 1995 in which Tanzania joined hands with other nations and vowed to reduce poverty by 50% by 2010 and total eradication by 2025. After the meeting each country developed its own poverty eradication strategy, and Tanzania produced The National Poverty Eradication Strategy that emphasizes the importance of economic growth and improvement in social services.

The Strategy has both macro and sectoral targets, and has identified priority areas and roles as well as responsibilities of various stakeholders in poverty eradication as well as coming up with a coordination mechanism. The bases of the strategy are the macroeconomic, social as well as sectoral policies. In this strategy the private sector is mentioned as the pillar for the envisaged achievements. Agricultural production and efficient marketing are explained as the basic priority areas for sustainable development and poverty eradication.

3.4.7 Community Development Policy 1996

The community Development Policy defines a community as people of the same origin, living in the same area, or people with similar occupation. The Tanzania communities are explained as a community based on similar occupations such as farmers, pastoralists, fishermen, employees, self employed, small and big business people. This is the meaning referred by this project.

The policy highlights indicators of development and social welfare as increase in social services such as good housing, health, education, nutrition, clean environment and sufficient clean and safe water. Also increase in income that enables families to meet their needs is considered as another indicator of development as well as decline in infant mortality, demand for higher technology, sustainable use of the environment, reduction and finally eradication of poverty at individual, community and national level are all relevant indicators of development. The community development involves many people and organisations which include the government, donors, NGOs, and the communities themselves.

The policy aims at enabling Tanzanians to contribute more to the self reliance objectives of the government to bring about their own development and that of the nation at large. It targets at bringing close and sustainable cooperation between authorities and institutions concerned with community development in planning and implementation of development plans, budget and budget control, exchange of information, educating communities on the efficient and sustainable use of their resources for their own development, recognize the role of the family institution in the development process, encouraging popular participation in formulating, planning, implementing and evaluation of the projects.

3.5 Summary of the Literature Review

The conceptual analysis of the subject has provided the interpretations of the concepts used in this research and project, and the theories governing the empowerment and more specifically capacity building have been presented in this chapter. The gap that exists between the envisaged performance of farmers in the output agricultural produce and the actual situation on the ground has been clearly demonstrated by the agriculture development in Tanzania.

The works done by other researchers in relation to agricultural production have been reviewed and unattended problems identified. The link between the project theme and the existing policies of the country has been established and the project is in line with all policies governing the development of the agricultural sector. The project, on this basis, promises a reliable and sustainable base for the agricultural sector emanating from the citizens from the baseline of the problem itself.

CHAPTER FOUR

4.0 PROJECT IMPLEMENTATION

4.1 Introduction

This project came in after the process of identifying it which involved a participatory community needs assessment which revealed many problems and opportunities that formed the basis for this project whereby its implementation would solve those problems. The resources available for project implementation are usually insufficient for all proposals that derived from community needs assessment. As rule of thumb the selection was made so as to come up with the project that provides the best outcome in solving community needs with least resources compared with other proposals.

A community forum was convened early in April 2013 and the empowerment project comprising of training need identification, training methodology and a coordination organ in the capacity building was chosen among other projects to provide the best solutions to the farmer participation in enhancing agricultural skills. A committee comprising of six (6) members of Elakunoto association were elected to work out the details of the project costs and benefits and finally presented their findings in a community forum of farmers for approval and implementation.

Also committee of three (3) technical people was chosen to prepare training modules initiatives of the farmers. The committee was vested with obligation of organizing the training, find the training methodology, establishment of training timing and establish a comprehensive coordination organ in the capacity building responsible for

enhancing agricultural production. This was to be done in cooperation with the farmers and the existing Elakunoto association management for use of Elakunoto association farm that were currently underutilized. The other objective was to solicit from the District Council on behalf of the farmers for the availability of budget for capacity building for enhancing agricultural production to the farmers in the District.

Table 9: Project Inputs

S/n	Inputs	Units	Quantity	Rate	Total Cost
1	Transport & CNA Survey	Est	1	3,040,300	3,040,300
2	Training Cost 1– (Facilitator)	Farmers	42	80,000	3,360,000
3	Training Cost 2– (Facilitator)	Farmers	42	160,000	6,720,000
4	Registration of Forms	Farmers	50	2,000	100,000
6	Establishment of farmer field centers	No	9	800,000	7,200,000
7	Negotiation for Credit Facilities	Est	2	300,000	600,000
8	Office Accommodation - Rent	Est	1	100,000	1,200,000
Total Cost			22,220,300		

4.2 Project Planning

The project on the enhancing agricultural production skills for agricultural products to farmers is an empowerment of farmers as a new institution for agricultural production in Tanzania which involves various activities that can be properly explained in a logical framework approach. These are outlined as Participatory Community Needs Assessment, Training/capacity building, registration of farmers in preparation for the production activities, Established farmer field centers for agricultural seeds, Access to credit facilities for agricultural production from

Financial Institutions, Strengthening the Internal Structural organization of the Farmers Associations. The Planning and Implementation sequence is as presented in the Log frame Table 3. The project cost TShs 29,240,300 and the summary of the budgeted project cost estimates is given in Tables 3 and 5.

4.2.1 Project Inputs

The project inputs are estimated as provided in the Table 9.

4.2.2 Project Implementation Logical Framework

Table 10: The Logical Framework of the Project Planned output

Planned output	Activities	Products and outputs	Resources	Responsible Parties	Means of verification	Assumptions
1. Community Needs Assessment Report	1.1 Focus group discussions	Getting preliminary information on farmers problems	-Funds for travelling and organizing meetings, -Farmers' time	-MCED Student -Selected farmers	Findings from the meetings correctly reflected in CNA	Readiness of the selected farmers to participate
	1.2. Development of CNA survey instrument	Summary of the focus group discussions reports	-Funds for stationery -Time -Computer facility	-MCED student -Three farmers	Testing the survey instrument before its administration	Information from the farmers reflects the reality.
	1.3. Farmer to Farmer visit to 42 farmers	Administering the survey instrument Responses	-Funds for transport -Farmers time - Pen and copies of the survey instrument	-MCED Student -Selected farmers	Correct responses from farmers to farmers	Respondents understand the instrument
	1.4. Analysis of responses and summarizing findings	Data coding & entry in SPSS program Statistical Analysis using SPSS	- Data processing fund -Computer with SPSS programme -Time	-MCED Student	The summarized results of the analyzed data	Correct coding and analysis using correct statistical tests
	1.5. Organizing a farmers community forum.	A successful meeting and good discussions and decisions on the CNA findings	-Funds for the meeting -Computer (laptop) -power-point projector - Note books - Time & Refreshments	-Village leaders - MCED Student -All farmers -Govt. officials	Decisions made and the selection of a committee on project dev.	Correct presentation of the findings of the CNA Survey
2.Training/Capacity building to the farmers in enhancing production	2.1. Finding a trainer and negotiation on the training program	Selecting a suitable trainer among the applicants and negotiating the time, duration, cost venue and timetable	Three quotations from reputable trainers. Time for Assessment of the Quotations and approval. Funds	-Farmers' Committee, Village leader and facilitators -MCED Student	Appropriate trainer selected and the terms and costs ascertained	Professional competence of the trainer selected meets the farmers' training needs.
	2.2. Organizing farmers into training groups according to their training needs	Three groups of farmers organized	Time for the committee and trainer to organize in consultation with trainees.	-Farmers 'committee. -Trainees consulted -MCED student	Training groups organized and training commence in the agreed venue and time.	All farmers who need training will be available and willing to pay for their training
	2.3. Selection of the training venue and costs	-Three venues discussed selection made on the basis of suitability, cost and convenience	Time for the farmers' committee to visit and assess venues. Transport	-Farmers' Committee -MCED Student - Owners of premises	A suitable venue selected for training of farmers.	The farmers comfortable with the venue and power supply will be available.
	2.4. Preparation of the Training program	-Notification of the trainees on date, venue and time for the training	-Funds for comm. -Time for meetings - Computer - stationery	-Farmers' Committee -MCED Student -Trainer	Farmers are well informed about their training timetable	The course material is well prepared by the trainer.
	2.5 .The conduct of the Training	Venue is available, clean & necessary services are in place. Farmers register and get the training	-Funds–Stationery etc -Facilitator/Trainer -Computer & Power point Projector -Refreshments.	-Trainer/Facilitator -Farmers' Committee -MCED Student - Service persons	Trainees receive the empowerment training and are ready to market agric produce	-The knowledge needed attained. -No interruption occurs in the training program

Planned output	Activities	Products and outputs	Resources	Responsible Parties	Means of verification	Assumptions
3. Registration of farmers for practical test on agricultural production	3.1. Farmers filling registration forms	No. of farmers who filled forms for registration	Registration forms for practical test on agricultural production Funds for photocopy Time.	-Representative from District Council -Farmers	Farmers have filled registration forms for practical test on agricultural production	No policy or regulatory impediments for the registration
	3.2. Submission of forms to DC of farmers in practical test on agricultural production	No of registration forms submitted and registered farmers in practical test on agricultural production.	-Filled Registration Forms - Funds for submission And follow up	Representative from District Council	No. of available for farmers in practical test on agricultural production	No policy or regulatory impediments for the registration
4. Establishing farmer field centers	4.1. The farmer field centers for the produce that each seed wants to produce are established in collaboration with the agrodealers	farmer field centers established farmers and the famers' committee	- Transport - Time - Calculator - note book - Pen and pencil	-Farmers - Famers' committee - Village and ward Leaders	Well defined farmer field centers are established for best seed production.	There is good cooperation between all stakeholders involved.
	4.2. Assessment is made on the need for seedling in terms of capacity and suitability and negotiations done on the terms of use for the already existing seeds by farmers in the villages where the produce shall be conducted	Farmers get the indication of the best seed production	- tools for seed foundation plots	-Farmers - Village & Ward leaders - Cooperative societies leaders	Establishment of quality seed and the needed quantity of each crop.	There is good cooperation between all stakeholders involved.
	4.3. Assessing any need for and cost of preparation of existing farmer field centres	Existing farmers field centres newly prepared	-Technical person to assess needed preparations costs -Funds for the needed overhauling	-Technical person	The submitted assessment report for the overhauling of existing seed foundation plots to the committee.	Agreement on who bears the cost is done in negotiations.
	4.4. New seed farmers field plots established where there is none	New seed famers field plots will be overhauled	-Funds for the works -The land (site)	- Farmers - Village/Ward leaders & Land off.	The land is found and establishment is commence	The land laws are followed in the whole process of hiring/procurement if needed
5. Access to credit facilities for agricultural production from Financial Institutions	5.1. A collective farmers approach to the financial institutions for access to credit for the agricultural production is done through the farmers association	Access to credits facilities for agricultural production to individual farmers.	-Transport to banks for negotiation on credits - Guarantees from donors or government Funds - communication	-Farmers -Farmers' committee - Association Leadership	Farmers access to credits for agricultural production	The collective or donor guarantee is acceptable by the financial Institutions
	5.2. Entering into a contractual agreements with the banks for credit facility	Availability of credit facilities to farmers	-Contract documents -Funds for transport and communications	-Farmers -Bank staff -Farmers' committee	Contracts with banks and flow of credits	The credit guarantees are accepted

4.2.3 Project Inputs

Table 11: The Project Input Cost Estimates Summary

S/ N	Project Component	Cost (Tshs)	Farmers Contribution	External Donor Interventions Needed
1	Community Needs Assessment	3,040,300		3,040,300
2	Training/capacity building	3,360,000		0
3	Registration of Forms	100,000	210,000	0
5	Training costs on farmers	6,720,000	800,000	10,000,000
6	Maintanace and hiring of farmers field centres	7,200,000	1,000,000	15,000,000
6	Access to Credit Facilities	600,000	2,000,000	0
7	Office Accommodation - Rent	1,200,000		1,200,000
Total Project Costs		22,220,300	3,010,000	29,240,300

4.2.4 Staffing

The project will require a few full time staff for the office to attend all matters of the association, to provide services to farmers, engage in search for specific assistance as well as procurements of inputs, develop income generating projects. The required staff will increase with increasing agricultural activities in the organization.

Table 12: Required Staff for the Farmers Association Office Staff Category

	Scale	Salary/mo	Salary/annum
1	Project Manager	400,000	4,800,000
2	Project Accountant	350,000	4,200,000
3	Secretary	200,000	2,400,000
TOTAL		950,000	11,400,000

4.2.5 Project Budget

The project budget covering all cost items and returns is provided in the table attached in the table below.

Table 13: The Farmers Empowerment Budget

S/N	Project Component	Cost (Tshs)	External Donor Interventions Needed
1	Community Needs Assessment	3,040,300	3,040,300
2	Training/capacity building	3,360,000	0
3	Registration of Forms	100,000	0
5	Training costs on farmers	6,720,000	10,000,000
6	Maintanace and hiring of farmers field centres	7,200,000	15,000,000
6	Access to Credit Facilities	600,000	0
7	Office Accommodation - Rent	1,200,000	1,200,000
TOTAL PROJECT COSTS		22,220,300	29,240,300

4.3 Project Actual Implementation

The project was tabled to the farmers in a forum held on 6th April 2013 and approved for implementation with some changes that were found necessary. The majority focus was on maize, Sorghum, beans, peas and vegetables. The products would fetch better prices when they are in good quality, they are nicely packed in an attractive package and the necessary promotion is done to advertise the product. These skills which will be built in the training, needed to be translated to action to place farmers in the competitive edge with the other traders.

Table 14: The Actual Implementation of the Project

PLAN			ACCOMPLISHMENTS		
Objectives	outputs	Activities	Activities	Means of verification	Comments
1. Community Needs Assessment Report	Getting preliminary information on farmers problems	1.1 Focus group discussions	Organizing meetings with small groups of farmers	Minutes of the meetings	The documents kept by the Farmers' committee
	Summary of the focus group discussions reports	1.2. Development of CNA survey instrument	The survey instrument developed and tested	The survey instrument attached	Three Villages were involved
	Administering the survey instrument Responses	1.3. Farmer to farmer visit to 42 farmers	The farmer to farmer visits were done to 42farmers farms	The responses received for the survey instrument	The responses were used in the analysis using SPSS program
	Data coding & entry in SPSS program Statistical Analysis using SPSS	1.4. Analysis of responses and summarizing findings	The data was processed and analyzed to establish the actual needs of farmers	The summarized results of the analyzed data	Correct coding and analysis using correct statistical tests, some involved manual analysis
	Deciding on the Community Needs Assessment findings	1.5. Organizing a farmers' community forum.	The meeting was convened on 2 nd May 2012and decisions made	Decisions made and the selection of a committee for project development.	The Committee formed was called Farmers' Committee
2. Training/Capacity building to the Farmers in enhancing agricultural production	Selecting a suitable trainer among the applicants and negotiating the time, duration, cost venue and timetable	2.1. Finding a trainer and negotiation on the training program	Three quotations from reputable trainers. Time for Assessment of the Quotations and approval. Farm Concern, Arusha Associates was selected	Appropriate trainer selected and the terms and costs ascertained	Professional competence of the trainer selected meets the farmers' training needs.
	Organized training groups according to the level of training needed	2.2. Organizing Farmers into training groups according to their training needs	Farmers organized into three training groups	The three groups undergoing different levels of training organized in an agreed time and venue	The Training Coordinator records and reports on training
	Deciding on the Venue to be used for Training based on cost and convenience	2.3. Selection of the training venue and costs	The Farmers' committee scrutinized three applications and chose SG Resort	A suitable venue selected paid for and used for the training as per plan	The venue was equipped with power and had space for more than 50 people.
	Notification of the trainees on date, venue and time for the training	2.4. Preparation of the Training program	All trainees issued with the document on the training programme, time due and time table	Farmers are well informed about their training timetable	The course material is well prepared by the trainer, and time table available
	Commencement of the training programme	2.5 .The conduct of the Training	The reporting, registration and actual training conducted	The trainers attending data on registration	The facilities needed are in place for the work to start.
3. Registration and preparation for market	No. of farmers who filled registration forms and ready for training	3.1. Farmers Filling registration forms of for training	Filling Registration forms and getting ready for training	42 farmers have filled the forms and are ready	Forms are submitted to DC
	Registration forms submitted	3.2. Submission of forms DC	Forwarding the filled registration forms to	The recognition of registered farmers were	No copies of the filled forms are left with the

PLAN			ACCOMPLISHMENTS		
Objectives	outputs	Activities	Activities	Means of verification	Comments
			DC for further action.	done	Secretary of Elakunato
4. Establishing farmer field centers	Existing farmer field centers were overhauled and new seed foundation plots were established	4.1. Farmer field centers established by agro vets, farmers and the famers' committee	The process is going on and the 42 farmers are on the process of applying seedlings from seed foundation plots	Establishment of seedling quantity of each crop if needed.	Good cooperation between farmers, farmers, and other stakeholders is crucial for this venture to succeed.
	Farmers get the indication of the best seedling production	4.2. Assessing the need for seedlings in terms of capacity and suitability.	Establishment of quantity of each seed required by the farmers	The reports on the volume of seedling required on monthly and quarterly basis	Good cooperation between farmers and other stakeholders is needed
	Existing farmer field centers will be overhauled	4.3. Assessing any need for and cost of overhauling the current seed foundation plots	This is partially done & a technician is needed to assess the overhauling the current seed foundation plots	The submitted assessment report for the overhauling to the committee.	Agreement on who bears the cost is done in negotiations.
	Establishment of the needed new seed foundation plots where there is none	4.4. New seed foundation plots to be constructed where there is none	Not accomplished	The new seed foundation plots needs shall come from the farmers once a product source is obtained	The land laws are followed in the whole process of procurement of the site for the new seed foundation plots
5. Access to credit facilities for agricultural production from Financial Institutions	Access to credits to individual farmers	5.1. Farmer through their associations by approaching the financial institution for agricultural production credits	The Association has not started approaching the banks for negotiation on the credit facilities for members.	Farmers access to credits for agricultural production	The collective or donor guarantee acceptable by the financial Institutions is required.
	Availability of credit facilities for agricultural production to registered farmers	5.2. Entering into a contractual agreements with the banks for credit facilities	Contract documents for the established farm yards are not yet signed	Contracts with banks and flow of credits	The credit guarantees are accepted

4.3.1 Project Implementation Report

The Project was started its implementation from May 2013 and the implementation is expected to continue up to June 2014. Farmers will be organized into 3 groups and the training on capacity building expected to be taking off as soon as fund available, with sensitizing farmers and equip them for participation in agro-output production. The training organization to be employed is Farm Concern Associates of Arusha. The training continues up to the mid of December, 2013.

Immediately after training 42 Farmers from Elakunato will fill registration forms for participation in agricultural production. However, farmers were shown prior interest on acquiring skills for maize, Sorghum, beans and vegetables.

(i) Project Outputs

The project expected output as per CNA report is presented by activities listed below:

Activity 1: Focus group discussion meetings with farmers are held in 3 selected villages from Mlangarini Ward namely Kiserian, Mlangarini and Manyire.

Activity 2: Community Needs Assessment survey instrument is developed.

Activity 3: Farmer to farmer visit for 42 selected farmers is done to obtain their opinion through a survey instrument prepared for community needs assessment

Activity 4: Analysis of responses of the CNA survey instrument is made and summary is done on the important findings for presentation in farmer community forum for discussions.

Activity 5: A Community Forum is organized for discussing the CNA findings and prioritizing the problems and proposed solutions.

(i) Training manual on agriculture production skills to 42 farmers

Activity 1: A suitable trainer is identified and negotiations on the training /capacity building program, based on the identified training needs of the farmers.

Activity 2: The farmers are organized into training groups according to the training schedule

Activity 3: The training venue is selected and assessment of costs involved is done.

Activity 4: The training programme is prepared; all farmers are informed on when each group will attend the training and the duration of the training.

Activity 5: The training will be carried out and the names of participants will be recorded.

(ii) Registration of farmers for practical test on agricultural production

Activity 1: Farmers who are ready to undertake test on trained new agriculture production methods will be registered. This involves filling application forms that are submitted to the Ministry of Agriculture for official registration and recognition as trained farmers on agricultural production.

Activity 2: The agricultural inputs supports agricultural will be obtained for interested farmers upon submission of application forms to the District Council for official registration.

(iii) Established farmer field centers

Activity 1: The farmer field centers for the produce that each crop wants to produce will be established in collaboration with the farmers groups.

Activity 2: Assessment is made on the need for crop items of capacity and suitability and negotiations done on the terms of use for the already existing seeds by farmers in the villages where the produce shall be conducted.

Activity 3: The need for overhaul of existing farmer field centers is assessed and estimation of the required costs is made and availed for project development.

Activity 4: The need assessment is done for new farmer field centers to be established where there is none and the cost for establishing the farmer field centers is estimated and the sources of finance for their establishment.

(iv) Contracts with financial institution to offer credit to farmers.

Activity 1: A collective farmers approach to the financial institutions such as micro finances including VICOBA, PRIDE and SEDA which are currently available in Arumeru District for access to credit for the agricultural production will be done through the farmers association.

Activity 2: Contractual agreements will be entered between individual farmers with named financial institution on credit facility for agricultural production.

4.3.2 Project Implementation Report Gantt Chart

Table 15 The Project Implementation Programme Gantt Chart

[illegible]

CHAPTER FIVE

5.0 PROJECT PARTICIPATORY MONITORING, EVALUATION AND SUSTAINABILITY

5.1 Introduction

Carrying out of the project involves continuous evaluation and monitoring in order to establish any variation from the planned activities or expenditures so that corrective action could be done. Likewise at the end of the project there will be an evaluation carried out to find if the project has achieved the expected results or not and if there has been any major problems, they could be the basis for formulating a new project or winding up the project.

5.2 Participatory Monitoring

At this stage the monitoring will be concentrated on what could be achieved with the resources that will be within the sphere of control of the farmers. The process continued until the project comes to the end in June 2014.

5.2.1 Monitoring Information System

This will involve participatory monitoring of the local beneficiaries in measuring, recording, collecting, processing and communicating information to assist local development project extension workers and local group members in decision-making. The steps which will be involved include:

- Step I:** Understanding goal/objective of the development project
- Step II:** Identifying activities to achieve objectives
- Step III:** Identifying measurements to assess results and show extent of progress achieved

Step IV: Developing measurement indicators

The system for monitoring will be derived from the verifiable indicators that will be set in the project planning and implementation stage. However, it is assumed that the objectives for the project has already been set and can be used to set the development performance indicators. Indicators are quantitative or qualitative criteria for success that enable one to measure or assess the achievement of project objectives:

- (i) **Input indicators** - explain what goes into the project, such as the number of hours of training, the amount of money used etc.
- (ii) **Output indicators** - explain project activities such as the number of farmers trained and number of farmer field centre established
- (iii) **Impact indicators** - measure actual change in agricultural production such as increased production.

The process shall assess the input indicators, output indicators and impact indicators pertaining to the empowerment of famers in agricultural production. The objectives of the project have the following performance indicators that involved commitment of inputs in terms of finance, time and physical resources. The outputs will be compared with the resources used and deviations corrected. Impact indicators could be viewed in terms of agricultural output generated after attainment of the objective.

5.2.2 Participatory Monitoring Methods Used in the Project

The Participatory Monitoring Methods that will be used in the project were developed from the previous methods used in the project design and Participatory

Action Research and the Logical Framework used in the project implementation structure. An aspect of self-assessment will be a part of the approaches used in determining the strengths of farmers, so it will surface up in the evaluation process.

The SARAR techniques that is to used be involve analytical techniques which enable farmers to prioritize their problems and opportunities and examine problems in depth, understand the causes and identify alternative solutions. Farmers will use the same analysis to assess the progress made towards solving the problem in the project implementation process. Involvement in the planning process will make the famers gather information pertaining to the project implementation at every stage and use it in monitoring the progress in relation to the resources committed.

5.2.3 Participatory Monitoring Plan

The participatory monitoring plan looks into the activities that will be developed from the objectives and assess the process of implementation to find out whether the resources are correctly used towards achievement of the overall objective of the project. The assessment will be presented in a tabular form that reflects the planned activities as carried out in the implementation stage. The participatory monitoring plan is projected as presented in the Table 16.

Table 16: Participatory Monitoring plan: Objectives

1.	Activities	Indicators	Data Source	Methods/Tools	Responsible Person	Time Frame
2.Training/Capacity building to the Farmers in agricultural production	Finding a Trainer and negotiation on training program	Appropriate Trainer Selected in view of cost and time	The Training Coordinator Report	Training registration records	Secretary to Farmers committee	Nov 2013
	Organizing the Training Program	Organized groups for each level	The Training Coordinator Report	Training Records	Secretary to Farmers committee	Nov 2013
	Selection of Training Venue	Appropriate Venue selected and Cost	The Training Coordinator Report	Training records	Secretary to Farmers committee	Nov 2013
	Preparation of the training program	Trainees informed	Training Coordinators Report	Training Registration Records	Secretary to Farmers committee	Nov 2013
	The Conduct of the training	Sessions conducted	Training Coordinators Report	Training Registration records	Secretary to Farmers committee	Nov 2013
3. Registration and preparation for market.	Farmers filling registration forms	No of farmers ready for training	Elakunato/Secretaries Records	Records of forms filled Interviews	Association secretaries	Nov 2013
	Submission of Registration Forms	Registration Forms submitted to DC	Elakunato Secretaries Records	Records of Registration forms forwarded	Association secretaries	Nov 2013
4. Establishing farmer field centers	Establishment of farmer field centers	Number of farmer field centers established	Project Monthly Progressive Reports	Interviews in the famers forum	The Secretary to the farmers' committee.	Nov 2013
	Seedling needs and capacities	Number of seedling foundation plots needed	Project Monthly Progressive Reports	Interviews in the famers forum	The Secretary to the farmers' committee.	Nov 2013
	farmer field centers establishment	-No of seed foundation plots needing overhauling -New seed foundation plots	Project Monthly Progressive Reports	Interviews in the farmers' forum	The Secretary to the Farmers' committee	Nov 2013
5. Access to credit facilities for production	Negotiation for credit facilities	The needed credit facilities availed	All farmers' credit facilities needs recorded for collective negotiations	Farmer Reports on credit facilities.	-Farmers' Committee -The Associations Leaders	Nov 2013

(i) Actual Monitoring

The project is at its early stages of implementation. The Training and capacity building was the main project component. The associated input indicator was the preparation of the training programs for various groups, organizing the training and notifying the farmers so that the facilitators and the venue including refreshments could be procured. This was done and out of the 42 farmers planned for the training sessions which will be facilitated by Farm Concern Associates of Arusha from October, 2013. This will be 100% of the target as the output. The impact will be that, after this initial training, the farmers will be ready, registered and participating on the practical agricultural production.

Farmers who will fill forms are expected to start producing maize, beans, and vegetable crops by implementing skills acquired. The issue of farmer field centers will be the second accompanied by the establishment of the farmer field centre close to farmers' farm yards. The discussions on this component came to the fact that no collective move had been made to this objective because the existing farmer field centres under the cooperatives were being underutilized.

The individual farmers will negotiate with the owners of the farmer field centre at an agreed fee, and the overhauling of the farmer field centre should be borne by the owners or any donor, so that the farmer remains with only the obligation of paying the agreed fee. The farmer field centers are however seen as good places for obtaining best seeds during the conduct of the agricultural production.

The proposed new established farmer field centers and associated costs were accepted as the document that can solicit grants from the donors. The site selection

and the establishment process have to comply with the laws governing the acquisition and development of land. It was also seen that the projects will take long to implement and may not solve the immediate problems of agricultural production. A parallel development was that a number of farmers who attended the first agricultural training sessions in this project will anticipate producing agricultural produces by using best seeds from the farmer field centre.

The access to credit guarantees by development partners for the agricultural production will be done in December after the present negotiations with micro finances on the extended credit guarantees for input supply in 2013, by micro finance and payment of the outstanding credit facilities for input supply to micro finances due to government delayed payment for input vouchers. The strengthening of internal structures of the farmers associations was intended to upgrade the association to a business entity while retaining the same names. The legal aspects of this move were being worked and the associations' legal consultant to also require the government to pay for the input vouchers to farmers. Farmers have increased payment of their entry fees and the annual contributions.

The associations have no offices or staff that can attend the members' fulltime. The budget was made to rent offices and employ staff competent to handle the operations of the association. The leadership was looking for a suitable office for renting at affordable rent and furnishes the office with computer, furniture, and employs staff for the office. No money out of committed funds had been used in this venture yet as the implementation process is in progress. The Farmers' committee has been

commissioned to develop projects that can earn income for the associations to enable them to manage its operations.

5.3 Participatory Evaluation

Participatory Evaluation concentrates on the objectives of the project and involves the beneficiaries and other stakeholders to assess whether the objectives were attained and what was the level of achievement attained. The evaluation is often made at the end of the project but it can be made at any predetermined stage of the project implementation. An evaluation of participatory will be carried out in a forum of farmers on November 2013 for the project work being reached a reasonable stage of its implementation.

5.3.1 Performance Indicators

The following are performance indicators used in this project:

- (i) To provide training to all 42 famers in Good agricultural production practices,
- (ii) To register all farmers for participation in the production of agricultural produce
- (iii) To ensure the need for seed farmer field centers are attended and famers have access to the best seeds for the agricultural produce

5.3.2 Participatory Evaluation Methods

The following are participatory evaluation methods that will be used to help the evaluation work to fit the purpose and the type of organization being evaluated:

- (i) **Stakeholder analysis**, which is the starting point of most participatory work and social assessments. It is used to develop an understanding of the power

relationships, influence, and interests of the various people involved in an activity and to determine who should participate, and when.

- (ii) **Participatory rural appraisal**, which is a planning approach focused on sharing learning between local people, both urban and rural, and outsiders. It enables development managers and local people to assess and plan appropriate interventions collaboratively often using visual techniques so that non-literate people can participate.
- (iii) **Beneficiary assessment** which involves systematic consultation with project beneficiaries and other stakeholders to identify and design development initiatives, signal constraints to participation, and provide feedback to improve services and activities.
- (iv) **Participatory monitoring and evaluation**, which involves stakeholders at different levels working together to identify problems, collect and analyze information, and generate recommendations.

This project will be evaluated using the participatory monitoring and evaluation methods. Although beneficiary assessment is found to be a suitable tool that brings the feelings of the beneficiary group to the evaluation process, the evaluation will be done by the stakeholders forum and the achievements made compared with the objectives and the deviations to be accepted when there will be no need for correction or corrections made where there will be need to do so.

5.3.3 Participatory Evaluation Summary

The small part of the project executed evaluation will be discussed in the farmers' forum and the following are expected achievements:

- (i) The training will cover all 100% of the targeted farmers. Farmers will be featured in the training program as they stated in the community needs assessment.
- (ii) The farmer field centers will be established and use in crops production will be very much useful by the farmers who will be able to access under them at ward level, under cooperatives at a reasonable fee to be paid by the farmer. The need for new farmer field centers and overhauling cost is due to substantial amount of money needed to be used for presentation to donors for marching grants programmes.
- (iii) The establishment of an office for the farmers' association will be highly demanded and efforts are being made to secure a good and affordable office as well as employing staff to provide services required by the stakeholders.
- (iv) The Farmers' Committee will be elected by the farmers' assembly and charged with the responsibility of developing projects that will enhance the financial position of the association and it will be the executive wing of the association.
- (v) The farmers will be advised to produce at high standard and quality so that they can operate competitively compared to investment cost. The former spirit of developing each individual farmer will remain as it is while maintaining a collective stand on matters pertaining to the conduct of the farmer operation.

543 Project Sustainability

This project has set basis to the farmers to carry out their activities in both input supply and output production. The baseline of the project as built by; has been a stable baseline and the sustainability of the project is guaranteed by the performance

of individual farmers at the individual level and their prospects as the agricultural sector remains to be the backbone of the economy of the country.

The empowerment project has built roots of the farmers to carry out their activities in both input supply and output production. The farmers Associations are now reconsidering upgrading their associations to operate as registered form as the way Tanganyika Farmers Association Operates. This will put the Associations in a position to do formal competitively with other association which importing agro-inputs as well as those trading in agricultural products.

CHAPTER SIX

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

The conclusion is based on the community needs assessment, problem identification, literature review, project implementation and the evaluation of the project. All these have provided a lot of information and insights that lead to the conclusions and recommendations made in this chapter. A lot of unknown information have been disclosed and changed the original perceptions on the farmers' participation in the enhancement of agricultural production. Some of the observations were correctly reflected after the research but some of the issues expressed as major problems were finally found to be only symptoms of an already existing problem among the farmers themselves.

6.2 Conclusions

Based on the conclusions from this project sound recommendations for sustainable participation of farmers in the agricultural production were developed. It can be concluded that:

The participatory needs assessment show that the farmers have done an incredible to enhance agricultural production. However, they have handicapped by financial constraints to enhance their sustainable agricultural production. Also lack of better seeds for the best production was another problem which was facing farmers before the commencement of this project. Hence, access to credit facilities, establishment of farmer field centers for seed production and skills acquired for agricultural production makes the farmers to be potential agricultural production breakthrough in

the transformation of agricultural produce to the maximum its production by every farmer and in turn would overcoming poverty rampant in the rural areas.

The obstacles expressed by farmers in the needs assessment were merely indications of lack of sufficient agricultural production knowledge, experience and confidence in the application of proven quality agricultural production skills. This was encountered by the training and capacity building that was the major goal of this project. The shortage of food in the country which is recurring and famine in neighboring countries should stand as stimulant to farmers to produce at the maximum capacity.

Commercial agricultural production promises good income and profits that form an alternative source of income to farmers instead of subsistence production for domestic use only. However agriculture in the country remains being a foundation of farmers' financial ability for the decades. Delayed or nonpayment by the government subsidy or other programmes, are counterproductive and great commitments are needed in this area.

The perceived lack of best seeds was a reflection of the understanding of the farmers on the existing problem of poor agricultural production. Establishment of farmer field centers seems to reduce the problem of availability of best seeds in Mlangarini Ward. However observations show that demand for best seeds is growing in both rural and urban centres attracting investments in these areas. The issues of location in relation to other services like road, power and communications are likely to influence the costs/benefits consideration on investments in farmer field centers establishment.

The farmer is the ultimate target in this project and therefore the interactions between the farmer and the other stakeholders is likely to be of mutual benefit to the two parties. The sustainability of such partnership will depend on the observation of the structural forms of social capital that covers aspects of agreements in roles, rules, procedures, social networks and how cognitive forms of social capital (that is, norms, values, attitudes, and trust) are conducive for mutually beneficial collective action. The way the farmers show credibility and far sighted vision in the delivery of good quality agricultural production will be the key for farmers' success.

This problem featured in subsidized inputs and food exports when there was food security risk. The government either put long and unnecessary bureaucratic red tapes in the business, or direct restrictions that affected smooth operations of the agricultural production and the business community in general. This contradicts the liberalization policy as observed by many of the researches.

The training and capacity building for the farmers is expected to be achieved by 100%. This sparked an accepted response of farmers' interest in agricultural production. This acceptance response of farmers' interest in the agricultural production indicates the need to extend this project to the rest of rural areas in Arumeru District and to the whole country at large.

6.3 Recommendations

From the above conclusions it is recommended that the government and the development partners should continue supporting farmers in enhancement of agricultural production in terms of skills, technical issues and financial support. Also

government and the development partners should continue to support farmers in inputs with their associated subsidies and build the agricultural production as foundation on the farmer community. However the government should not enter into contracts with farmers on subsidized input distribution until the necessary funds are deposited in the bank to avoid default or delayed payments that cause adverse effects on farmers in meeting their credit obligations to banks and input suppliers.

The internal organizational and functional weaknesses observed should be analyzed in much greater depth and solved so as to increase participation of farmers in the affairs of their associations. Offices of the associations should be opened, staffed and empowered to provide business services to members and public to generate income. The farmers should learn more skills to update their knowledge on quality agricultural production. This will make them better placed in the position to produce at the maximum capacity.

The implementation of the project should continue as planned and the terminal evaluation be carried at the end to establish whether all the objectives have been attained. For effective monitoring and evaluation there is a great need for the farmers' associations to transform their agriculture production pattern. Greater commitment can be better achieved in this institutional setting.

The financial institutions are urged to support the farmers as they have been doing in commercial agricultural production, by providing credits with favourable terms for the development of the agriculture sector. The NMB, CRDB and the proposed Agriculture Development Bank should focus their primary business in this area.

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APPENDICES

Appendix I: Questionnaire for Mlangarini Ward Farmers

GENERAL INFORMATION

Questionnaire number:

Village :

Sub village.....

Division

Ward

Group Name

Enumerators' name.....

A1. SOCIO-ECONOMIC HOUSEHOLD CHARACTERISTICS

A1. Sex of the respondent

1. Male

2. Female

A2. Age of the respondent

1. 18-25 years

2. 26-35 years

3. 36-50 years

4. Above 50 years

A3. Marital status of the respondent

1. Married

2. Single

3. Separated/divorced

4. Widow/widower

A4. What is the level your formal education

1. Primary
2. Secondary (form iv)
3. Secondary (form vi)
4. Certificate
5. Diploma
6. University
7. Never gone to school
8. Adult education

A5. Farmer household composition (including relatives, house girls, house boys e.t.c)

Age group	Number of household members	No. of members sepatrated by sex	
		Male	Female
1. Adults (≥ 18 years)			
2. Children (11-18 years)			
3.Children (<10years)			
Total			

A6. Mention main household sources of income

1. Source of income	Rank
2. Sale of milk	
3. Sale of maize	
4. Sale of livestock products	
5. Off farm - petty business (Kiosk, mining, carpentry, masonry	
6. Employed (, Teachers, ext., health, security guard,	
7. Casual labour in Flower farms	

B. FARMING AND LAND ALLOCATION PATTERN

B1. How much land do you own currently?
 acres.

B2. How many acres are used for agriculture?
 acres.

B3. Is the land you own enough for agriculture? 1. Yes 2. No

B4. If no how do you get enough land for agricultural activities?

1. Rent
2. Borrow from relatives/friends
3. Sharing
4. Both renting and sharing
5. Both borrowing and sharing
6. No other means

C. MAIZE PRODUCTION

C1. When did you start growing maize? (State the year)

C2. Why do you grow maize crops?

1. Source of food
2. Making local brew
3. Decorations
4. Source of income
5. For exchange with banana
6. Main staple food
7. Source of livestock feed
8. Source of both food and income

C3. Change of production system since you have started maize production?

Important crops	Year/Acreage				
	Acres 2007	Acres 2008	Acres 2009	Acres 2010	Acres 2011
Maize					
Beans					
Pigeon peas					
Sorghum					
Vegetables					

C4. What are the 4 main reasons for the above observed changes?

Write in order of priority

1. Unpredictable climatic conditions
2. Limited access to inputs and implements

3. Increase sources of food crops
4. Increase source of food and cash crops
5. Diversify sources of quick and regular income
6. High cost of establishing maize farms
7. Inadequate water for irrigation
8. Increased land coverage
9. Inadequate agricultural land
10. Feed for livestock
11. Inadequate labor force
12. Short term maturing crops
13. Both cash and food crops

Reason	Write the code
1.	
2.	
3.	
4.	

D. ACCESS TO NEW IMPROVED MAIZE VARIETIES

D1. Do you grow any of the improved varieties on your field? 1. Yes 2. No

D2. If yes, mention the varieties grown (Rank the varieties in order of their importance).

Variety	Write the code
1. Katumani	
2. SEED-CO	
3. TMVI	
4. Panner	
5. Staha	

D3.

Complete the table for the trend in farm size and Maize area:

		2006	2007	2008	2009	2010
A	Farm size (acres)					
B	Total maize area (acres)					
C	Total kilos of maize planted					
D	Total bags of maize harvested					
E	Total Bags reserved for food					
F	No of maize bags sold					

E: LEVEL OF EXPOSURE TO NEW MAIZE-BASED TECHNOLOGIES

E1. Have you ever participated in any Maize training programs? 1. Yes 2. No

E2. If not, why?

1. Not a group member
2. Lack of interest
3. Lack of time to attend
4. NA

E3. Was the training adequate?

1. Yes

2.No

E4. What 4 major trainings do you still need
on maize production?

1. Improved maize farming management
2. Proper Storage of maize
3. Strategies to access reliable markets/information
4. Improved maize farming management
5. Proper Storage of maize

Training needed	Write the code
1.	
2.	
3.	
4.	

6. Strategies to access reliable markets/information
7. Proper Water harvesting and utilization
8. Post harvesting and processing techniques
9. Maize pests and diseases
10. Entrepreneur skills
11. Disaster coping mechanism
12. No training needed

F: PRICES OF INPUTS IN MAIZE PRODUCTION

F1. Do you use any input in banana production 1. Yes 2. No

F2. If yes, complete the table below.

No	Type of input	Source of input	Is it readily available? 1.Yes 2.No	If not what do you do? (Write the code)
1	DAP-FERTILIZER			
2	FYM			
3	MINJINGU			
4	Pesticides (Furadan)			
5	UREA			
6	Hand hoes			
7	Ox plough			

1	Borrow
2	Purchase
3	Rent
4	From donor projects

Codes

ey: Sources of input

1. Own

2. Agrovet/stockist
3. Government
4. NGOs
5. Cooperatives
6. Other farmers
7. Extensionists
8. Do not use

G. MAIZE MARKETING, UTILISATION AND COORDINATION

G1. Do you sell any of your maize produce? 1. Yes 2. No

G2. In what form do you normally sell them?

	Forms of selling	1. Yes 2. No	Reasons indicate below		Codes for reasons
1	Raw maize			1	Easy to sell quickly
2	Dry maize			2	High market demand
3	Maize flower			3	Affordability
4	None of them			4	High economic returns

G3. Where do you normally sell your maize and maize products?

	Market place	Distance from your HH	Means of transport	Cost for both ways
	NMC-Arusha			
	Kikatiti			
	Warehouse-stores			
	Tengeru			
	HH/Farm level			

G4. What other costs do you incur during marketing of your maize?

1. Market tax
2. None
3. Time spent transporting
4. Time spent waiting for buyers

G5. Please indicate the trend of your price in terms of high and low

Price	Year				
	2007	2008	2009	2010	2011
Highest					
Lowest					

G6. What are the sources of information about maize best production techniques (about improved maize varieties)?

1. Researchers.
2. Extensionists

3. NGO's (Specify)
4. Field days
5. Written publications
6. Electronic media
7. Other farmers
8. No source

1. Cover with banana leaves
2. Store at the roof
3. Polythene bags

H. ACCESS TO EXTENSION SERVICES

H1. Are extension services available in your village?

1. Yes 2. No

H2. Have you ever obtained subsidy for production? 1. Yes 2. No

H3. If no, what are four main difficulties in obtaining credit?(circle answers)

1. Hard requirements to meet criteria
2. Inadequate information on subsidy program
3. Lack of entrepreneurship skills
4. Lack of collateral
5. Unable to refund on time
6. Low return in harvest
7. Few government staff
8. Fear of confiscating property

- 9. Not interested in loans
- 10. Unable to reached by NGOs
- 11. Not interested in loans

I: MAIZE PRODUCTION TECHNIQUES

I1. Is there any maize group/cooperative for providing training on good maize production techniques 1. Yes 2. No

I2. If yes are you a member? 1. Yes 2. No

I3. IF no, and there was such a group, would you like to be a member? 1. Yes 2. No

I4. What benefits would you get from being a member of such a group? Rank four of them.

- 1. Easy access to reliable production techniques
- 2. Improved maize farming/business
- 3. Access to inputs
- 4. Increased collaboration among farmers
- 5. Access to market information and pricing.....
- 6. Increased certainty of income from banana
- 7. Increased ability to save and acquire credit.....
- 8. Education on maize processing and marketing.....
- 9. Able to cater for HH needs.....
- 10. Sell to the cooperative/Warehouse.....
- 11. Increased security against thieves and livestock.....

J: CONSTRAINTS IN MAIZE PRODUCTION

J1. Mention four main constraint you face in maize production? (Begin with the most important constraint)

1. Lack of training
2. Drought
3. Unavailability of inputs
4. Maize pests and diseases
5. Strong winds
6. High cost of production
7. Lack of capital
8. Inadequate labor force
9. Inadequate land and poor soils
10. Stealing maize
11. Destruction by free grazing animals
12. Unstable warehouse receipt system
13. Inadequate water for irrigation

J2. Specifically what problems do you face in maize production (Mention 4 by priority).

- 1.
2. Lack of refresher training on maize production and marketing
3. Unreliable and low prices
4. Lack of market information

5. High cost and unreliable transport to warehouse stores
6. High cost of production
7. Theft occurrences
8. Low production
9. Unhealthy competition/middlemen
10. Unstable market and customers
11. No problem

J3. What recommendations would you suggest regarding maize production and marketing in the village? Give four

1. Post harvest management for the best storage
2. Train on improved maize production and management techniques
3. Establish a warehouse receipt system
4. Expand maize farming
5. Access to new drought tolerant production techniques
6. Increase collaboration with government
7. Improve access to inputs
8. Train entrepreneurship
9. Infrastructure and transport system
10. No training needed