

**INDIGENOUS CHICKEN FOR INCOME GENERATION AND NUTRITION
IMPROVEMENT BY RUFJI DISTRICT COUNCIL MEMBERS IN PWANI
REGION**

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

2016

CERTIFICATION

The undersigned certifies that he has read and hereby recommends for the acceptance by the Open University of Tanzania a dissertation entitled: “**Indigenous Chicken for Income Generation and Nutrition Improvement by Rufiji District Council Members in Pwani Region**”, in partial fulfillment for the requirements of the degree of Master of Community Economic Development of the Open University of Tanzania.

.....

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DECLARATION

I, **Pamela Andrew Simba**, do hereby declare that this CED project report is my own original work and that it has not been submitted or presented and will not be presented to any other university for similar or any other degree award.

.....

Signature

.....

Date

DEDICATION

This work is dedicated to my lovely parents Mrs. Grace Simba for the encouragement, emphasizes and the supports I received from them during my studies of Masters in Community Economic Development. My special thanks to my lovely children Lauren and Loris for their tolerance and supports I received from them during my studies in order to pursue Masters in Community Economic Development.

ACKNOWLEDGEMENT

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ABSTRACT

This dissertation is an outcome of the research study that was conducted at Rufiji District and the project identified being implemented in the same district. The study and project implementation covers the period from October 2015 to September 2016. The study was conducted by using participatory methods. Community needs assessment was conducted at Rufiji by using participatory methods such as Focus Group Discussion, Interview, the use of questionnaire for primary data collection methods and for secondary data collection there was the use of journals, books, internet and reports. The study revealed that chicken keeping project will be sustainable as they identified themselves and they implement with efficiency, not too expensive to establish and the demand of the products increases as days increase. Also time frame for the chicks to mature and become ready for sale also is too short as it can take four to six weeks depending on the feeds used. The study recommends that community members can organize themselves and manage the income generating projects in order to increase their incomes. Through trainings, community members can achieve their planned project goal and the project becomes sustainable and increases income to community members.

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LIST OF ABBREVIATIONS

AD	Annual Domical
ADB	African Development Bank
ADRI	Animal Disease Research Institute
BC	Before Christ
BP	Business People
CBO	Community Based Organization
CED	Community Economic Development
CTI	Confederation of Tanzania Industries
CVL	Central Veterinary Laboratory
DANIDA	Danish International Development Agency
DEO	Division Executive Officer
FAO	Food and Agricultural Organization
FBO	Faith Based Organization
GDP	Gross Domestic Product
IFAD	International Fund for Agricultural Development
IP	Influential People
NGO	Non Governmental Organization
NRPC	National Rural Poultry Centre
NSGRP	National Strategy for Growth and Reduction of Poverty
OUT	The Open University of Tanzania
PRA	Participatory Rural Appraisal
SPSS	Statistical Packages for Social Science

SUA	Sokoine University of Agriculture
TAWIRI	Tanzania Wildlife Research Institute
TCAL	Tanzania Chamber of Agricultural Council and Livestock
TCCIA	Tanzania Chamber of Commerce, Industry and Agriculture
VE	Veterinary Expert
VEO	Village Executive Officer
VIC	Veterinary Investigation Centers
WEO	Ward Executive Officer
WTO	World Trade organization

CHAPTER ONE

PARTICIPATORY NEEDS ASSESSMENT

1.1 Introduction

This chapter describes Rufiji District in Pwani Region community profile and participatory needs assessment. Community needs assessment is a process of gathering, analyzing and reporting information about the needs of your community and the capacities or strengths that are also currently available in your community to meet those needs.

Section one, including community profile which shows location, population, social services, finances services, transport and communication it give clear picture of the activities carried out in the community and which need to be supported. Second are all about assessment of the needs of the community and how these needs would be address. It involves objectives, research questions, and research methodology such as research design, sampling techniques, data collection and data analysis. Third section covers the main findings of the community needs assessment, there several methods were used in data collection in order to get the information, such as questionnaire, participant observation, focus group discussion and document reviews were used. Section four consists of community needs identification and prioritization method was used to show how the needs were ranked, and the last section is conclusion which summarizes the finding of the community needs assessment.

The chapter examines the background of the community needs Rufiji District in Pwani Region about 178 Km Southern of Dar es Salaam. It describes the community

profile as well as the research methodology used for community needs assessment and discussed the findings. Participatory needs assessment is a way of understanding the needs of a local population including needs relating to Health, Food, Housing, Employment and Education. Professionals and local people form a partnership to identify community needs, set priorities and develop a way forward (an action plan).

The overall aim of the participatory needs assessment is to understand the needs of the community from their own perspective rather than from the provider/donor or external's view point. In Participatory Needs Assessment, there are different methods of information collection and these methods are; Informal or Formal voluntary discussions with community groups, Focused Group Discussion, Interview with Key Informants and service users, Household Surveys, Relevant local documents about the community, Observations, Community Mapping and others. Participatory needs assessment was conducted at Rufiji District Residents in order to assess the level of income generated to community members and determine nutrition improvement.

The chicken (*Gallus domestics*) is a fowl that is said to be one of the most widely domesticated animals in recorded history. Charles Darwin considered chickens descendants of a single wild species, the red jungle fowl, which is found in the wild from India through Southeast Asia to the Philippines. Genetic analyses have shown that every breed of domestic chicken can be traced to the red jungle fowl. Scientists estimate that they were domesticated roughly 8,000 years ago in what is now Thailand and Vietnam (Encarta DVD, 2008). The indigenous chicken forms a very heterogeneous population; they exhibit wide variations in size, plumage, color, comb type, and skin color (Ndegwa et al.,1991). Encarta describes them as diurnal in habit

(more active during daytime), highly gregarious, meaning they are able to live together as a flock, and roosters are polygamous and able to guard a large number of hens. The fecundity, or ability to reproduce, of the species is an important characteristic, especially because their eggs and meat are prized as food. They are better adapted to living on the ground, where they find most of their natural diet, consisting of worms, insects, seeds, and plants, while their four toed-feet are designed for scratching.

1.1.1 Main Benefits of Raising Indigenous Chickens are

- (i) They are easy to establish for low-income families.
- (ii) They are more prolific and unproblematic to rear on small plots of land.
- (iii) They are more genetically diverse, well adapted, and more resistant to local pests and diseases.
- (iv) They are vital for future food security, leading towards self-employment and self-reliance.

1.2 Community Profile

1.2.1 Geographical Location and Area

The Rufiji DSS (RDSS) area extends from 7.47` to 8.03` south latitude and 38.62` to 39.17` east longitude. The RDSS is located in Rufiji District, Tanzania about 178 kilometers south of Dar-es-Salaam. Rufiji District is one of the six Districts of the Coast Region, the others being Bagamoyo, Kibaha, Kisarawe, Mafia and Mkuranga. Rufiji District, located in the south of the Region, has six Divisions with 19 Wards divided into 94 registered villages with 385 hamlets. The District covers an area of

approximately 14,500 square kilometers. The RDSS operates in six contiguous wards and 31 villages (about 60 km long by 30 km wide) and covers an area of 1,813 square kilometers. Rufiji District has an overall mean altitude of less than 500 meters. Its vegetation is mainly formed of tropical forests and grassland.

1.2.2 Population

The Rufiji District has a population size of about 182,000 of which 85,000 (about 47% of the District) are under survey. The population densities for the district and survey area are 12.5 and 46 per square km respectively. The mean household size for the whole district is about 5 persons (Bureau of Statistics, 1994). The district is largely rural although the population is clustered around Utete (District headquarters), Ikwiriri, Kibiti and Bungu townships. Rufiji district is home to several ethnic groups. The largest group is the Ndengereko (who, according to oral tradition, are the original inhabitants of the area), other groups include the Matumbi, Nyagatwa (concentrated in the delta area), Ngindo, Pogoro, and Makonde.

The majority of the people are Moslems with few Christians and followers of traditional religions. In addition to local languages, Kiswahili is widely spoken; English is not commonly used in the area. The majority of the people in Rufiji District are subsistence farmers. Farming areas are often located some distance from the family home and make use of periodically flooded alluvial soils.

1.2.3 Climate, Topography and Vegetation

The district has hot weather throughout the year and two rainy seasons; short rains (October to December) and long rains (February to May). The average annual

precipitation in the district is between 800 to 1000 millimeters. Rufiji District has an overall mean altitude of less than 500 meters. Its vegetation is mainly formed of tropical forests and grassland. A prominent feature in the District is the Rufiji River with its large flood plain and delta, the most extensive in the country. Mangrove forests flank the tributaries of the delta. The river, from which the District takes its name, divides the district geographically into approximately equal halves. The district is also a gateway to Selous Game Reserve. The reserve has a variety of wild animals such as zebras, buffaloes, hartebeest, monkeys, lions, hyenas, warthogs and elephants.

1.2.4 Health Services

The district has 56 health facilities. They include two hospitals (one government and one mission), five government health centers and 48 government dispensaries. A private dispensary based at Kibiti offers mobile clinic services in some parts of the district. Over the counter drugs are available from many private shops and kiosks in the villages. Many people also obtain services from traditional healers including traditional birth attendants. Malaria and waterborne diseases such as cholera and diarrhea are the major health problems of the area as reported through the health services and as perceived by local people.

Major causes of mortality include acute febrile illnesses including malaria, acute lower respiratory infections, tuberculosis, AIDS, and parental causes. Immunization coverage ranges from 85% for BCG (tuberculosis) to 66% for measles in children 12- 23 months of age. About 89% of the population, live within 5 kilometers of a

formal health facility. All villages and health facilities in the district have been positioned by GPS and mapped in a GIS database of district health resources.

1.2.5 Education Services

Each village has at least one primary school (from standard one to seven). There are four secondary schools in the district (three government and one private) of which two are located in the DSS area. A Folk Development College, providing post-primary polytechnic education, is located in Ikwiriri Township. According to the 1988 population census results (Bureau of Statistics, 1994) males are more literate (66%) than females (34%) in the district.

1.2.6 Economic Activities

The majority of the people in Rufiji District are subsistence farmers. Farming areas are often located some distance from the family home and make use of periodically flooded alluvial soils. Temporary houses located on this farmland means that some households are often split geographically for up to four months of the year. For polygamous households, this may mean a seasonal 'double' splitting of their membership. Major crops grown include cassava, maize, rice, millet, sesame, coconut and cashew nuts. Fruit such as mangoes, oranges, pineapples, papaya and jackfruit are also grown. Some residents are involved in fishing while others in small-scale commercial activities such as selling wood products (e.g. timber, furniture and carvings).

1.3 Community Needs Assessment

This Chapter examines the background to the community, based organization, the community profile and the community needs assessment. As well it describes the

research methodology used for community needs assessment and discussed findings. Needs assessment is 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 projects must have accurate, reliable and usable information that reflects the needs of a specific community. Needs should emerge directly from ideas articulated by the target population and other stakeholders in a community. Needs assessments conducted with participation of the entire community will strengthen commitment and enthusiasm for a project. It also assists to create community ownership of a project and it generates data to develop indicators for monitoring and evaluation.

1.3.1 Objectives of Community Needs Assessments

Research objective aimed on collecting the information and analysing the data collected in order to identify indigenous chicken in Income generation and Nutrition improvement. Overall Objective is to determine importance information required for Indigenous Chicken in Income Generation and Nutrition Improvement.

1.3.1.1 Specific Objectives

- (i) To Find Out The Importance Of Indigenous Chicken In Nutrition Improvement
- (ii) To Identify The Contribution Of Indigenous Chicken In Community Low Income
- (iii) To Find Out How Indigenous chicken improve life standard.

1.3.2 Research Questions

- (i) What are the importance of indigenous chicken in nutrition improvement?
- (ii) What are the contributions of indigenous chicken in community low income?
- (iii) How indigenous chicken improve life standard?

1.3.3 CNA Questions

The study was guided by the following questions

- (i) What are the main factors contributing to poverty among the members of community in Rufiji district?
- (ii) What are the capacities of the community in Rufiji district in project management?
- (iii) What are the initiatives, which can be initiated by community in Rufiji district members?

1.3.4 Research Methodology

1.3.4.1 Research Design

The research done was descriptive in nature in this descriptive study both qualitative and quantitative methods for data collection were used. Quantitative approach

involves collection of quantifiable data which, are normally in terms of quantities (numbers) and qualitative data were also collected such as sex of respondents. These qualitative data and quantitative data collected from the study were represented in form of tables.

1.3.4.2 Sampling Techniques

Both purposive and random sampling techniques were used to get the sample size required. Purposive sampling was used to collect secondary information data in most cases and some primary data from professionals. Random sampling technique was used for sampling Rufiji District members who were providing details on their community.

1.3.5 Data Collection Methods

Data were collected through primary sources and secondary sources. Both secondary and primary data were collected through various methods and these methods were;

1.3.5.1 Secondary Data

Secondary data were taken from available data or information that were in documentations in various offices. These data collected were taken through documentary review method, in which, the abstract from different reports, pamphlets, books, event reports and Journals.

1.3.5.2 Primary Data

These are the data collected by the researcher directly from the respondents that were selected through the determined sampling procedures. Interviews, Focus Group Discussions and other methods were used by the researcher.

1.3.5.3 Questionnaires

Data were collected through the use of questionnaires. Questionnaires were distributed to sixty respondents but only forty respondents returned the questionnaires. The respondents had ability to read and write. The questionnaire helped in collecting general information about the interviewee such as age, sex, level of education, respondents' income, respondents' occupation, community economic activities.

1.3.5.4 Interview Method

Interview method was used in primary data collection. The researcher collected information/data from the respective respondents by using interview method by using structured and unstructured questions as a main tool. Questionnaires used had some questions that were used to interview the respondents.

1.3.5.5 Focus Group Discussion

Focus Group Discussion method was very useful in collecting data or Information from the community or respondents by using two groups of participants or respondents. Community members had a Focus Group Discussion on various issues like income generating activities existing within their district and the nutrition obtained from indigenous chicken.

1.3.6 Data Analysis Methods

Data collected from the study were manually analysed and then changed to variables coded in order to be entered into SPSS for data analysis. Data processed and analysed using Descriptive statistics methods, mainly frequency tables. Qualitative

data were collected through the use of Focus Group Discussion that was conducted during the study. During the study some were given questionnaires, some were interviewed and some were collected or gathered for Focus Group Discussion in order to collect data. District members had a Focus Group Discussion on various issues like income generating activities existing within their district and the potential nutrition obtained from indigenous chicken. So, during the study both qualitative and quantitative data were collected.

1.4 Community Needs Assessments Findings

1.4.1 Respondent's Sex

The findings from the Community Needs Assessment done at Rufiji District basing on the methods of data collection used, it was found that the respondents' sex was 27.5% male and 72.5% female and this data was taken from the forty respondents out of sixty planned sample of respondents.

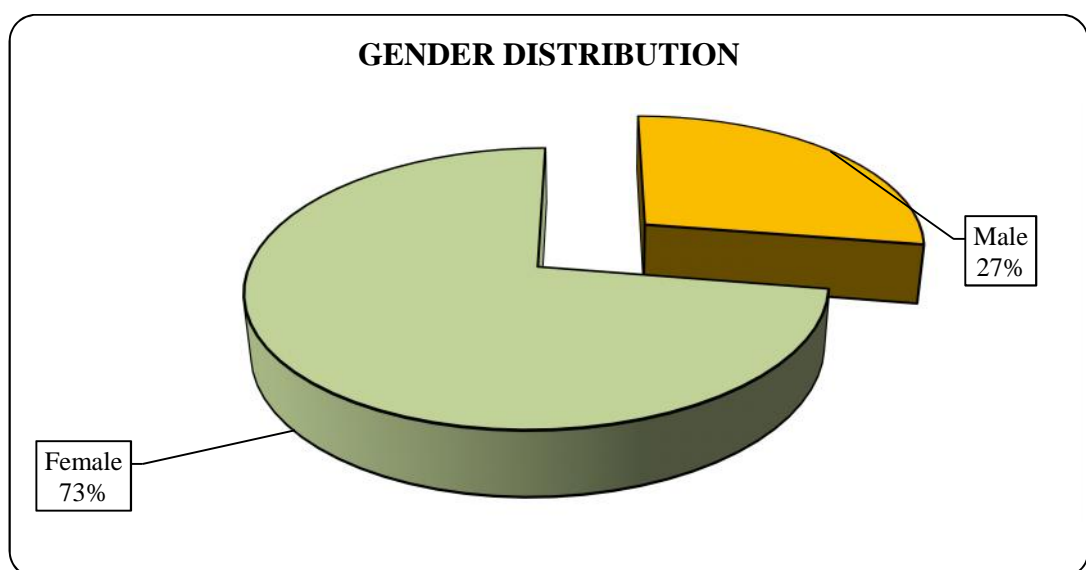


Figure 1: Sex of Respondents

Source: Research (2016)

Findings were derived through the use of different data collection methods, which included the Questionnaires, Focus Group Discussion, Observations, interviews (key informants), and secondary data were taken from District Office at Rufiji Council.

According to Figure 1 female constitute 73.0% of the respondents while the male is 27%, in community-based or led projects, women do take parts and seem to be trustful in execution of the projects and also for the projects' sustainability as the women are in most cases not supporting the zeal for embezzlement of the project's fund and by being trustful and manage well the income generated from chicken then the project becomes sustainable.

1.4.2 Age of Respondent

Findings shows that out of forty respondents 24.0% had age ranging between 18-25 years, 27% had an age ranging from 26-45 years, 38% had an age ranging from 46-60 years, 11% had the ages above 60 years. This finding show that most of the respondents were 46-60 years age which is an elder and this is a wise group can be used for the development of their community and Country at large. Although youth are sought not to be serious with project's management, in this project youth will be useful as there are other members who are older to them and these matured or older people will help to manage the youth in order to make them focus for the sustainability of the project and by the project becoming sustainable the individuals and households level of income will increase. By increasing the level of incomes to youth participating in the project this will also decrease the number of dependency in the community and this increases the effective utilization of youth as manpower and

also youth will be of a help for the transfer of the knowledge concerning project to the next generation.

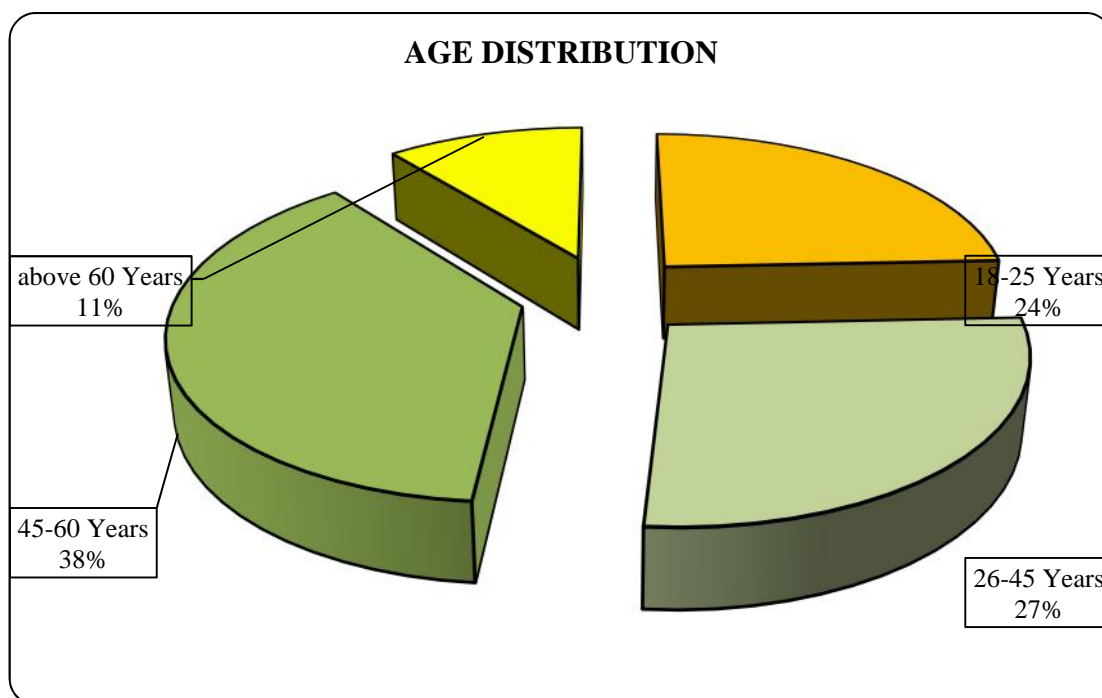


Figure 2: Age Distribution of Respondent

Source: Research, (2016)

1.4.3 Occupations of Respondents

The findings show that this community had many occupations and the respondents had different occupations as 7.0% are Farmers, 62.0% are Business men and female, 8.0% were saloonists, 5% were Teachers, 5% were retailers and 13.0% were Tailors. Findings show that each respondent had an occupation as it is being categorized in the Figure 3 the finding indicate that most of the district members are business men and women, having people with knowledge and experiences in business will easy the search for the markets for the project products and also will help in the income generation of the project because they have the experience of managing money for the business hence making the right decision at right time for raising their income.

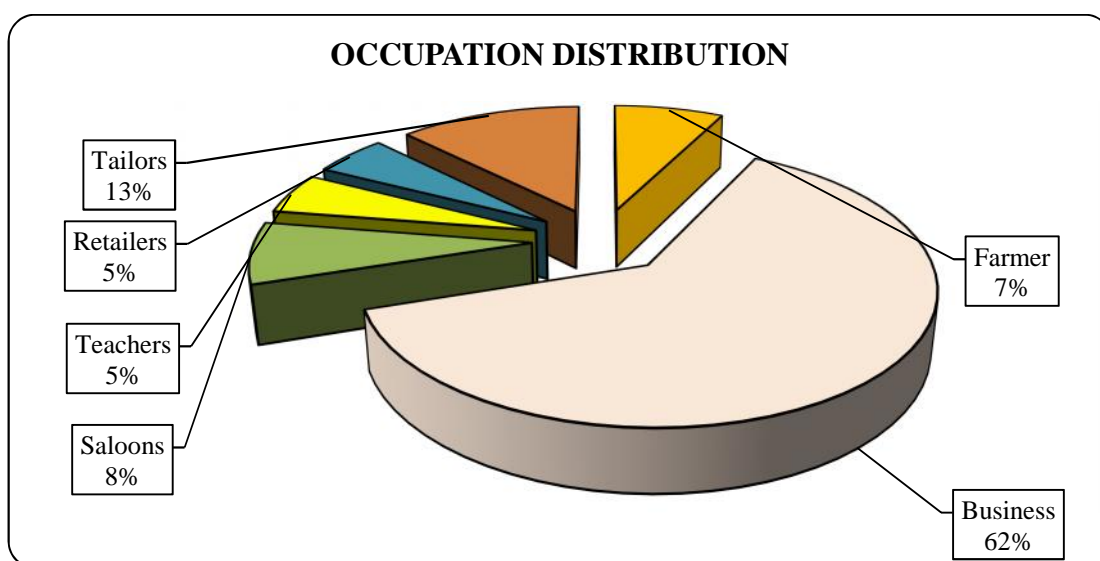


Figure 3: Occupations of Respondents

Source: Research, (2016)

1.4.4 Potential Income Generating Project

According to Table 1 the findings show that 37.5% proposed that the potential income generating from eggs, 50% income generated from chicken meat, 12.5% income generated from fertilizers. Indigenous chicken project will be sustainable due to the fact that the project is not too cost full, easy to manage and needs few time for the chicks to mature and become ready for sale. Poultry can take four to six weeks in order to become mature for sale and also the return on sale is the double of the cost of the project. Group members will have the income through selling of unslaughtered chicken, slaughtered chicken, feathers also members will benefit from getting the manure for agricultural purposes.

Table 1: Potential Income Generating Project

Income sources	Frequency	Percent	Valid Percent	Cumulative Percent
Eggs	15	37.5	37.5	37.5
Meat	20	50	50	87.5
fertilizers	5	12.5	12.5	100
Total	40	100	100	

Source: Research 2016

1.4.5 Education Level of Respondent

Respondents had different levels of education and this has been presented in the Table 2, the finding shows that, respondents who had Primary School Education level had 20%, Secondary School Education Level had 22.5%, Certificate had 15%, Respondents with Diploma comprised 27.5%, Graduates comprised of 12.5% and Post Graduate were 2.5%. The findings reveal that this Community had no people without formal education and the majority of the respondents had Diploma Education Level. This is a community of literates' people. The results indicated that most of the people in the area were less interested in education and preferred more madras classes. Given the level of education of the respondents they can attend and run the project and follow the sensitization and training in brick making business, entrepreneurship and business skills.

Table 2: Education Levels of Respondents

	Education level	Frequency	Percent	Percent	Cumulative Percent
	Primary	8	20.0	20.0	20.0
	Secondary	9	22.5	22.5	42.5
	Certificate	6	15.0	15.0	57.5
	Diploma	11	27.5	27.5	85.0
	Graduate	5	12.5	12.5	97.5
	Post Graduate	1	2.5	2.5	100.0
	Total	40	100.0	100.0	

Source: Research, (2016)

1.4.6 Impact of Chicken keeping to Community Members

The finding show that the project of chicken Keeping will bring an impact of 70% in the economic status or income status of the community members at household level

to the community level at large 27.5% of the respondents said that the project will have an economic impact while a third class was comprised with 2.5% who said that the project will have an impact though low impact.

Table 3: Impact of Chicken Keeping to Community Members

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid First Class	28	70.0	70.0	70.0
Second Class	11	27.5	27.5	97.5
Third Class	1	2.5	2.5	100.0
Total	40	100.0	100.0	

Source: Research, (2016)

1.4.7 Marital Status

Table 4 shows marital status of respondents within the study area. The findings show that most of respondents by 64.4% were married, 16.7% of the respondents were widow, 12.2% of respondents were single and 6.7% were divorced. Although there were married but they still face same challenges as widow, divorce and single women do face. This means that community do face the same socio – economic challenges no matter which status they are.

The Convention on the Nationality of Married Women - adopted in 1957 - is integrated under article 9 providing for the statehood of women, irrespective of their marital status. The Convention, thereby, draws attention to the fact that often women's legal status has been linked to marriage, making them dependent on their husband's nationality rather than individuals in their own right.

Table 4: Marital Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	11	12.2	12.2	12.2
	Married	58	64.4	64.4	76.7
	Divorce	6	6.7	6.7	83.3
	Widow	15	16.7	16.7	100.0
	Total	90	100.0	100.0	

Source: Research, (2016)

1.4.8 Number of Dependants

The Table 5 shows the respondent's number of dependants from the study area. The data shows that 66.7% of respondents do have more than 4 dependants which imply that apart from their personal life rural women have to take care of their families despite the fact that they are facing a lot of challenges within the community. They play triple role that is domestic, economic and social roles in order to make sure that they participate fully in their families and society in general.

Table 5: Number of Dependents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	1	1.1	1.1	1.1
	2	11	12.2	12.2	13.3
	3	18	20.0	20.0	33.3
	4 and above	60	66.7	66.7	100.0
	Total	90	100.0	100.0	

Source: Research, (2016)

1.4.9 Level of Livelihood

Table 6 shows that most of rural women are living a miserable life since 100% responded that their livelihood is not satisfactory. Therefore Urgent and relevant action should be timely taken to improve the livelihood of rural women.

Table 6: What is the Level of Livelihood Status of Rural Women in Rufiji District

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not satisfactory	90	100.0	100.0	100.0

Source: Research, (2016)

1.4.10 Challenges Facing Rural Women

Table 7 shows that, despite many challenges facing community of Rufiji, income poverty seems to be the major challenge facing them as it displays 52.2% followed by Lack of capital by 14.4%, Lack of entrepreneurial skills by 8.9%, persistence discrimination and gender norms by 7.8%, work load by 6.7%, increased experience of domestic violence by 5.6%, and lack of education and training by 4.4%. Income poverty among women in rural areas is still in existence for example most women are engaged in small scale business in informal. Most of them face problem in their struggle for economic and social prosperity.

Table 7: Main Challenges Facing Rural Women

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Persistence discrimination and gender norms	7	7.8	7.8	7.8
	Work load (they play triple role i.e. domestic, economic and social)	5	5.6	5.6	13.3
	Lack of capital	13	14.4	14.4	27.8
	Lack of entrepreneur skills	8	8.9	8.9	36.7
	Lack of education and training	4	4.4	4.4	41.1
	Increased experience of domestic violence	5	5.6	5.6	46.7
	Income poverty	48	53.3	53.3	100.0
	Total	90	100.0	100.0	

Source: Research, (2016)

Lack of entrepreneurial skills, management problem, inadequate capital and security contribute to low productivity and persistence poverty. This made them to be not powerful in the community as a result they cannot make decisions as far as community matters are concern. Hence there is a need to empower rural women so that they can work and enjoy the same status as men.

1.4.11 Main Economic Activities to Rural Women in Rufiji District Engaged

Most

Table 8 shows that 58.9% of all respondents engaged in tobacco farming. Rural women do depend much on tobacco farming for their survival. Despite the fact that they spend a lot of time in cultivating this crop, the end product is taken by men which is a result of not having access to and control over resources. Furthermore 23.3% are engaged in petty business to generate income for their daily living. Other activities had done by Rufiji community include poultry keeping, beekeeping, livestock keeping and handicraft. Focus group discussion came with the argument that there is a need of helping community engage in different activity that will improve their life rather than dealing with tobacco farming.

Table 8: What are the Economic Activities do Rural Women Engaged Most in Your Community

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Tobacco farming	53	58.9	58.9	58.9
	Livestock keeping	7	7.8	7.8	66.7
	Poultry keeping	3	3.3	3.3	70.0
	Beekeeping	3	3.3	3.3	73.3
	Petty business	21	23.3	23.3	96.7
	Handicraft	3	3.3	3.3	100.0
	Total	90	100.0	100.0	

Source: Research, (2016)

1.4.12 Entrepreneurship Education and Training

The Table 9 shows that 68.9% of all respondents do not know about entrepreneurship. This reveals that most rural women in Chessa village who are engaged in different petty business and other IGAs are not aware with business related skills.

During the interview and focused group discussion respondents suggested that, women should be provided with entrepreneurship training. Through the entrepreneurial training rural women will be able to generate business idea, carry out a market research, develop a business plan, set up the business and managing the business.

Table 9: Do you Know About Entrepreneurship Education and Training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	28	31.1	31.1	31.1
	No	62	68.9	68.9	100.0
	Total	90	100.0	100.0	

Source: Research, (2016)

1.4.13 Income Earning Per Month

The Table 10 shows the income earning of rural women per month. 93.3% of all respondents do earn below Tshs. 30,000/= per month which is below the poverty line. Community at Rural village have limited control and access to resources including land, capital and also lacking business related skills has made their lives very misery that they cannot suffice their lives.

Table 10: Income Earning per Month

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below tshs 30,000	84	93.3	93.3	93.3
	30,000 - 50,000	6	6.7	6.7	100.0
	Total	90	100.0	100.0	

Source: Research, (2016)

1.4.14 Measures to Improve the Livelihood of Rural Villages

According to Table 11 shows that 40% of all respondents suggested indigenous poultry keeping as a potential need in improving their livelihood. Other respondents by 20% needed capital, 16.7 % entrepreneurship training, 8.9% gender training, 7.8% revolving fund, 4.4% for organic farming and 2.2% for beekeeping project. Through the focus group discussion with rural women, the researcher asked the respondents to identify the possible opportunities having which can improve the livelihood of rural village.

Table 11: Measures to Improve the Livelihood of Rural Village

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Provision of Capital	18	20.0	20.0	20.0
	Entrepreneurship Education and training	15	16.7	16.7	36.7
	Organic farming	4	4.4	4.4	41.1
	Beekeeping	2	2.2	2.2	43.3
	Gender training	8	8.9	8.9	52.2
	Indigenous poultry keeping	36	40.0	40.0	92.2
	Revolving fund	7	7.8	7.8	100.0
	Total	90	100.0	100.0	

Source: Research, (2016)

Most respondents suggested the establishment of indigenous poultry keeping as IGA which suits their environment. Indigenous poultry keeping is very crucial for rural women as it is inexpensive to establish but also the availability of market throughout the Rufiji District. This exercise assisted the researcher to recognize what is supposed to be emphasized when planning the project.

1.4.15 Findings from Key Informants

Key informants such as VEO, Village chair person and Hamlet leader on their interview had identified the sources of household income to rural women, challenges that women faced and suggested measures to overcome. When asked, what are the sources of household income to rural village? Key informants argued that “rural do depend much on farming especially maize farming though others do engage on petty business, poultry keeping, livestock keeping as well as handicraft. But the end product is taken by men, so this made women remain poor with no voice in front of men”.

Hamlet leader on behalf of the key informants argued that, “the major challenges that faced rural community were income poverty, lack of capital, lack of entrepreneurship skills, domestic violence and persistence discrimination”. When asked, what are the suitable measures for improving the livelihood status of rural women? They proposed that” women should be supported with income generating activities like poultry keeping simply because the market for it is available within the area”. With this notion they said that “though women will be supported with income generating activities that should go hand in hand with entrepreneurship training”. The training could help them in running their project well. And at last they come out with the

notion that the village should make sure that, in their plan there must be one activity for women empowerment either in gender education or any other activity that will result into improving rural women livelihood. This study help the researcher to understand what was to be emphasized during project planning, as it was revealed that the priority was much based on indigenous poultry keeping establishment for intervention.

1.5 Community Needs Prioritization/levelling of Needs

Poultry keeping project was identified by the Rufiji District group members through focus group discussion. Focus group discussion was used to identify potential project to be executed. Potential projects were identified and Pair wise Ranking method was used to rank the identified potential projects in order to determine the first and best project to be executed. By Pair wise ranking, Poultry keeping project was given a first priority to be executed because it got more scores. Potential identified projects were: the project to entrepreneurship education and training, beekeeping, revolving fund, provision of capital, gender training, indigenous poultry keeping, organic farming. By ranking all those potential projects, groups members ranked them in order to determine the project that will be viable, less cost and that can be sustainable and achieve their planned goal and have economic impact by increasing household incomes that will turn them having positive improvements in their economic status. Group members participated in the identification and ranking the potential projects and came up Indigenous Poultry keeping project as the project to be executed for income generation in order to reduce income poverty hence affordability of their needs or meeting their family obligations.

Table 12: Pair Wise Ranking Matrix

NEEDS	Provision of Capital	Entrepreneurship Education and training	Organic farming	Beekeeping	Gender training	Indigenous poultry keeping	Revolving fund	Score	Rank
Provision of Capital		Provision of Capital	Provision of Capital	Provision of Capital	Gender training	Indigenous poultry keeping	Provision of Capital	4	2
Entrepreneurship Education and training			Entrepreneurship Education and training	Entrepreneurship Education and training	Gender training	Indigenous poultry keeping	Entrepreneurship Education and training	3	3
Organic farming				Beekeeping	Organic farming	Indigenous poultry keeping	Organic farming	2	5
Beekeeping					Beekeeping	Indigenous poultry keeping	Revolving fund	1	6
Gender training						Indigenous poultry keeping	Gender training	3	4
Indigenous poultry keeping							Indigenous poultry keeping	6	1
Revolving fund								1	7

Source: Research, (2016)

1.6 Chapter Conclusion

Chapter one has dealt with the Participatory Needs Assessments and this has involved community members in the identification of the community needs on the importance of indigenous chicken in income generation and nutrition improvement. Participatory Needs Assessments done at Rufiji District shows that they can increase their income and improving nutrients in their diet chicken keeping project, which was declared by community members that this project will be viable and sustainable.

This study involved community of Rufiji in identifying problems facing them. Participatory need assessment process guided women to identify key problem and

proposed solutions to address them. The assessment revealed that most rural women in the village do suffer from income poverty, other challenges they face includes: work load, persistence discrimination and gender norms, domestic violence, lack of capital and lack of education and training opportunities. Indigenous poultry keeping was identified as a core need, which if effectively implemented could address the entire community problems. The researcher recommended that, it was a high time for development partners such as government, private companies, financial institutions, nongovernmental organizations and individuals to join hands to support rural women simply because they play a key role towards achievement of transformational economic, environmental and social changes required for sustainable development.

CHAPTER TWO

PROBLEM IDENTIFICATION

2.1 Background to Research Problem

Rural women play a critical role in rural economies and societies in both developing and developed countries. Across regions rural women have proved that they are resourceful and committed to new ways to improve their own lives, those of their families and communities. Despite this knowledge and the attention given to rural women in international frameworks, women in rural areas continue to face serious challenges in carrying out their multiple roles within their families and communities and their rights and priorities are often insufficiently addressed by national development strategies and gender equality policies.

It is estimated that at least 70 per cent of the world's very poor people live in rural areas. Rural poverty is the result of lack of assets, limited economic opportunities and poor education and capabilities, as well as disadvantages rooted in social and political inequalities. Rural women, in particular, are often disproportionately held back by disadvantages rooted in such inequalities. In many countries, gender-based stereotypes and discrimination deny rural women equitable access to opportunities, resources and services. This means that rural areas in most regions of the world are farthest from achieving the Millennium Development Goals.

Policies that enhance gender equality and women's empowerment are therefore crucial for rural development, poverty reduction and economic growth and the achievement of internationally agreed goals and commitments for development. The

global food crisis provided a serious reminder of the importance of sustainable agriculture to food and nutrition security and development. It also brought renewed attention to the significant role rural women play in agriculture. In many parts of the world it is the main sector of employment for women and in some regions women are responsible for a large proportion of food crops. The role of rural women in agriculture in developing countries is essential for ensuring food and nutrition security and eradicating hunger.

Many rural communities are not only food producers but they also have the primary responsibility for food distribution at the household level. Contribution to food production and food security, however, continues to be constrained by their unequal access to essential resources and technologies, tools, assets and services, including land ownership and access to extension services. It is critical that the currently increased attention to food and nutrition security issues generates equal benefits to women. To effectively tackle hunger, improved collection of gender-sensitive data as well as targeted measures are needed to ensure that women farmers have equal access to agricultural resources and an equal voice in decision-making at all levels.

Despite their contribution to agriculture, women have not benefited much from their labour. Access to and control over productive resources such as land still continues to be a major set-back for women farmers, limiting their ability to effectively practice sustainable agricultural development. Gray and Kevane (1999) noted that the increase in value of land especially with the emphasis on cash crops has put women at a disadvantage. They have tended to have little influence on decisions on market, oriented enterprises. Apart from access and control over benefits,

inequalities in terms of access to and control over factors of production limits women's participation in different economic activities. Land is one of the limiting factor for women especially smallholder farmers. The significance of having access to and control over resources cannot be overemphasized as argued by Allendorf (2007) that resource is a major source of livelihood, power and control.

Promoting and ensuring the full enjoyment of the rights of rural women and expanding their access to opportunities, resources and services requires comprehensive action at different levels. Rural women are less likely than urban women to own property. It is estimated that rural women own less than ten per cent of property in the developed world, and two per cent in the developing world. In a number of countries women remain at a disadvantage due to inequality in statutory and customary laws on access to land ownership and other types of property and inheritance. Although evidence suggests that lending to women is more cost-effective when compared to men, significant barriers to women's equal access to credit exist.

In some regions it is estimated that women receive less than ten per cent of all credit going to small farmers and only one per cent of the total credit going to the agricultural sector. Microfinance and microcredit have been recognized as useful tools for providing opportunities for rural women to move out of extreme poverty. But even in these areas, women continue to face discrimination in access to credit, usually receiving smaller amounts than those allocated to men. Many country examples demonstrate the importance of capacity-building, dissemination of

information, gender-sensitive statistics, legal assistance, mobilization and advocacy in enhancing women's rights and access to productive resources.

Community Needs Assessment has shown that there are number of problems facing Rufiji community. Such problems include income poverty, lack of capital to establish profitable business, lack of education and training and inadequate entrepreneurial skills as a result of persistence discrimination and increased experiences of gender based violence that resulted into unequal access to and control over resources.

According to the opinions from the respondents, income poverty was identified as the core problem facing them. The findings also have revealed that those problems have been a constraint to empower rural Village. After ranking the problem by using pair wise matrix, the respondents come out with indigenous poultry keeping as their solution for their problems. The project intended to empower rural women so as to have a full enjoyment as men.

Though some challenges exist, raising indigenous chicken is preferable to the commercial breeds for small-scale chicken production. For example, the broilers are more expensive to buy, susceptible to diseases, and require high maintenance for their development. Thus, they can be extremely difficult for a small-scale farmer to manage. Broilers are best raised in confined conditions where disease can be managed through sterilization, but the indigenous birds can be raised free-range as they are less susceptible to the harsh weather and environmental conditions of Kenya. This forces the farmer raising broilers to purchase expensive feeds rather

than relying on nature's abundant feeds, like worms and insects. Although the commercial chicken grows faster and can be finished within six weeks, there is a high initial start-up cost and a greater risk.

Furthermore, the indigenous chicken industry in Kenya has seen tremendous growth due to the high demand for their products, especially in townships throughout Kenya. The increase in demand has been attributed to an increase in prices of red meat as well as health consciousness among meat lovers. Meat and eggs are considered complete proteins because they contain all of the essential amino acids needed for humans as well as important fats, minerals and vitamins our bodies need.

Furthermore, the indigenous chicken industry has a recognized potential to generate higher income and transform living standards if appropriate interventions are developed and implemented. The Kenya Economic Report (KPPRA) identifies poultry as one of the leading livestock enterprises that can contribute the most towards the attainment of the UN's Millennium Development Goal 1 (MDG1). The indigenous chicken industry in Kenya, therefore, is posed to play a strategic role in on-going socio-economic development under Vision 2030, which is a long-term national development plan to transform Kenya into a rapidly industrializing middle-income by the year 2030.

2.1.1 Problem Tree Analysis

A problem tree analysis is carried out in a small focus group (about 6-8) using a flip chart or overhead transparency. The first step is to discuss and agree the problem or issue to be analyzed. This can be quite broad the problem tree will help break it

down or it can be more focused in which case the output will also be more detailed. The problem might be the result of a brainstorm exercise, or it might be well established and agreed. The problem or issue is written in the centre of the flip chart and becomes the trunk of the tree. The wording doesn't need to be exact as the roots and branches will further define it, but it should describe an actual, real problem, and it should be worded so that it is not an absence or lack of something e.g. no money!.

Now identify the causes of the focal problem, and then identify the consequences. This should be done on post-its or cards so that, after gathering all the contributions, they can be arranged in a cause-and-effect logic. This can be done realistically, in which case the roots represent the root causes of the problem and the branches represent the consequences of the problem. Like real roots and branches they divide and divide again (in this way the Problem Tree is similar to a Mind-Map). Discussion questions might include: does this represent the reality? What are the most serious consequences? Which causes are easiest / most difficult to address? What possible solutions might there be? Where could a policy change help address a cause or consequence, or create a solution? Additional questions might include: Are the economic, political and socio cultural dimensions to the problem considered? And, considering the dynamics of the problem, which causes and consequences are getting better, which are getting worse and which are staying the same? The problem tree is closely linked to the objectives tree, another key tool in the project planners repertoire, and well used by agencies. The problem tree can be converted into an objectives tree by rephrasing each of the problems into positive desirable conditions - as if the problem had already been solved and more. Some cards may need to be

slightly reworded, and when mapping causes that lead to effects now become means that lead to ends. In this way root causes and consequences are turned into root *solutions*, and key project or influencing entry points are quickly established.

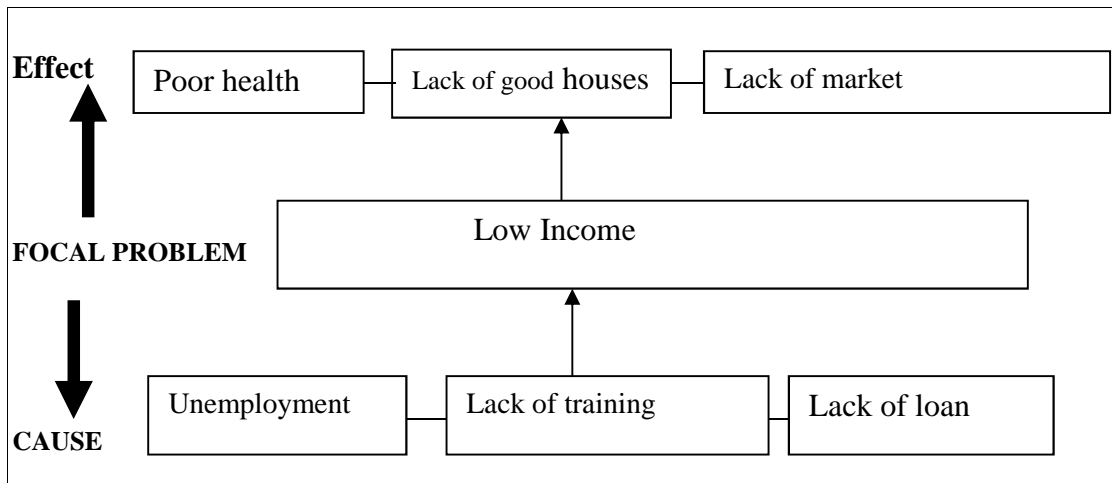


Figure 4: Problem Tree Analysis

2.2 Problem Statement

Rufiji District members are in need of generating income and nutrition improvement for their families. The majority cannot afford to increase income easily so they opt keeping indigenous chicken for income generation and nutrition improvement. These group members cannot afford having their own modern houses for their families hence depending on chicken keeping Therefore Rufiji District members need to access more sources of incomes in order to meet their obligations and also improve their economic and health status. Therefore then members have to establish poultry keeping project as a faster income generating project in order to meet their Economic empowerment to rural community has been a great challenge in Rufiji district simply, within the family, the members are governed by a set of norms and practices evolved by the head of the household who exercises power, authority and control

over the members. Since men have access and control over resources, their role is clearly defined as bread winners and women are supposed to confine themselves to the role of home makers. Access to and control of productive resources like land, farm equipment and inputs is male dominated. Therefore, sustainable interventions towards addressing women's practical and strategic needs are significant.

It is expected that the participation of community in IGAs can contribute to enabling households to cope with income shocks, to ensure food security, to avoid an increase in poverty or to prevent vulnerable households from falling below the poverty line. Women's income is important for achieving economic growth and sustainable development in Rufiji Village and thus, their economic contributions should be given importance in policy design.

From this study, the researcher has come up with the conclusion that in order to eliminate the distressed condition of rural women and bring them to the main stream of development for achieving a sustainable livelihood, they need to be involved in income generating activities much more actively. Furthermore, they need to improve in all sorts of areas such as income, information, knowledge and skills, education, and access to capital. Therefore indigenous poultry keeping came up as the means to solve the problem.

2.3 Project Description

Chicken keeping for sales is the project to be implemented by Rufiji District group members. These members prioritized this project as there is an increase in demand of chicken meat especially in urban and rural areas. They will build a building for

poultry centre, buying of batch of chicks, buying of chicks' feeds, vaccination and some equipments. These chicks are fed to grow till the time for selling them.

2.3.1 Project Title

The project title is Indigenous chicken in income generation and nutrition improvement at Rufiji District.

2.3.2 Project Physical Location

The Rufiji DSS (RDSS) area extends from 7.47° to 8.03° south latitude and 38.620 to 39.170 east longitude. The RDSS is located in Rufiji District, Tanzania about 178 kilometers south of Dar-es-Salaam. Rufiji District is one of the six Districts of the Coast Region, the others being Bagamoyo, Kibaha, Kisarawe, Mafia and Mkuranga. Rufiji District, located in the south of the Region, has six Divisions with 19 Wards divided into 94 registered villages with 385 hamlets.

2.3.3 Surface Access to the Project Area

In terms of transport the Rufiji District area is crossed from North to South by the Dar-es-Salaam –Lindi / Mtwara trunk road, half of which is paved and the remainder unsealed. Unpaved feeder roads and tracks link most of the villages to this trunk road. Telephone facilities in the district are located in the three townships. The district is not connected to the national electricity grid, but Ikwiriri Township has 24 hour, diesel generated, electrical power from the national electrical supply company. Other places that have electricity depend on private generator units.

2.3.4 Population

The Rufiji District has a population size of about 182,000 of which 85,000 (about 47% of the District) are under survey. The population densities for the district and survey area are 12.5 and 46 per square km respectively. The mean household size for the whole districts about 5 persons (Bureau of Statistics, 1994). The district is largely rural although the population is clustered around Utete (District headquarters), Ikwiriri, Kibiti and Bungu townships.

2.3.5 Climate, Topography and Vegetation

The district has hot weather throughout the year and two rainy seasons; short rains (October to December) and long rains (February to May). The average annual precipitation in the district is between 800 to 1000 millimeters. Rufiji District has an overall mean altitude of less than 500 meters. Its vegetation is mainly formed of tropical forests and grassland. A prominent feature in the District is the Rufiji River with its large flood plain and delta, the most extensive in the country. Mangrove forests flank the tributaries of the delta. The river, from which the District takes its name, divides the district geographically into approximately equal halves. The district is also a gateway to Selous Game Reserve. The reserve has a variety of wild animals such as zebras, buffaloes, hartebeest, monkeys, lions, hyenas, warthogs and elephants.

2.3.6 Target Community

Target community for the project are people with low incomes. With the study done, Rufiji District members were taken as a model for low income earners. Low income

earners to the study carried are the people living under 1 US \$ per day and those living above 1 US \$ but cannot afford basic needs.

2.3.7 Stakeholders

Stakeholders for this project will be Rufiji Ward Local Government Leaders, Extension workers, Influential people at Rufiji and Rufiji residents.

2.3.8 Project Goals in CED Terms

Project goal is to increase the income level to the low income earners through chicken keeping for sale and nutrition improvement.

2.4 Project Objectives

2.4.1 General Objectives

General objective of the project is to increase the income level to low income earners through chicken keeping for sale and nutrition improvement

2.4.2 Specific Objectives

Project intends to:

- (i) To find out the importance of indigenous chicken in nutrition improvement
- (ii) To identify the contribution of indigenous chicken in low income people
- (iii) To find out how indigenous chicken improve life standard.

2.5 Host Organisation/CBO Profile

The project is owned by residents of Rufiji District about 178 kilometers south of Dar-es Salaam. Rufiji District is one of the six Districts of the Coast Region, the others being.

Bagamoyo, Kibaha, Kisarawe, Mafia and Mkuranga. Rufiji District, located in the south of the Region, has six Divisions with 19 Wards divided into 94 registered villages with 385 hamlets.

2.5.1 Mission

Self-determination within district members, self-empowerment through entrepreneurship and financial access.

2.5.2 Vision

To empower ourselves through Trainings, entrepreneurship and access to increase income and nutrition improvement.

2.5.3 Activities

- (i) Brooding hens
- (ii) Selecting and storage of hatching eggs
- (iii) Site selection for indigenous chicken
- (iv) Finding materials for chicken house building

Table 13: SWOT Analysis

Strength	Weakness	Opportunities	Threats
Strong and committed leadership	Insufficient funds for the project	Availability of market for project products	Diseases
Group has an access to Financial Institutions	Inadequate knowledge in chicken keeping	Availability of extension workers within the district	Theft due to lack of watchman
Group has strong unity	Distance between the chicken building and the households	Members volunteering for the project	
	Lack of basic accounting knowledge	Availability of feeds nearby	

2.5.4 The Role of CED Student in the Project

The role of the CED Student in the project is to make sure the plans are executed as they are planned in order the group members achieve the goal. The roles are listed here below:

- (i) To facilitate the importance of indigenous chicken in income generation
- (ii) Facilitating the importance of nutrients in diet
- (iii) To advise District members in purchase of poultry equipments, feeds and chicks.
- (iv) Assisting in lobbying and advocacy for Poul.

CHAPTER THREE

LITERATURE REVIEW

3.1 Introduction

This chapter review the literature related to the indigenous chicken in income generation and nutrition improvement. It helps a researcher to get the relevant information through different data sources, which are either in primary source or in secondary source of data. Data are being found in different sources such as from the policy relating to the project to be executed, from different books, journals, reports and respondents. According to Patton (2003), Literature review is important as it provides knowledge of the problem are, clearly identifies the need for the proposed study and it identifies the gaps and strengths in previously scholarly studies. The chapter provides the Theoretical literature, Empirical Literature, Policy Review and Literature review summary.

3.2 Theoretical Literature

Chicken keeping is done by both rural and urban dwellers as chicken contributes for household incomes, which leads for the families to meet their social obligations, increasing food supply and nutrition to household members by either eating the meat or eggs from poultry. According to Kiman, (2006) and FAO, (2007), the term“ chicken keeping” refers to poultry, irrespective of the genotype, that are kept in small numbers in an urban or peri-urban setting for commercial or social purposes. The birds could be layers, broilers or indigenous chicken, ducks, turkey, geese, quail or guinea fowls. They may be kept in enclosed or in a free range but are housed indoors at night. The number of birds may range from as few as six to as many as

hundred or more, either as one type or in mixed flocks. The birds are kept in specially built houses, sometimes in cages, and are provided with feeds and water in a controlled way. There are also semi-intensive systems, which combine both feeding and scavenging within an enclosure.

The poultry production systems in Africa are mainly based on scavenging indigenous chickens and most of these chickens are found in virtually all villages and households in rural Africa (Aichi, 2003; Kazi, 1998). These systems are characterized by low output per bird. However, over seventy percent of the poultry products and twenty percent of animals' protein intake in most African countries come from this sector (Aichi, 2003). Poultry production systems in Africa are distinguished by the fact that chickens are indigenous and integral part of farming system, with short life cycles and quick turn over; low input production system with outputs accessible at both inter households and intra household levels. The free range systems convert low quality feeds into high quality protein. In most African countries, the chicken have no regular health control programmer, may or may not have shelter and scavenge for most of their nutritional needs (Van veluw, 1987; Yongolo, 1996).

Chicken productions in Bangladesh have improved the status of landless women through access to more food, income and labour as well as increased social status in the rural community (Saleque and Mustafa, 1996). Further, accessing village woman with chicken encourage their involvement in rural development, particularly where technology transfer include their participation of end users (Ngongi, 1996; Alders,

1997). Local chicken are known to be able to survive under various types of shelters including make shift chicken houses, kitchen and even roosting in trees (Adrew, 1990; Host, 1990; Mustafa, 1990; Yongolo, 1996).

Chicken housing in modern poultry keeping is an important input and has to be a major component of the initial capital investment (Weaver, 1996; Baghwat, 1996). Surveys have shown cases where no housing/shelter provided in rural poultry system. (Huchzermeyer, 1973; Kuit, Traore and Wilson, 1986; Antubi and Sonaiya, 1994; Yongolo, 1996).

Reports suggest that where housing is provided to village chickens, the houses are made of the locally available materials such as wood, mud, bricks, sugarcane stems, bamboo and cereal stovers (Antubi and Sonaiya, 1994; Huchzermeyer, 1973; Yongolo, 1990).

Commercially poultry production systems are said to be unstable especially when there is hunger and thus deficit in grain sources. In such circumstances, rural local chickens were to be the main source of animal protein (Suleiman, 1989). The shortage of maize, which is the staple food for Tanzanians, affects production of commercial poultry feeds, as maize is the major source of ingredients. The free-ranging local chicken sector can therefore provide a sustainable means of provisional of much need animal protein at a minimum cost (Msofe et al, 2002).

Indigenous chicken makes substantial contributions to household food security throughout the developing world. Indigenous chicken serves as an investment and

source of security for households. They are used as sources of meat and eggs for consumption. They are a source of income (Muchadeyi et al 2007) and thus represent a major contribution towards achieving Millennium Development Goal 1 (halve the number of poor people in the world by 2015). Their demand is ever increasing and marketing is easy thus providing source of income to families (Bett et al., 2012).

Indigenous chicken are alternative source of animal protein due to the fact that they can be slaughtered and consumed as a single meal hence do not require storage facilities. Indigenous chickens are also a means of investment to the welfare of women and children in traditional, low-input farming systems in the tropics (Dana et al 2010; Okeno et al 2012). Besides rural households, these low-input, low-output poultry-husbandry systems are an integral component of the livelihoods of most of peri-urban, and some urban, households in most parts of the developing world (Magothe et al., 2012). A review by Gueye (2000) indicated that an average family flock of five adult chickens (two cocks and three hens) enables women in Central Tanzania to have an additional income equivalent to 10% of the average annual income. In the Niger Delta, family poultry husbandry contributes 35% of the income of household women, which represents about 25% of Nigerian minimum wage and 50% of the per capita income.

In Cameroon, they contribute significantly to poverty alleviation and food security of more than 60 per cent of families living in rural areas (HakoTouko et al., 2013). Experiences in many other developing countries have shown that village poultry can be used as an effective means of empowering women and as a tool for poverty alleviation (Kitalyi, 1998). Besides economic considerations, the chickens are useful

in a number of social, cultural and spiritual activities such as entertainments, gifts, funeral rights and spiritual cleansing (Njenga, 2005). In some parts of Kenya, cock fighting is an exciting and popular entertainment for rural folk (Maina 2000). Other uses include disposal of kitchen leftovers, manure production and being biological clocks for telling time of the day especially in rural areas (Njenga 2005). Chickens are also used as animal model in biomedical research.

The composition and availability of feeds will vary, depending on the season, locality and production system. Poultry need feed containing energy and protein, as well as vitamins, minerals and water. The need for feed will change, depending on the age and status (chicken, grower, egg layer, broody hen) of the bird. The cheapest - and also often the best - way to supplement the diet of your poultry, is to use local resources. Many vitamins and nutrients are destroyed if the feed is stored too long or under sub-optimal conditions, e.g. high humidity and heat. Knowledge of feed quality and sources of different feed types is important for feed safety.

Although chicken keeping is beneficial as it increases income, nutrition and is environmental friend, the production faces constraints like diseases and parasites, poor feeds supply, limited to financial credit access, high prices in inputs, insufficient of marketing strategies, low management skills. All these contribute to low productivity.

3.2.1 Poultry/Chicken Diseases

Disease can be defined as any change or impairment of normal body function that affects the chickens' ability to survive, grow or reproduce. An understanding of the

cause of a disease and its method of spread (transmission) will assist in controlling it. Knowledge of the clinical signs of a disease and the characteristics of lesions found at Post-mortem will help in its diagnosis and instituting preventative measures.

3.2.2 Rules of Diseases Prevention

Give access to the right feed and clean water, particularly for small chicks;

- (i) Build shelters against wind and rain
- (ii) Clean houses regularly and disinfect the floor and walls
- (iii) Provide dry litter regularly where applicable
- (iv) Do not put too many birds together
- (v) Different species of poultry for example hens, turkeys, pigeons, ducks and guinea fowls should be kept separate
- (vi) Separate chicks from adult birds except from the mother hen
- (vii) Vaccinate chicks against the most important diseases and re-vaccinate where necessary
- (viii) Isolate and treat sick birds – if medication is not available then kill the sick birds
- (ix) Burn or bury killed birds.

3.2.3 Characteristics of Healthy Birds

- (i) Alert and on guard
- (ii) Bright eyes and comb
- (iii) Walk, run, stand and scratch
- (iv) Continuously Eat and drink
- (v) Normally Lay eggs

- (vi) Normally Smooth and neat feathers
- (vii) Soft compact droppings Breathe quietly

3.2.4 Characteristics of Unhealthy Birds

- (i) Unhealthy birds/sick birds
- (ii) Tired and lifeless
- (iii) Dull eyes and comb
- (iv) Sit or lie down
- (v) Eat and drink less
- (vi) Lay less or stop laying eggs
- (vii) Ruffled and loose feathers
- (viii) Wet droppings with blood or worms, diarrhea
- (ix) Cough, sneeze and breathe noisily.

3.2.5 Costs Associated with Disease Control

- (i) Mortality
- (ii) Morbidity
- (iii) Reduced productivity- weight gain/egg production
- (iv) Downgrading at processing
- (v) Treatment
- (vi) Vaccination
- (vii) Surveillance and monitoring
- (viii) Loss of market
- (ix) Public health control
- (x) Welfare perceptions

3.3 Empirical Literature

Empirical literature review was done in order to find if there are related studies done in order to capture what others have done in order to know the gap or use their findings as inputs to the current study. This was done by the use of research questions of the study. The empirical study based or focused on the assessment of the commercial poultry keeping in order to find if the chicken keeping for commercial purposes will lead to an increase of incomes to households, individuals and national through its contribution in the Gross Domestic Product.

Chicken keeping has its history and this can be traced back to probably eight thousand years ago. The history of chickens (*Gallus domestics*) is a bit of puzzle and they were first domesticated from a wild form called red jungle fowl (*Gallus Gallus*) a bird that still runs wild in most of southeast Asia, likely hybridized with the grey jungle fowl (*G. Sonneratii*). That occurred probably about eight thousand years ago. Recent research suggests there may have been multiple origins in distinct areas of South and Southeast Asia, including North and South China, Thailand, Burma and India.

Since the wild progenitor of chickens is still among us, comparisons of behaviour and other changes that exist are available to us. Behaviourally, domesticated chickens are less active, have fewer social interactions, are less aggressive to would-be predators, and are less likely to go looking for foreign food sources than their wild ancestors. Other changes include increased adult body weight and simplified plumage; egg production starts earlier, is more frequent and produces larger eggs.

Genetic studies suggest multiple origins of domestication. The first archaeological evidence to date is from China about 5400 BC, in geographically widespread sites such as Cishan (Hebei province, ca 5300 BC), Beixin (Shandong province, ca 5000 BC) and Xian (Shaanxi province, ca 4300 BC). Domesticated chickens appear at Mohenjo-Daro in the Indus Valley by about 2000 BC and, from there the chicken spread into Europe and Africa. The earliest firm evidence for chickens in East Africa are illustrations from several sites in New Kingdom Egypt.

Chickens arrived in western Africa at Iron Age sites such as Jenne-Jeno in Mali, Kirikongo in Burkina Faso and Daboya in Ghana by the mid-first millennium AD. In Americas, it is believed that chickens were brought to the Polynesian islands from Southeast Asia with the Lapita expansion, about 3300 years ago. While it was assumed that they had been brought to the Americas with the Spanish conquistadors, presumably pre-Columbian chickens have been identified at several sites throughout the Americas, most notably at the site of El Arenall in Chile, ca 1350 AD.

Since then chickens have been kept in different countries, these chickens are kept due to their importance like being the source of food, nutrition, income, eggs, poultry manure for use as organic manure, source of foreign exchange to the country through exports of poultry products. Chickens keeping are done in different countries like Malawi, Tanzania, Bangladesh and others. In Malawi village poultry keeping forms an integral part of rural life in Malawi. Most villagers own chickens even an impoverished widow and this helps to improve the living status of villagers. In Malawi there is an opportunity of keeping chicken, as there is controls for diseases, better housing, better nutrition, better breeding, better management. In each of these

aspects there are gaps and constraints where dedicated input can achieve real progress, real benefits.

In Malawi there is a focused attention to the village poultry sector in order to improve the productions. The National Rural Poultry Centre (NRPC) was formed in early 2013 as an affiliate of the International Rural Poultry Centre, a subsidiary of the KYEEMA Foundation based in Brisbane, Australia. The NRPC exists to promote the needs of smallholder poultry farmers to raise livelihoods and contribute to improved nutrition in rural areas of Malawi. NRPC aims on fostering widespread Government and Community commitment to village poultry, promote advocacy for the smallholder poultry, Improve disease control and other sources of loss, serve as a focus for a network of individuals and institutions who are involved in with village poultry, serve as a small but significant local centre of excellence on the village poultry sector. Others are to promote measures to improve the health of rural poultry genetic resources, promote training and education at all levels, in smallholder poultry and related subjects, undertaking some basic field research on health, production and marketing of village poultry and finally evaluate and optimise the potential of rural poultry.

In Malawi, about 86 percent of the population lives in rural areas, where most people practice smallholder subsistence farming (NSO, 2000). The majority of the people are resource poor, and over 60 percent are food insecure (NEC, 1999). These farmers grow different crops and are the custodians of more than 80 percent of the total national livestock population (GO, 1998). Their annual per capita income could be as low as the equivalent of US\$74 (Gondwe et al, 1999), mainly derived from crop

production. In Malawi poultry are named in Chichewa and most of the names were descriptive and based on phenotype; feather plumage, legs, tail feathers, head and other features or simply colour. Poultry keeping in some countries are kept under the approach of the community-based project. Community-based project is designed to promote diverse breeding of poultry species in rural areas while at the same time putting necessary intervention measures in place to deal with identified constraints. Unlike other projects related to poultry, such as the Bangladesh (Jansen, 2000) and Egyptian models (Kolstand and Abdou, 2000). This project concentrates on indigenous poultry species of chicken in order improve meat and egg production and sustain diversification within flocks utilizing the existing free-range system. All management decision under community-based projects, are taken and implemented by the community and accompanying research is based on full farmer participation.

In Bangladesh's experiences, women are the ones operating and managing technical enterprises like; broiler farming, layer farms and duck farms efficiently with a high economic return on the investment (Riise et al, 2004). Rural women in either male-headed or female headed households of North-West Amhara, were more responsible for chicken rearing, while the men were responsible for crop cultivation and other off-farm activities (Halima, 2007). According to Mcainsh et al (2004) and Gueye (1998); approximately 80% of the chicken flocks in a number of African countries were owned and largely controlled by rural women.

In Bangladesh, over two million poor women have involved themselves in poultry production and this has been valued as a tool for poverty alleviation through increasing of household income by selling of chicken. Poultry production can be a

tool for improving the immediate welfare in household, especially for women and children, (Alam, 1996 and 1997). Quisumbing et al (1995 and 1998), argue that considerable attention is needed to adapt the poultry model to the cultural, technical, economic, and institutional situation in the target country. Over the years many donord including DANIDA, IFAD, WFD and ADB have supported the poultry projects in Bangladesh with funding and technical assistance.

In Ethiopia, poultry production systems show a clear distinction between traditional low input systems and modern production system using relatively advanced technology. There is also a third emerging small-scale intensive system as an urban and peri urban small-scale commercial system (Alemu and Tadelle, 1997). In Ethiopia, smallholder rural poultry production is characterised by the small flocks, nil or minimal inputs with low output and periodic devastation of the flock by disease (Tadelle and Ogle, 1996).

In Tanzania, chicken keeping forms an integral part of household activities providing food and generating additional family income. Chicken keeping makes an important contribution to the livelihoods of the most vulnerable rural households. In Tanzania, chicken keeping is now being transformed to sub sector into an industry that will cater for the needs of poor households. Chicken production also improves household's nutrition standards and helps meet family and social obligations. Poultry production in Tanzania is being contributed by the growing of demand of poultry products. The poultry industry in Tanzania is divided into traditional poultry production and commercial poultry production. Traditional poultry sector is the largest contribution of about 70% of the flock and supplying 100% of poultry meat

and eggs consumed in rural and 20% in urban areas. Poultry production in Tanzania is being carried out under two major systems which are small scale village or backyard poultry system which is the dominant one and the small scale extensive traditional systems in rural areas.

Chicken are kept in Tanzania because of the benefits derived and these benefits are sources of animal protein for the population of Tanzania, source of income to the farmers, sources of foreign exchange to the country through exports of poultry products, feathers and continuous supply of eggs and also manure for use as organic manure. Though poultry in Tanzania brings some benefits, the industry is being faced with some challenges which are lack of marketing skills, lack of organization among producers, inadequate regulatory framework in the poultry farming, inadequate technical support services and low genetic potential of the local breeds, Hatcheries and breeding farms are limited, lack of motivation by the local population to engage and invest in poultry farming, poor health control, poor housing and inadequate feeding, lack of adequate capacity to control diseases like Newcastle disease that attack poultry, low productivity per producer and poor nutrition and husbandry management.

3.4 Policy Review

Tanzania is endowed with natural resources, which include land, forage and a large livestock resource base. Livestock's kept in Tanzania are for instance 18.5 million Cattle, 13.1 million Goats, 3.6 million Sheep's, 1.2 million Pigs, 30 million indigenous poultry and other species (MWLD, Statistical Year Book, 2005). The livestock industry in Tanzania is being categorized into two major production

systems, which are extensive and intensive. In order for livestock industry to develop and achieve its goals, the industry requires a comprehensive livestock policy to guide all stakeholders.

Since 1980s, Tanzanian economy has been undergoing gradual and fundamental transformations in order for the industry to achieve its goals. Different poultry policies have been formulated, the first policy document was formulated and launched in 1983 with the aim of stimulating livestock development in the centralized economy and the emphasis was on large-scale parastatal institutions for production, processing and marketing. The second policy (Agricultural and Livestock Policy of 1997) was in line with the ongoing reforms and redefined roles of public and private sectors. During the implementation of second policy, other reforms emerged thus demanding for a review and formulation of a new policy.

The new policy which is the third policy seeks to address specific key issues which include animal identification, registration and traceability, animal welfare, indigenous technical knowledge, biotechnology and bio-safety, organic livestock farming, food safety, emerging diseases, livestock products regulatory institutions, professional regulatory institutions, animal genetic resource conservation, livestock stocking, veterinary laboratory system, livestock related disasters and pet animals. The policy aims at stimulating development in the livestock industry in order to increase rural and national income, improve food security and environmental conservation. The policy endeavors to increase national well-being of all stakeholders involved in the livestock industry.

Though livestock contributes to GDP, Livestock development in Tanzania faces some challenges like lack of proper arrangement to allocate land and give ownership of grazing areas according to traditional or legal procedures, frequent changes of livestock grazing areas into crop cultivation, game reserves and the migration of livestock farmers that limit them to develop their areas, Livestock diseases, inadequate infrastructure for processing and marketing of livestock and livestock products, knowledge and skills of livestock keeping and unavailability of credit facilities.

There are opportunities for poultry development in Tanzania and these opportunities will increase the poultry's contribution to the national economy. These opportunities are like a large herd and diverse livestock resources, land resources, diverse and favorable climate and agro-ecological zones, potential domestic and export markets, availability of trainable manpower and relatively low cost labour, wide range of indigenous technical knowledge in livestock and favorable macro-economic policies.

The rationale for the national livestock policy is to commercialize the industry and stimulate its development while conserving the environment. The aim is to support the livelihoods of livestock farmers through increased incomes and self-sufficiency in food of animal origin and thus addressing the goals set in the National Strategy for Growth and Reduction of Poverty (NSGRP) of 2004. Tanzanian population is expected to increase to 55.2 million by the year 2025 thereby significantly increasing demands for livestock products; therefore a need for special emphasis on improvements of livestock productivity.

“The livestock industry has a clear development vision, based on the Tanzanian development Vision 2025 that states; By year 2025, there should be a livestock sector, which to a large extent shall be commercially run, modern and sustainable, using improved and highly productive livestock to ensure food security, improved income for the household and the nation while conserving the environment” (Tanzanian livestock policy, chapter 2.1) The policy also has a mission which states; ”To ensure that livestock resource is developed and managed sustainably for economic growth and improved human livelihood” (Tanzanian livestock policy, chapter 2.2).

Policy has an overall objective and specific objectives. An overall objective of is to develop a competitive and more efficient livestock industry that contributes to the improvement of the well-being of the people whose principal occupation and livelihood is based on livestock achieve environmental sustainability, strengthen technical support services and develop and disseminate new technologies and to develop human resources including livestock farmers.

The poultry industry in Tanzania is divided into traditional and commercial production systems and traditional system is the largest contributing over 70% of the flock and supplies most of the meat and eggs consumed in rural and about 20% in urban areas. The main indigenous breed sub-types include Kuchi, Kishingo, Sukuma, Kinyafuzi and Kiduchu. Commercial poultry production is mostly practiced in urban and peri-urban areas. The common commercial breeds and their crosses include White Leghorns, Rhode Island Red, Light Sussex and Plymouth Rock and some hybrids such as Hi sex, hybro, Shavers and Arbo Acres. Both commercial and

traditional systems are constrained by diseases, poor quality feeds, and inadequate technical support services, low genetic potential of the local breeds and weak farmers' organizations and there is inadequate regulatory framework in hatcheries and breeding farms.

As the policy aims to increase the quantity and improve the quality of poultry and its products to satisfy domestic demand, increase export and promote sustainable poultry production, the Government of Tanzania has to support and strengthen technical support services and use of appropriate technologies in poultry production, promote inventorisation, characterization, evaluation and selection of the indigenous poultry breeds. The Government has to undertake promotion for investment in poultry production, processing and marketing. Others are to encourage establishment of quality breeding farms and hatchery facilities and to sensitive, encourage and promote establishment of poultry producers and traders associations (Tanzania Livestock Policy, 9).

For veterinary services, the policy states that there should be veterinary services that comply with World Organization for Animal Health (Office International des Epizooties-OIE) standards, recommendations on animal health and guidelines for international animal diseases control and trade. Livestock's and livestock's products are guided by World Trade Organization (WTO) Sanitary and Phytosanitary (SPS) Agreements. The government has established veterinary laboratory system that comprises national laboratory and zonal laboratories that are strategically located and these include Animal Disease Research Institute (ADRI-Temeke) functioning as Central Veterinary Laboratory (CVL), Veterinary Investigation Centers (VICs) at

Mpwapwa, Iringa, Arusha, Mwanza, Mtwara, Temeke and Tabora. These laboratories do provide technical support for disease surveillance, diagnosis, quality control and supervision of field vaccination campaigns. There are other laboratories like that of Sokoine University of Agriculture (SUA), Tanzania Wildlife Research Institute (TAWIRI) and other private owned laboratories.

The Government has declared in the policy that the veterinary medicines will be provided by ensuring adequate supply accessibility and affordability of safe, quality and efficacious veterinary medicines. The policy states that the Government will encourage and support manufacturing, importation and distribution of quality veterinary medicines and will also strengthen technical support services in veterinary service.

The Government has also declared in the policy that livestock inputs like feed resources, germ-plasm materials, farm machinery, and equipment used for veterinary practice and livestock facilitated by working in collaboration with stakeholders in order to promote investment in production and distribution of these livestock inputs and the Government will also strengthen technical services in livestock inputs.

Local Government Authority has been given greater responsibility and authority to develop and implement their plans in livestock production, facilitation and maintenance of law and order, while private sector is tasked to respond to a new set of opportunities and challenges. Some of the reforms have been made in the Local Government Authorities in order to enable them implement the policy, strategies and programmes and this has been done hand in hand with the livestock extension staffs

being transferred from central Government to Local Government Authorities in order to increase their efficiency, effectiveness and accountability.

Non-Governmental Organizations (NGOs) and Community Based Organizations (CBOs) also play a role in livestock development, particularly in the provision of knowledge, information, capacity building and mobilization of resources at the grass-root level and the Government will provide an enabling environment for the NGOs/CBOs to provide the necessary interventions. Apart from NGOs/CBOs, there are associations supporting the industry and these are like Tanzania Chamber of Commerce, Industry and Agriculture (TCCIA), Tanzania Chamber of Agricultural Council and Livestock (TCAL) and the Confederation of Tanzania Industries (CTI). So, the National Livestock Policy will be used as a guide towards achieving the vision and mission of the livestock industry. The objective is to attain food security, poverty reduction and increasing of in household and National income from livestock industry.

3.5 Literature Review Summary

The study found literatures concerning Poultry Keeping project. Different poultry keeping projects are implemented in the world. Some Poultry keeping projects were found in Tanzania, Malawi and other countries. In Tanzania, the Government has formulated the Policy in order to support the Poultry keeping as Poultry keeping brings income to households through the selling of the products such as meat, feathers and manure. Poultry keeping in Tanzania seems to be carried out at most household's levels. Most rural families keep Poultry as the poultry in rural areas are

less costing as the chicken search for feeds themselves. This makes many families to keep them.

The Government has supported the poultry keeping projects by formulating the policy and the implementation of the policy helps the people with poultry keeping projects get support. The Government has shown the interest of support by implementing the policy by employing extension workers in order to support the poultry keepers within the country. Apart from employing extension workers, the Government has established livestock/poultry research centers to ensure healthy of the livestock or poultry. Government has given private sector the approval to support livestock and poultry sector development by allowing them to open research centers, veterinary medicine centers, vaccination centers and other supports in order to ensure poultry sector grows and helps households to increase their income and fight against income poverty. It is expected that chicken keeping project that was established by Rufiji District members will be sustainable and increase the incomes to households of community members and other community members indirectly hence reducing poverty at household levels.

CHAPTER FOUR

PROJECT IMPLEMENTATION

4.1 Introduction

This chapter is very important as it links with previous chapter one and two. Chapter four is the execution of the identified project. As it links chapter one which is the needs identified and chapter two which is problem identification. After identification of the project to be implemented, we implement in chapter four. Chapter four deals with the project implementation and this implementation carries sub-titles which are Project output, Project planning, Project Implementation Plan, Project Inputs, Staffing Pattern, Project Implementation Budget and Actual Implementation Report.

4.2 Products and Outputs

The project will be able to accomplish following items by the end of June, 2013.

4.2.1 Products

- (i) Farmers, village leaders with knowledge and skills in modern poultry keeping.
- (ii) How to do away with chicken diseases
- (iii) New chicks
- (iv) Seasonality chicken production

4.2.2 Outputs

- (v) 20 members trained on modern poultry keeping
- (vi) 10 leaders trained
- (vii) Knowledge and skilled from the Demonstration area
- (viii) Production of beneficiaries poultry system increase.

4.3 Project Planning

Project planning is a procedural step in project management, where required documentation is created to ensure successful project completion. Documentation includes all actions required to define, prepare, integrate and coordinate additional plans. The project plan clearly defines how the project is executed, monitored, controlled and closed.

This project planning requires an in-depth analysis and structuring of the setting project goals, identifying project deliverables, creating project schedules and creating supporting plans. The project goal is defined and the appropriate methods or activities are planned in order to execute the project. The necessary activities and duration are planned into a work breakdown structure.

The project planning also organises different areas of the project for instance project plans, workloads and the management of teams and individuals, funding or budgeting and materials. Usually project planning is being done before the project is actually started.

4.3.1 Project Implementation Plan

Project implementation plan is a technical document that provides a high level view of the overall structure of the project. This is the execution of the plan in order to achieve project overall goal, objectives and output. It describes how the activities will be carried out in order to achieve outputs. Time to be spent, resources to be used and responsible person.

Table 14: Project Financial Budget

SN	Activity	Objective	Output	Input	Resources			Responsible	Time Frame
					Material	Labour	Financial		
1.	To conduct awareness meeting for the stockholders and community on nutrition improvement	To identify the importance of indigenous chicken on income generation and nutrition improvement	Problem Statement	Documents and reports from district extension	- Survey Results Brochures	CED student & Extension Staffs	TSh. 1,200,000	CED student and Extension Staff	June, July, & Sept.
2.	Conduct a training to district members on how to generate income	To develop a model that enable them predict the status of income availability	40 members trained	Training Manual	Stationeries	- CED students - Extension officers	TSh. .4,250,000	CeED students	August. 2016
3.	To conduct supervising visits to the trained leaders	To develop a model that predict the status of nutrition availability in chicken	6 leaders to have supervisory skills	Performed Report on Monitoring & Supervision	CED student & Extension staffs	- CED students	TShs. 120,000	CED Students	Aug & Sept. 2016
4.	The Community Needs Assessment	To obtain the authentic requirements of community members to analyze the existing situation	Community Need Assessment	Interview Questionnaire	Community Profile Reports	- CED student & Community leaders & Extension Staff	TSh.300,000	CED students	Aug2016
5.	Training Impact on Monitoring Evaluation Meeting	To ascertain relevance appropriate-ness, effectiveness, efficiency of the training programme	Monitoring/Evaluation training participants basing on system.	Modern Poultry Performance Report	CED student & Extension Staff of Village Council member	- CED Students & Village Council members			

In order to achieve the overall goal of the Poultry keeping project, there are some activities to be carried and these activities are the identification of the community, conducting a one day workshop on poultry keeping, poultry building and officer, identification and purchase of chicks, purchase of equipments and chicks' feeds and marketing and selling of the poultry after maturity. Resources needed are community members and poultry expert for human resources and funds as financial resource and some stationery.

4.3.2 Inputs

During project implementation, some inputs were used in order to implement the poultry keeping project. Some of the inputs that were used during implementation of the project were human resources inputs, materials inputs and financial inputs. Human resources inputs were the use of human beings as project manpower and also as project management team. For the material resource, some material were used for the execution of the project and also financial resources was used as input for the project. Financial resource used was the use of funds/money for the payment of an Office rent, payment of a rent for poultry keeping building, purchase for poultry keeping equipments, payment for extension worker, purchase of chicks, purchase of Feeds, purchasing vaccination medicines and other payments done for the execution of the project.

4.3.3 Staffing Pattern

The project staffs are Project Manager, two Accountants, and three professionals working in the field of Agricultural & livestock management and community development. Others are two project supporting staff assisting the daily duties of the

project. All these staffs are working on voluntary basis. The project has established a Project Management Committee comprised of 5 members. The committee is responsible for overseeing the daily operation of the project activities.

4.4 Project Implementation Strategy

The implementation of the project was through participation of all stakeholders including CED student, agricultural extension officers, NGOs & CBOs along the village who specializing in poultry activities.

4.4.1 Inputs for Implementation

These includes the following:

- (i) Material support
 - Training Aids
 - Venue for training
 - Generation
 - Essential facilities
- (ii) Human Resources
 - Facilitators & Co-facilitators
 - Staffs from the district office
 - Coordinator – village chairman
 - Village Executive officer
- (iii) Financial Resource
 - Funds for facilitation
- (iv) Social Resources
 - Cooperation from the district – Goodwill
- (v) Active Participation of the Village leaders and farmers.

Table 15: Project Implementation Report

Hierarchy of Objectives	Objectively Verifiable Indicators (OVIs)	Means of verification (MOV)	Assumptions
Goal (Impact): Increase Income generation	Increased income and improved standards of living of the community	Survey and audited monthly and annual reports	Willingness of community members to disclose their economic status.
Objective 1: Training 15 group members on poultry keeping			
Output 1.1: 15 Group members were trained on Poultry keeping	15 group members were trained on Poultry keeping	Progressive report	Community members become aware about the project
Activities			
1.1.1 Identification of trainees	15 trainees identified	List of trainees	Group members are aware for training on poultry keeping
1.1.2. Conducting one day workshop on poultry keeping	15 Group members attended the Workshop	Attendance list	Community members become aware about the project
Objective 2: Acquiring a building for poultry keeping			
Output 2.1: houses built			Members can access building
Objective 3: Undertake production of the first batch of seven days old chicks			
Output 3.1: One batch of three hundred chicks were bought	Receipt for payments	Chicks in the poultry building	Chicks in the poultry building
Activities			
3.1.1. To identify good quality chicks	Quality of Chicks bought	Physical appearance of the bought chicks	Physical appearance of the chicks
3.1.2. Purchase of chicks	Receipt showing purchase payments done	Receipts and chicks in chicks building	Receipt of payment and presence of the chicks in poultry keeping building
Output 3.2. fifteen bags of Chicks' Feeds were bought	Feeds in the project area	Presence of feeds to the project area	Receipt for payment and presence of feeds at project area.
Activities			
3.2.1. To identify the Feeds with required nutrients for the chicks	Labels showing the type of feeds and their contents	Labels showing the type of feeds and their contents	Physical healthy of the chicks
3.2.2. To purchase fifteen bags of Chicks' Feeds	Receipt for payments and quantity of feeds bought	Receipt for payments and feeds available	Availability of chicken feeds

Output 3.3. Poultry brooders, heaters, feeders and troughs equipments for poultry keeping were purchased	Equipments in place	Receipt for payments and availability of equipments	Equipments in place
Activities			
3.3.1. To identify the needed suitable equipments	Equipments were identified	Quality of equipments bought	Labels showing quality of equipments
3.3.2. To purchase the equipments	Receipt for payments and quantity of equipments bought in place	Quality of equipments bought	Equipments in place
Output 3.4. One vaccination done to three hundred chicks	Number of chicks vaccinated	Progressive report	Visit done by Veterinary officer
Activities			
3.4.1. To identify the veterinary expert for vaccination	Veterinary officer was identified	Progressive report	Poultry were vaccinated
3.4.2. Doing vaccination activity	Number of chicks vaccinated	Physical health of chicks	Payment receipt for vaccination
Output 4.1. To sale three hundred live chicken to at least two reliable markets	Number of poultry sold	Increase of income through sales	Sales report
Activities			
4.1.1. Three buyers identified	Sensitization for poultry	List of sensitized people	Readiness of community members to support the project
4.1.2 Transport of live chicken	Chicken loaded in a truck	Truck with loaded live chicken	Chicken are ready for sale
Objective 5. To register the business officially			
Output 5.1 Constitution prepared	Minutes of the meeting for constitution making	Constitution in place	Rufiji District group members adhere to constitution
Output 5.2 Bank account opened	Account number	Check book	Readiness of group members to use Bank account
Output 5.3. Received Certificate of Registration	Receipt for registration fees' payments	Certificate of Registration in place	Community members are aware of the project
Activities			

5.1.1 District members meeting for constitution making	District members contribute to formulate constitution	Constitution manuscript	Stakeholders become aware on project
5.1.2 Signing and approval of the constitution	Group members accepted to formulated constitution	Attendance list of the meetings	Stakeholders become aware on project
5.2.1 Meeting to select the Bank	District members attendance on the meeting	Attendance list	Rufiji District members are aware on the importance of the use of Bank account
5.2.2 Selecting signatories and opening the account	Minutes of the meeting held for account opening	Names of signatories	Rufiji District members are aware on the importance of the use of Bank account
5.3.1. Facilitation of registration process	Key members making follow ups on registration process	Application letter for certificate of registration	Group members are aware for the project
5.3.2. Paying for registration	Amount of payment	Receipt for payment	Sustainability of the project

4.5 Actual Project Implementation

This part describes the actual project implementation. It described how the project was executed step by step. Shows how the activities were executed and the resources utilized in order for the activities to be implemented. Activities executed are those that were planned in the project design. Project implementation requires a coordination of a wide range of activities, the overseeing the team, the management of the budget, communication and other issues associated with the project.

Project implementation was done and planned activities were carried out as planned. The following activities have been conducted and some are accomplished while others are still on progress. Project design and planning was done and identification of trainees was done. Twenty members were identified for training and two days workshop on Poultry keeping was conducted in order to have group members with a

capacity that will manage the project to become sustainable in generating income and nutrients improvement.

With the help from veterinary or poultry expert, the equipments for the poultry keeping were purchased, Feeds were purchased and healthy chicks were purchased. Some activities were done like identifying the quality needed equipments, needed and recommended feeds with the quality nutrients and thereafter the chicks were purchased and being kept in their rented poultry building. Feeding of the chicks proceeded and vaccination was done to make the chicks healthy by being free from diseases attack. Supervision for feeding and records keeping went hand on hand in order for the project team to observe the maturity of the chick.

CHAPTER FIVE

PROJECT PARTICIPATORY MONITORING, EVALUATION AND SUSTAINABILITY

5.1 Introduction

Chapter five describes how the project participatory monitoring and evaluation will be carried out for the project to become sustainable. In order for the project to become sustainable there should be effective and efficient project monitoring and evaluation. Project monitoring will show if the project activities are executed as planned and the resources planned are utilized as it was planned hence gives a direction of the project so as the project team can determine if they are moving towards the planned direction in order to achieve the project objective hence achievement of the project overall goal. Evaluation has to be done and this will help to get the right information that will help the team to know if the project will either be sustainable or not to become sustainable.

Monitoring enable a project to be on the right track as any deviation can be located immediately. It also enables the progress in term of performance quality and standards. Evaluation is also critical for assessment in the surveillance of the projects situation and its appropriateness, acceptability and its impact evaluation basically is a work oriented to impact. Sustainability on the other hand is a continuous process of the project through its resource exploitation, but without comprising the users next.

According to World Bank web, Participatory monitoring and evaluation refers to a process through which stakeholders at various levels engage in Monitoring and

Evaluation of a particular project. It entails sharing the responsibilities for evaluation planning, implementation and reporting by involving stakeholders in defining the evaluation questions, collecting and analyzing data and drafting and reviewing the report. So, the needs for participation according to the World Bank is the sharing of the responsibilities by each stakeholder for each stage of the project during project life.

Participatory monitoring is the systematic recording and periodic analysis of information that has been chosen and recorded by stakeholders (insiders) of the project with the help of outsiders (experts). The main purpose of participatory monitoring is that it provides information during the life of the project, so that adjustments and/or modifications can be made if necessary. Participatory monitoring provides an ongoing picture that allows the community to determine whether the activities are progressing as planned and it also shows when activities are not leading to objectives, so that early adjustments can be made.

Participatory evaluation is an opportunity for both insiders (community members) and outsider (expert) to stop and reflect on the past in order to make decisions about the future. Insiders are encouraged and supported by outsiders to take responsibilities and control of planning, evaluation and analysis of the information and presenting evaluation results. Participatory evaluation is not taken as a final judgement on whether the project activities are successful or unsuccessful. The information should encourage changes and adjustments either during the life span of the activities for future phases of the activities or for future new activities.

The chapter describes project participatory monitoring, evaluation and sustainability of the Poultry Keeping project. The information has been collected and analysed for the purpose of monitoring the project, evaluating the project and see if the project will be sustainable. Monitoring and evaluation was done in order to ensure that the planned activities for Poultry keeping project are performed as planned, resources planned are well utilized, stakeholders participation if fully done. Rufiji District members participated in project planning and participated in planning on how monitoring and evaluation will take place. They participated in monitoring and evaluation for instance some of them volunteered in cleanliness of the Poultry building and outside the building, during cleaning the building, they see everything that is happening at the project site. Participation during vaccination also is a part of monitoring on how Poultry are vaccinated and also monitors the number of the poultry that were vaccinated and the medicine used for vaccination. By participating on vaccination helps them to know the medicine and costs used for purchase of the medicine and by doing so they are evaluating the vaccination activities. Some of the group members are Supervisors and Leaders for the project, being leader of the project means participation in the management of the project and by doing so, becomes the part of monitoring and evaluation of the project. As long as many group members participate in the project stages the expectation of the project to become sustainable becomes high.

5.2 Participatory Monitoring

Participatory monitoring is the systematic recording and periodic analysis of information that has been chosen and recorded by insiders with the help of outsiders.

Participatory monitoring provides information during the life of the project, so that adjustments and/or modifications can be made if necessary and by doing so, it helps to measure the progress of the project. Participatory monitoring helps to keep track of activities by recording information on a daily, weekly, monthly or seasonal basis and taking the time to stop and analyze the information monitored can provide important immediate feedback and can be used in the future for participatory evaluations. Keeping of tracks gives information for decision-making.

Monitoring as a continuous process is done from the commencement of the research project by involving the owners of the project, stakeholders of the project in participatory ways this means that the village leaders are involved fully. It compares progress of an activity with the original plan, as follows:

- (i) Certifying problems and finding solution immediately informally
- (ii) Keeping project activities on schedule by compromise.

Monitoring for projects was done continuously throughout the project life in order to detect discrepancy between planned and actual implementation. Key people including village extension officers were involved in making sure that the project was in track.

Participatory monitoring does not only keep records but also giving a room for people to add up, discuss, integrate the information. The time to stop and analyze vary according to the nature and/or seasonality of activities. In order for community members to participate in monitoring there should be an agreement on why they are making monitoring and everyone should be informed on the progress towards

planned objectives and activities. These members should be given an opportunity for trainings in order to have the ability to combine qualitative (descriptive) information with quantitative (number) information, providing a more complete analysis. By having an ability to track qualitatively and quantitatively, community members become able to track the progress towards objectives and activities.

We do participatory monitoring due to the reasons that it gives a room for knowing an ongoing picture that allows a community to determine whether activities are progressing as planned. Also it shows if the activities are not leading to objectives so that early adjustments can be made. Monitoring provides an early warning, which identifies problems at an early stage hence solutions can be sought before the problems get out of hand. By doing monitoring, good standards are maintained. Continuous feedback throughout the life of the activities ensures that the quality of the activities is sufficient to provide good results. Participatory monitoring shows the required resources that are required to produce a certain effect or how necessary resources can be distributed differently to get a better effect. Participatory monitoring ensures the equally representation in decision making and equally distribution of costs and benefits.

In this project, community members have participated fully at each stage. On project identification, group members joined together voluntarily and participated in the stage of identification of which project will be executed that will generate income in order for the group members to benefit from incomes that will be derived from the selling of the project products. Group members came from different occupations which were food vendors, tailoring, saloon, horticulture and bar and groceries.

Participation was done fully and they organized themselves and made an agreement on the project to be executed. They all participated in identification by using scoring ranking method of the thought projects and came up with the establishment of the poultry keeping project as they became aware that this will be viable and it is not too expensive to start and manage the project.

In project planning, each group member participated by giving his or her views concerning the project. Project planning needed their consent as it is the ones who are the owners of the project and are the ones that will have to implement the project. By implementing the project, they have to make monitoring and controlling of the project during project executions in order to control the resources to be used in order to manage the project planned budget. Implementation of the project will be done by group members. Group members have volunteered to perform some tasks in order to reduce the project management costs and also it is a part of learning to the group members. The members have volunteered to perform cleanliness, assist in vaccination activities, doing feeding of the poultry and also they volunteered in searching for the markets in order to be sure of the selling of the project products.

Participatory monitoring will be done in collaboration with the group members, this has been planned and it was organised by themselves. This aims to empower the group members for future project sustainability. This participatory monitoring will empower them as they will either establish new projects or increase the size of the project in order to increase the sales of their project products hence the increase of their incomes. Evaluation of the project will be done by the project evaluation expert in collaboration with the group members. Fully participation of the group members

in project evaluation will empower the group members in order for them to perform evaluation of their projects for their future projects. Group members will be trained on how evaluation of the project is being done and they will learn by doing the evaluation activities during evaluation of the current project.

5.2.1 Monitoring Information System

Monitoring information system is the system that has been designed to collect and report information on a project and project activities that enable a project manager to plan, monitor and evaluate the operations and performance of the project. According to IFAD (2000), monitoring system is defined as an observation system for the project managers to verify whether the project activities are happening according to planning and whether means are used in a correct and efficient manner.

In order for the monitoring of the project to be effective, monitoring information systems planned should be of timely, relevance and trustworthy in order to give an information that can be used to assess if the planned or desired changes are taking place. The system should also be considered in terms of cost, scope and scale of the information to be collected for monitoring, time and expertise during planning or selecting the system that should be used for monitoring.

Monitoring information systems can be of the quantitative in nature or qualitative in nature. During planning or selection of the information system to be used, planning teams should consider that the quantitative are often more costly in terms of the equipments, people and time while qualitative requires special skills which means the need for skilled people to be specified that are the ones to conduct the monitoring

activities for the project. So, there is a need to think before you plan what type of monitoring information system should be used for monitoring.

The monitoring information system that were developed should be appropriately managed. Monitoring system will need resources and management support to ensure that it is carried out effectively and in a way that it should contribute to the overall success of the project. If it is poorly managed then the reputation among stakeholders will be harmed. Poorly managing of the information system will lead to failing to collect information on time, poor quality monitoring work, overspending the budget, and limited capabilities.

In order for the project monitoring systems to work well then there should be a positive consideration on the people to be trained in order to promote effective monitoring support, systems that will integrate the information into a management structure and ensure data storage, processing and retrieval, and which can clarify formats for reports and timing, Time for monitoring activities to take place, Financial resources and use of monitoring information.

As the information is the fuel that drives the project monitoring system, without information, it is not possible to know what has happened and what has to be done in order to rectify the changes occurred. A well-functioning project monitoring system will enable to collect appropriate information on the work and on the project's context in a way that will feed into timely and relevant decision-making, reporting and learning on changes happened. Information system has to be carefully managed to ensure that the necessary information is collected at the right time, and to ensure

that you do not receive more information than you can analyse and that you need as a basis for action. This will help to collect the information that is needed rather than collecting information that is irrelevant.

Table 16: Project Monitoring Information System

Categories of information	Things to Monitor	Record to Keep	Data collector	Data users	Uses of Information	What Decisions can be made
1. Work plan Activities	Time spent Activities performed Resources spent	Resources' Utilization record	CBO team. CED Student. Agape group members.	CBO team CED student Agape group members	Ensure planned activities are performed as planned through making reference to work plan.	Reschedule of activities if needed.
2. Cost and Expenditure	Resources spent Equipments purchased Time management Operating within Budget	Purchasing records Inventory Time management Payment records	CBO team. CED Student. Rufiji district members.	CBO team CED student Rufiji district members	Compliance with Financial plan agreed by group members.	Determine needs for other funding sources. Budget review
3. Equipments and Feeds	Quality of equipments purchased. Quality of Feeds purchased.	Feeding reports. Purchasing receipts and reports.	Rufiji District group members. CED Student	Rufiji district members. CED Student	Ensuring purchased Equipments and Feeds followed quality planned.	Feeds purchased to feed the chicks or purchasing other Feeds.
4. Marketing and Sales	Marketing activities done. Cost of marketing and costs associated with Sales. Number of poultry sold	Sales and Marketing reports	Rufiji District group members. CED Student	Rufiji District group members. CED Student.	Sales report to be used to determine if the project gets profit or loss	Reschedule marketing activities. Re-pricing if the project does not make profit
5. Project sustainability	Resources' utilization. Project sustainability.	Performance progress reports	Rufiji District group members. CED Student	CBO team CED student. Rufiji District group members	Comparing work plan and Actual in order to determine if the project is on the right track.	Reschedule activities if not on the right track.

It also gives a room to oversee the quality of the information received so that the analysis and subsequent actions are not spoiled by the poor quality of the information available for the project. In this project, monitoring information system was designed in order for the project monitoring team to be able to monitor the project. Monitoring information system was designed by Rufiji District members with collaboration with the CED Student. The system planned will assist the members to monitor if the activities are carried out as planned, costs and expenditures, records to keep, who

collects reports, who makes decision on the reports, time planned and time spent and other resources used.

5.2.2 Participatory Monitoring Methods

Participatory Monitoring Method used was Participatory Rural Appraisal (PRA). It promoted the use of the methods in a participatory manner, allowing group members to be involved in deciding which the methods are appropriate, designing them, and collecting the information. By involving the group members in analysing the information for significant changes, there is a greater likelihood that project stakeholders as well as project staff will learn from the experience. Monitoring methods used were;

5.2.2.1 Documentation

Documentation method was used in collecting daily, weekly reports for monitoring progress of the project. Reports were collected from group members, extension worker and host organization and information that were collected were documented in various offices. .Data taken helped the project team in monitoring of the chicken keeping project and sustainability.

5.2.2.2 Participant Observation

Rufiji District members and other project stakeholders used the participants' observation for monitoring activities being carried for the project in order for the monitoring of the project. Monitoring is an ongoing activity and can be done by observing what is being done, relevance of what was done in relation to the project's

activities planned. Each participant is given a room to participate in monitoring activity in order to determine if the project is smoothly moving towards the plan.

5.2.2.3 Group Interview

Group interview tool/method was used to gather information that was used for the monitoring purposes. Group interviews give information about the experience and perspectives of the group concerning the progress of the project. All members were given a chance to express their view and experience concerning the project

5.3 Participatory Monitoring Plan

Participatory Monitoring Plan refers to a detailed proposal for doing monitoring, it is a plan of action, it is deciding on and making arrangements for participatory monitoring in advance. Monitoring plan should be created after the planning phase and before the design phase of a project or intervention. The Participatory monitoring plan should include information on how the stakeholders of the project or intervention will participate in monitoring and how the project will be examined and assessed. The plan should underlay assumptions on which the achievement of the project goal depend. The anticipated relationships between activities, outputs and outcomes.

Members of the project beneficiaries participated in the planning of how monitoring activities will be carried out. They discussed and prioritized their developmental needs and external actors (experts) used the information to plan their project and programmes. In participatory planning, local community members were given power in planning and were involved in decision –making on what they thought to be able

for them to achieve. It is a plan that involved group members who are the owner of the project in measuring, recording, collecting, processing and communicating information to assist local development project extension workers and local group members in the decision making.

5.3.1 Participatory Evaluation Methods

Participatory Evaluation Method used was Participatory Rural Appraisal (PRA). It promoted the use of the methods in a participatory manner, allowing group members to be involved in deciding which the methods are appropriate, designing them, and collecting the information. By involving the group members in analysing the information for significant changes, there is a greater likelihood that project stakeholders as well as project staff will learn from the experience. In participatory evaluation, people learn more about the things that will have worked well and also learn on how and why they worked well. They also learn on things that have not worked well and why they did not work well.

In a participatory evaluation, the overall and immediate objectives, their continued relevance and the effectiveness of the activities are all taken into account. Much of the information from Participatory Assessment, Participatory Baseline and Participatory Monitoring can be used in participatory evaluation. Information from participatory monitoring will give progress trends and total amounts. By examining the activities individually and relative to objectives, give stakeholders relevant and useful information that will help them decide whether the objectives and/or activities should stay the same or change. Participatory rural appraisal was used to facilitate

the use of Questionnaire, Focus Group Discussion and Key informants Interview methods were planned to be used during evaluation of the project.

5.3.2 Project Performance Indicator

In order for the project to be achieved and sustainable, there should be performance indicators planned in order to assess the achievement of the project. Performance indicators refer to variables that show the extent of change that resulted from the project. They help to measure quantities, quality and timeliness of what was planned. They measure the status of progress in achieving outputs and outcomes. The project indicators do show relevance, performance and effectiveness of the project as well as progress towards meeting its outputs and outcomes.

Table 17: Monitoring Indicators for the Project

S/N	Activity	Monitoring Indicators	Responsible Party
1.	Poultry keeping improvement toward Modern Poultry	Number of poultry keeping change to better poultry	- CED students - Extension Staff
2.	Formulation of Monitoring and Evaluation Systems supervision	- Checking of the Quality and quantity of the M&E system Prepared	- District's members - Extension staff
3.	Establishment of new Income Generating Activities	The number of the newly Income Generating Activities	- CBO-Consultant - Community Members

Source: Survey Findings, (2016)

5.4 Project Sustainability

Project sustainability is defined as a requirement of our generation to manage the resource base such that the average quality of life that we ensure ourselves can potentially be shared by all future generations. Development is sustainable if it involves a non-decreasing average quality of life (Geir B. Asheim, "Sustainability," The World Bank, 1994).

In order for the project to become sustainable there should be better utilization of resources and opportunities, understanding the interconnections among economy, society and environment and also living or utilizing resources within the limit. A project becomes sustainable when its resources are managed and utilized in the way that ensures successful project completion. For the project to become sustainable there are some principles to be followed and these principles are use limited resources, never exceed available resources and allocate resources strategically.

Use limited resources, the project can be accomplished only if resources are available and enough Rufiji District members assessed the required amount of resources and compared it to the existing resources base and this will help the Rufiji members manage the project in a sustainable manner. The principle states that never exceed available resources. The efforts to achieve effective management will be successful if the use of available resources never exceed the amount of resources necessary for the project completion. You should plan resource consumption in advance and minimize resource wastage. Allocate resources strategically. Rufiji District members recognized the importance of allocating project resources to only prioritized directions according to the strategy Resources allocation activities should

be planned for the long-term perspective and utilized considering stakeholders' expectation.

Planning sustainability. In order to plan sustainability you need to think of conceptualization of the project, organizing the project team, incorporate standards, minimize waste and communicate project. Conceptualize project, the concept of project has to reflect the probability of successful project accomplishment. If the concept is unrealizable, then the project is likely to be unsuccessful.

In order for this project to become sustainable, Agape group members carefully managed the process of project conceptualization to develop a concept that is coherent to available project resources, meets stakeholder's expectations and fits into their strategy. Organize project team; Project team will be a major project resource. Rufiji District members identified themselves and organized themselves in order to become the project resource for the aim of the project to become sustainable. Minimizing waste, project beneficiaries planned the use of resources in order to avoid wastage of resources. Incorporate standards and communicate project, group members incorporated their standards in order to fit their expectations and these were all communicated to the project team.

Project sustainability plan, group members prepared a document that described how the project management was going to respond to certain changes, events, emergencies or other factors which would challenge viability and relevance of their project. The plan also was strictly emphasising on the resources to be used. For this

project, the resources needed are easily to be attained as Poultry Feeds are many sold at different places in Rufiji and Dar es Salaam, Vaccination medicines are available.

With these steps being taken, it is the hope of the project beneficiaries that their project will be sustainable and the incomes that will be derived from the selling of the project products will increase the households' income and help to improve the economic and living standards of the project beneficiaries. The project will be sustainable as the market for poultry increases as days go on. The increase in demand gives a room for the project to be sustainable.

Institutional sustainability, due to the fully participation of project stakeholders from project identification, designing, implementation, monitoring and evaluation, this brings the sense of project ownership. Because they feel being the owner of the project they will have strategies to make the project sustainable. They had planned to register their group in order to be legally enforced and become a business entity that keeps poultry for sales. Another plan is to open a Bank account in which the profits will be saved for the future expansion of the project.

Financial sustainability will be achieved due to the reason that the group members planned to volunteer in performing some activities in order to minimize running costs for the project. Some of the project profit derived from sales will be deposited to the Bank account and any withdrawal shall be approved with some group members. This has been done in order to avoid embezzlement of their money. They have planned to have some months without distributing the profits to themselves in order to increase the money for future expansions of the project.

5.5 Data Analysis and Findings

The collected data was entered immediately after field survey and this was done simultaneously with the field survey during the period. Analysis of data provides sense for the data collected during the fieldwork. The research strategies employed in this study combine both qualitative and quantitative methods. The advantage of simultaneously employing qualitative and quantitative methods in the study of rural livelihoods is getting increasing recognition among researchers. This is because it enables to benefit from the insights that the two methods provided when used in combination.

Evaluation was conducted once at the midterm of the project. It was carried out by the village leaders, the village Community Development Officer, and the MCED student. They evaluated the progress in work plans, establishment of systems, implementation of planned activities, achievement of objectives, effectiveness of the project, impact of the project and efficiency/cost effectiveness of the project.

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1 Introduction

This Chapter six gives a summary of all previous Chapters. It explains what was done in the all previous chapters. The chapters gives a brief explanation on how Community Needs Assessment was carried out, Problem Identification, Literature review, Project Implementation, Participatory Monitoring and Evaluation and finally Project Sustainability. Participatory needs assessment was conducted at Rufiji District area in order to assess the level of income generated to community members and the nutrition improvement obtained in chicken meat. Rufiji District residents do perform chicken keeping and they do farming like farming tomatoes and other vegetables and some of the residents are doing business. The community needs assessment study was conducted in order to know the income generated to community members and nutrition improvement through indigenous chicken.

Problem identification was done during Community Needs Assessment as many residents of Rufiji District who were respondents to the study revealed that indigenous chicken are potential for income generation and nutrition improvement. Literature review was done in order to get information that would support the project to be viable and sustainable. After Literature review, it was found that chicken keeping project will be sustainable as there are many information supporting the project like Government support through policy and employing extension staff that support the project. Apart from the Government, the project has been implemented in other countries and became sustainable. Project planning and Implementation was

done in order for the group members to achieve their goal, which is to increase the incomes to individuals and nutrition improvement. During planning, monitoring and evaluation was planned and will be carried in order to know if the project will be sustainable and if there are changes to be adjusted in order for the project to achieve its goal. Generally, this chapter six explains briefly on what was done in the previous chapters.

Apart from giving a briefly explanation of what was done in the previous chapters, this chapter also explains on the conclusions and recommendations basing on the project in order to give a room for others who will need to undertake a study like this in the future.

6.2 Conclusion

The study was carried effectively at each stage, steps were followed at each stage in order for the project to be identified to be a real project that community members have selected through Pair wise ranking and the project to be executed to become sustainable and attain the planned goal of the community. By carefully conducting of Community Needs Assessment, Problem identification, Literature review and Project Implementation were well planned and executed. Monitoring and Evaluation will also be carried in order for the project team and community to assess if their project will be sustainable in order to start second phase of the project.

The findings from the Participatory Needs Assessment conducted at Rufiji District basing on the methods of data collection used, it was found that the respondents' sex was 28% male and 72% Female of which 22% had age ranging between 18-25 years,

25.5% had an age ranging from 26-33 years, 34% had an age ranging from 34-41 years, 11% had the ages between 41-48 years and 7.5% had an age ranging from 48-55 years. This finding shows that most of the respondents were youth which is a man power and this can be used for the development of their community and Country at large.

The findings show that this community had many occupations and the respondents had different occupations as 62.5% are Farmers, 7.5% are Business men and female, 8% were saloonists 2% were Teachers, 8% were small traders and 12% were Tailors. This data was taken from the fifty respondents out of seventy, planned sample of respondents. Education level of the community ranges from primary school to University and they revealed the project will be viable and sustainable due to the increase in demand and this will decrease dependency by creating new direct and indirect jobs due to the presence of the project. The study found that the community needs to be trained on skills and knowledge for the project in order to avoid risks.

The study found that chicken keeping is being done at different places like in rural and urban, and at different countries. Poultry keeping is done by both rural and urban dwellers as poultry contributes for household incomes, which leads for the families to meet their social obligations, increasing food supply and nutrition to household members by either eating the meat or eggs from poultry.

According to Kiman, (2006) and FAO, (2007). Chickens are kept due to their importance like being the source of food, nutrition, income, eggs, poultry manure for use as organic manure, source of foreign exchange to the country through exports of

poultry products. Chickens keeping is done in different countries like Malawi, Tanzania, Bangladesh and others. Although poultry keeping is beneficial as it increases income, nutrition and is environmental friend, the production faces constraints like diseases and parasites, poor feeds supply, limited to financial credit access, high prices in inputs, insufficient of marketing strategies, low management skills. All these contribute to low productivity and in order to increase productivity there is a need for stakeholder to give support on the mentioned issues.

The reason for the chicken keeping project to be selected was due to the reasons that Rufiji District members had ranked their potential projects and this became the project with more importance which means it was the first and selected to be executed. Second, the project is easy to establish as it is not more expensive as it does not need more capital for investment. Finally, after the project becoming successful, Rufiji District members will have their own chicken building in place in order to avoid paying rent of which in future they will only be inquiring the costs for purchase of chicks, feeds and medicine which will obviously be cheaper compared to other projects.

Participatory monitoring, evaluation and sustainability plans were developed and used as was planned. Relevant matrixes against Objectives, Outputs and Activities were developed for Project Monitoring and Evaluation. Monitoring plan was also established and it shows Project Performance Indicators, Sources of Data, how and when the data will be collected and the responsible persons to collect the information. For evaluation, also performance indicators against the objectives, outputs and Activities were developed.

First Outcomes that may be expected if the project will be successfully completed are the Community to increase their incomes individually and at household level and by an increase in incomes they can afford basic needs like paying for their House loans and meet other family obligations like paying for children's school fees, affording foods purchases and clothes. Second outcome is the impact of capacity building to the community. Rufiji District members will be able to manage chicken keeping projects and can also transfer the knowledge to the other communities. So, in future it is expected that the group will be a Business entity with its members receiving middle or higher incomes.

6.3 Recommendation

Researcher recommends for those intending to do studies in this similar project to encourage community participation at every stage. Community participation has a significant or impact on learning. By participatory of each members at every stage gives a room for each participant to gain new knowledge and also transfer his or her knowledge to others. Its my belief that each community member has a knowledge whether informal or formal and this knowledge can be of a support to others.

Capacity building has to be given a priority as this study revealed that most of the community members had insufficient knowledge on the project supervisor and management. There is a need for capacity buildings to be done to the communities that want to establish the project like this. Though chicken keeping is been done since previous years, many community members do not have sufficient knowledge on the project. So, empower the communities by doing Trainings, Workshops and Seminars to support them.

The needs for Community Participation, Transparency and Accountability are inevitable for the sustainability of the projects. Give a room for members to participate fully, allow and encourage Transparency in every stage from project identification to implementation and Monitoring and Evaluation. Also insist each person to be accountable for the project. Take measures for the people who make things in a wrong way.

In order for the projects to be effectively and efficiently, project design should be done systematically and each component needed should be accounted for. No any room to exclude things that are supposed to be included because by excluding things you will find difficulties during project implementation. You need to have detailed plan that shows the overall objective, specific objectives, output and activities to be carried out. Show who will do what, when and how and the location and the costs to be incurred.

Researcher recommends for the Literature review to be done effectively by gathering information from many different data/document sources. There are different sources of information like documentaries, journals, books, internet, pamphlets and previous Dissertations. Find detailed information from different sources. With sufficient sources of information, planning will be easily and implementation hence sustainability.

REFERENCES

- Beutler, A. (2007). Introduction to Poultry Production in Saskatchewan, University of Saskatchewan, Saskatoon, Saskatchewan, Retrieved on 18th November 2009 http://www.agriculture.gov.sk.ca/Introduction_Poultry_Production_Saskatchewan.
- Chambers, R. (1987). Sustainable livelihoods, environment and development: putting poor rural people first. IDS Discussion paper No.240. Brighton, UK.
- Ibe, S. N. (1990). Increasing rural poultry production by improving the genetic endowment of rural poultry in Africa. Addis Ababa, Ethiopia.
- Jacob J. P., Butcher, G. D., and Mather, F.B. (1998). *Vaccination of Small Poultry Flocks*, University of Florida, The Gainesville Publisher.
- Kimani, C. W. (2006). Improving farmyard poultry production in Africa. Socio-economics and Policy Research Working Paper 32. ILRI (International Livestock Research Institute), Nairobi, Kenya.
- Mbugua, P. N., (1990). Rural smallholder poultry production in Kenya. In Smallholder rural poultry production. Proceedings of an international workshop held October 9–13 1990, Thesaloniki, Greece.
- Minga U. M., Katule, A., Yongolo, M., and Mwanjala, T. (1996). The rural chicken industry in Tanzania, Research and Development Efforts in Tanzania, Morogoro, Tanzania.
- Ndegwa, J. M. and Kimani, C. W. (1997). Rural poultry production in Kenya: Research and development strategies In: proceedings of 5th Kenya Agricultural Research Institute (KARI) scientific conference, KARI, Nairobi.

- Ndegwa J. M., Kimani, C. W., Siamba, D. N., Mburu, B. M., and Waweru, O. M., (1998). Evaluation of the state of the art in poultry industry in Rift Valley Province in Kenya. Proceedings of rural poultry production workshop. August 1998. Kenya Agricultural Research Institute. Kakamega, Kenya.
- Nhleko, M. J., Slippers, S. C., and Nsahlai, I. V. (2003). A preliminary report of on-farm performance of rural chickens kept under farmersman-agement, pp. 79–83. Paper presented at the 1st National Workshop on Indigenous Poultry Development, Nature and Development Group of Africa. Pretoria, South Africa.
- Rhodes J. L., Timmons, J., Nottingham, J. R., and Musser, W. (2008). Broiler Production Management for Potential and Existing Growers, University of Maryland Cooperative Extension Poultry, Retrieved on 12th January, 2011 from: <http://www.mdchick.umd.edu>.
- Sonaiya, E. B., and Swan, S. E. J. (2000). Small-scale poultry production, technical guide manual. FAO Animal Production and Health 1. Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.
- Sonaiya, E. B. (1990). Toward sustainable poultry production in Africa. In: Paper presented at the FAO expert consultation on strategies for sustainable animal agriculture in developing countries, Rome, Italy.
- Sonaiya, E.B. (1993). Evaluation of non-conventional feed ingredients as supplements for scavenging chickens. In Proceedings, 7th World Conference on Animal Production. Toronto, Canada
- Tuitoek, J. K., Chemjor, W., Ndegwa, J. M., and Ottaro J. M., (1990). Morphological characteristics and protein requirements of indigenous Kenyan Chicken. In:

proceedings of the 6th biannual Kenya Agricultural Research Institute (KARI) Scientific Conference 9-13 November 1998, Nairobi, Kenya.

Yongolo, M. G. S. (1996). Epidemiology of Newcastle disease in village chickens in Tanzania. PhD dissertation, Sokoine University of Agriculture, Morogoro, Tanzania.

Yongolo, M. G. S., Minga U. M., Katule A. M., Mtambo M. M. A., Mutayoba S. K., Mdegela, R. H and Lawrence, P. (1998). Effect of Newcastle Disease on Population and Economic impact to scavenging village chicken in Msolwa Village in Morogoro Region Tanzania. *Tanzania Veterinary Journal*. 18(4), 90 - 104

APPENDICES**Appendix 1: Structured Questionnaire for Community Members**

Dear respondent, the questionnaires below intends to collect some information from you. Please be free to give the required information and information provided will be kept confidential.

Tick where appropriate and fill the information where required.

1. Respondents Personnel Particulars

i Sex: a) Male ()

b) Female ()

ii Age: a) 18-25 ()

b) 26-35 ()

c) 36-45 ()

d) 46-55 ()

e) 56-and above ()

2. What is the level of Education:

a) None ()

b) Primary Education ()

c) Secondary Education ()

d) University ()

e) Above ()

3. Respondent`s occupation

a) Farmer ()

b) Teachers ()

c) Local Leaders ()

d) Business/Traders ()

e) Technicians ()

f) Doctors ()

g)Others.....

4. What is an average monthly income of the community members?

a) Tzs. 5,000-10,000 ()

b) Tzs. 15,000-30,000 ()

c) Tzs.35, 000-50,000 ()

d) Tzs.55000-100,000 ()

e) Tzs. 200,000-500,000 ()

f) 550,000-1,000,000 ()

5. What are the major economic activities in the community?

- a) Food vendor ()
- b) Tailoring ()
- c) Hot culture ()
- d) Food processing ()
- e) Animal husbandry ()

6. What kind of project/business do you think is potentially, sustainable and economically viable?

- a) Food vendor ()
- b) Tailoring ()
- c) Hot culture ()
- d) Food processing ()
- e) Animal husbandry ()

7. What will be the impact of that project

- a) Increase of individual income
- b) Decrease of dependence
- c) Creation of employment

8) Does the government/private institutions provide support to income generating activities in the community?

a) Yes ()

b) No ()

c) I don't know ()

9) If yes what kind of support do they get?

a) Financial support ()

b) Entrepreneurship skills ()

c) Tools and equipments ()

d) No Support ()

e) Other Support ()

Appendix 2: Interview Guide for Focus Group Discussions with CBO

Date of Interview ___/___/___

Place of Interview _____

Name of Moderator of Focus Group Discussion:

Name of the CBO:

1. How many members of VICOBA are male and female? a)Male_____

b)Female____
2. When did VICOBA start? (Year).....
3. Is the CBO registered?
4. Who financed the CBO during the take-off?
5. What is the overall goal?
6. What are the income activities being undertaken?
7. Are the income generating activities generate profit? i)Yes () ii) No ()
8. Do you think the income from the established project will be beneficial to the members?.....
9. What are the other potential economic projects in the community?.....

10. What are the challenges facing the project?.....
11. Have the CBO members received any training on business under takings or technical knowledge related to the group activities?.....
12. How have the members benefited from the group income activities?.....
13. What kind of support has CBO received from the Government/any other development institution?.....
.....
14. What should be done to improve the group economic performance?.....
.....

Appendix 3: Interview Guide to Government Officials

Date of Interview ____/____/____

Place of Interview_____

1. Is there any program that support chicken keeping projects?
2. If yes, what kind of support?
3. How many CBO's are dealing with income generating activities in this community?
4. Does Government have any policy that support chicken keeping project?
5. What challenges facing poultry keeping in the community?
6. How does the Government support the project to be sustainable?
7. Suggest measures to support the project to become sustainable
 - a).....
 - b).....
 - c).....

Appendix 4: Application Letter to CBO

C/O The Open University of Tanzania,
P.O. Box 23409,
Dar es

Salaam,

22/7/2016

Mwenyekiti wa VICOBA Makazi
S. L P
Rufiji
Pwani

**YAH: MAOMBI YA KUKUTANA NA WANACHAMA WA VICOBA
MAKAZI**

Mada ya hapo juu ya husika,
Kwa barua hii nawasilisha maombi rasmi ya kukutana na wanachama wote wa
VICOBA Makazi.

Azimio la kukutana ni kupata fursa ya kujadiliana na kubadilishana mawazo katika
suala zima la kuleta maendeleo ya kiuchumi miongoni mwa wanachama na jamii
kwa ujumla.

Majadiliano yanatarajiwa kutumia muda wa saa moja na nusu na hii itategemea
ushiriki wenu ikiwa ni pamoja na kujali muda. Majadiliano hayo yanatarajia kuleta
matokeo ambayo yatasaidia kuimarisha au kuibua namna ya kupata ufumbuzi wa
masuala ya kiuchumi na changamoto zinazojitokeza katika maisha ya wanachama.

Iwapo ombi langu litakubaliwa naomba kupangiwa siku, saa na mahali pa kukutania.
Natanguliza shukurani zangu za dhati

Pamela Simba

Mwanafunzi wa chuo kikuu Huria-Kituo cha Dar es Salaam Makao makuu
Kitivo cha uchumi na maendeleo ya Jamii.

Appendix 5: Reply of Letter from CBO

VICOBA Makazi,
S.L.P
Rufiji
Pwani
29/7/2016 ,

Pamela Simba
K.K Chuo Kikuu Huria,
S. L P 23409,
Dar es Salaam.

Ndugu,

**YAH: OMBI LAKO LA KUKUTANA NA WANACHAMA WA VICOBA
MAKAZI**

Mada ya hapo juuu ya husika,

Kwa barua hii napenda kukufahamisha kuwa maombi yako ya kukutana na wanachama wote wa VICOBA Makazi yamekubaliwa.

Kutokana na azimio uliloandika la kukutana kuwa ni kupata fursa ya kujadiliana na kubadilishana mawazo katika suala zima la kuleta maendeleo ya kiuchumi miongoni mwa wanachama na jamii kwa ujumla, Uongozi umeafiki kukupa nafasi ya kukutana na wanachama.

Unaombwa kufika ofisini uonane na Mratibu ili kupanga ratiba na jinsi ya kukutana mara upatapo barua hii. Natanguliza shukurani zangu za dhati na pia kwa niaba ya wanachama.

Hadija Abdala
Mratibu VICOBA Makazi

Appendix 6: Photos of Trainees who Attended the Workshop



Some trainees who attended workshop



One day workshop on chicken keeping



Clarification during one day workshop on chicken keeping



Chicken building



Chicks in building



After purchase of chicks feeds started



Chicken Vaccination and feeding



Chicks in place