

**THE ROLE OF *MIGOWE* TOWARDS RURAL POVERTY  
ALLEVIATION IN NJOMBE DISTRICT, TANZANIA**

**BY**

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## ABSTRACT

Poverty alleviation is the most urgent task facing humanity today. It is a challenge that no country, developed or developing can forego. The characteristics of rural and urban poverty are quite different. In order to reduce rural poverty in Tanzania, improvement in farm incomes of majority of the rural population is necessary. One of the strategies which can be used as an intervention to alleviate poverty is *Migowe*. This study therefore, was designed to investigate the role played by *Migowe* towards rural poverty alleviation in four villages of Njombe District. The general objective of the study was to investigate the role of *Migowe* towards rural poverty alleviation. Specific objectives were to identify factors that influence community members to abide to *Migowe* regulations, to assess contribution of *Migowe* towards household food security and income improvement. The study adopted a cross-sectional research design where interview schedules were applied to collect data from a sample size of 120 respondents. Data were statistically analyzed by the use of descriptive statistics whereby frequencies and percentages were computed. Chi-square was employed to examine the relationship between variables. Findings from this study show that respondents participated in *Migowe* activities because they wanted to accomplish their planned activities on time. Activities involved in *Migowe* included buying pork, crop harvesting, cultivation, land preparation and milk selling. *Migowe* activities helped farmers to increase household incomes and household food security. Statistical T-test analysis result showed a significance difference at  $p \leq 0.05$  between mean income of *Migowe* and non *Migowe* members. Furthermore, the study recommends that farmers should be encouraged to continue working in groups of people with homogeneous social norms and values and that there should be a

deliberate effort of publicizing this type of traditional cooperation throughout the country to all farmers with similar activities.

## DECLARATION

I, **Danford Hezron Mwelelwa**, do hereby declare to the Senate of Sokoine University of Agriculture (SUA) that this dissertation is my original work and that it has not been or concurrently being submitted for a higher degree award in any other University.

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Date

The above declaration is confirmed

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Prof. M.R. Mlozi  
(Supervisor)

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Date

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## **DEDICATION**

This dissertation is dedicated to my lovely father Hezron Alaturanga Mwelelwa and my lovely mum Alatulaga Mgeyekwa who together brought me up and showed me the value of education. They cheerfully fulfilled their parental responsibility unknowingly.



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**LIST OF ABBREVIATIONS**

ARD	-	Agricultural Research and Development
FAO	-	Food and Agriculture Organization
FGDs	-	Focus Group Discussions
IAC	-	Inter Academy Council
IFAD	-	International Fund for Agricultural Development
KIT	-	Royal Tropical Institute of the Amsterdam-Netherland
LGA	-	Local Government Authorities
MA	-	Master of Arts
MDG	-	Millennium Development Goals
MSc	-	Master of Science
NBS	-	National Bureau of Statistics
NGOs	-	Non Government Organizations
NRI	-	Natural Resource Institute
NSGRP	-	National Strategy for Growth and Reduction of Poverty
SACCOS	-	Savings and Credit Co operative Societies
SNAL	-	Sokoine National Agricultural Library
SPSS	-	Statistical Package for Social Sciences
SSA	-	Sub Sahara Africa
SUA	-	Sokoine University of Agriculture
TDHS	-	Tanzania Demographic and Health Survey
TDV	-	Tanzania Development Vision
TZS	-	Tanzanian Shillings
UPE	-	Universal Primary Education

URT	-	United Republic of Tanzania
USA	-	United States of America
WWW	-	World Wide Web

## CHAPTER ONE

### 1.0 INTRODUCTION

#### 1.1 Background Information

Poverty alleviation is the most urgent task facing humanity today. It is a challenge that no country, developed or developing can forego. The characteristics of rural and urban poverty are quite different. Generally, poverty is high in rural areas where it is associated with lack of education, a low degree of market integration and lack of employment in the vibrant off-farm rural sector (World Bank, 1996a). A combination of strategies should be applied to combat rural poverty. Strategies aimed at alleviating rural poverty therefore include three key elements: identifying opportunities such as access to markets and social service provision to build up assets, facilitating empowerment like participation by the poor in political processes and decision-making and enhancing security. Social service provision essentially refers to the access to services by the most vulnerable farmers in rural society. Access to knowledge is required for growth, but if the context is not right, or if farmers' access is not inclusive, such growth will not lead to well-balanced development and certainly not to pro-poor development (Wennink *et al.*, 2007).

The most effective strategies are those which are well known and most experienced by the rural poor themselves. Poor people have their own strategies to secure their livelihoods depending on factors such as their socio-economic status, education and

local knowledge, ethnicity and the stage in the life cycle of the household (Messer and Townsley, 2003). Most of these are traditional, hence they are rarely considered to be potential for poverty alleviation especially in rural areas.

One of the strategies which can be used as an intervention to alleviate poverty is *Migowe*. *Migowe* are one of the traditional practices, which can be used to alleviate poverty in rural areas. *Migowe* can be defined as a form of collaborative production practiced by the Bena tribe. It can also be defined as work parties where members of the community of similar social relationship collectively come together to support one of their fellow member as friends and neighbours to help accomplish a given task. It may be cultivating farms, planting, weeding or harvesting especially in the peak season or in connection with specific tasks like brick making and building houses (Odgaard, 1997). *Migowe* is a plural and its singular form is *Mgowe*. Among the Bena tribe in Njombe District, *Migowe* are one of the manifestations of the social relationships between people of the same village or sub village.

*Migowe* has a long history among different tribes in Tanzania, and are known by different names. For example, they are called *slaqwe* among the Iraq in Arusha, *songoleda* among the Gogo in Dodoma, *Ifogong`ho* among the Sukuma in Mwanza (Towo, 2004), *chijao* among the Yao, *chitikidya* among the Makonde in Mtwara (Yusuph, A. personal communication, 2007), *ibyana* among the Safwa in Mbeya (Mlozi, M. personal communication, 2007), *indimya* among the Nyakyusa in Mbeya (Odgaard, 1997), *kuimiana vikwa* among the Pare in Kilimanjaro and *kiwili* among the Sambia in Tanga (Kiluvia, S. personal communication, 2007). In Southern Mozambique they are called *txima* among the Xangana and the Ronga tribes and

*dhidhima* among the Choipe tribe (Gule, C. personal communication, 2008). Furthermore, in North Togo they are called *kpabe* among the Losso tribe in Niamtongou (Djana Babatima, P. personal communication, 2008) and it is called *lubilo* among the Masubia tribe in Caprivi region of Namibia (Matungu, M. personal communication, 2008). Likewise, it is called *ubudehe* among the Rwandese in Rwanda (Mwabonimana, M. personal communication, 2008). According to Dunbar (2004), *Ubudehe* is the traditional Rwandan practice and cultural value of working together to solve problems. The government of Rwanda has resurrected this traditional cooperative mechanism as the model for a program designed to alleviate poverty. The objective of the program is to 'revive and foster collective action at the community level.' It is also designed to rebuild trust in communities, to build accountable local institutions, and to help local people act to alleviate poverty.

There are three types of *Migowe*. The first is the one where, the Chief or the person in authority calls all his people to come and work for a certain planned activity. This type was known as *Mukwila* (Nyangava, 2000). In this type of *Migowe*, people come and work because he is their Chief or person in authority. At the end of the work, food and drinks were served and sometimes even a bull is slaughtered for people to eat and even take away some of the meat to their homes.

The second type is one which is called by a man who is polygamous. His *Mgowe* concern all his wives and children who are able to work. They come to work in his

farm. The farm is his property, no wife or children can have a share on the produce from the farm. The last type of *Migowe*, is the one which is called upon by a head of household. This type is of great concern to this research, since its evolution is the product of different types of activities which are done nowadays. While there is a certain force in the first and second type of *Migowe*, nothing is behind this type of *Migowe*. In this type, there is a fixed schedule for *Migowe* activities for the whole week, especially when there are many activities to be done in the peak season, either on the farm or during the season of building houses. People come to help their fellow member just for a good will. By doing so, every member invests some kind of social capital where he/she will one day organize his/her *Migowe* to accomplish a certain activity.

In recent years, the focus of *Migowe* has tremendously changed. This has been due to the increase in technology, such as the use of tractors and draught animal power. Also, the increase in population has caused a decrease in farm land owned by a household. In the 2000s, community members in most villages in Njombe District have changed the activities that were traditionally done in *Migowe*. While in the past community members cooperated in farming and house building activities, currently they cooperate in buying pork slaughtered by one of their community members. Through this type of *Migowe*, pork is finished within a short time and the owner is assured of finishing pork within a day and can even manage to do other activities, which were not possible in the past.

Moreover, the owner is also assured of reducing the cost and loss which could be associated with selling pork for more than one day. But above all, one is assured of an



income from selling pork within a day. Through this practice, markets for the farmer's products are created within their environments. This type of *Migowe* has emerged due to a decline in crop prices such as maize and potatoes. In other words, this is a new strategy for improving communities towards food security and a way of increasing household income. It is argued that, this type of *Migowe* could be used as an entry point in assisting community members through provision of soft loans to improve their economic status and well being and hence alleviating poverty.

## **1.2 Problem Statement**

If poverty is to be alleviated in rural areas, initiatives should be strengthened to enable the poor to participate in economic growth. The more farmers are integrated into the rural markets, the less likely they are to be poor (World Bank, 1996b). *Migowe* are now a strategy for farmers to mobilize themselves in order to solve their own problems using their locally available resources.

In spite of their existence for quite a long time among many farmers, the actual role they play in poverty alleviation through accomplishment of their activities is not documented, hence not known. Few studies mention *Migowe* as a traditional practice for accomplishing farmers large tasks (Towo, 2004; URT, 2003; Amend, 2002).

There is inadequate information concerning *Migowe* practices and how they contribute towards poverty alleviation. This study therefore, aims at investigating the role of *Migowe* towards rural poverty alleviation in Njombe District.

### **1.3 Justification**

The results of this study will give a clear understanding of the role played by *Migowe* practices in the rural community towards rural poverty alleviation. This research is in line with National Strategy for Growth and Reduction of Poverty (NSGRP) cluster one which stipulates about growth and reduction of income poverty. Specifically, it focuses on goal four of NSGRP which aims at reducing income poverty of both men and women in rural areas and consequently, facilitating the achievement of good and quality life of all Tanzanian people as hypothesized in the Tanzanian Development Vision (TDV) of 2025. Moreover, the research is in line with Millennium Development Goals (MDGs) number one which is dedicating efforts to eradicating extreme poverty and hunger. Hence, the potential of *Migowe* to rural poverty alleviation will be known. Also, these findings will help policy makers, administrators, District Councils and financial institutions on how better they can do to help the rural community in poverty alleviation. Furthermore, the study will provide the basis for suggesting probable changes in the informal sector implementation in the district and will make a contribution to the improvement of relevant public policies aimed at rural poverty alleviation in the district.

### **1.4 Objectives**

#### **1.4.1 Main Objective**

The main objective of the study was to investigate the role of *Migowe* towards rural poverty alleviation in Njombe District.

#### **1.4.2 Specific Objectives**

- To identify factors that influence community members to abide to *Migowe* regulations towards alleviating rural poverty.
- To assess the contribution of *Migowe* towards household food security
- To examine the contribution of *Migowe* towards household income improvement
- To identify constraints facing *Migowe* activities in the communities.

### **1.5 Hypothesis**

1. *Migowe* practice contributes to an increase in income and food security of farmers, and alleviates poverty.
2. *Migowe* practice do not contributes to an increase in income and food security of farmers, and alleviates poverty

## CHAPTER TWO

### 2.0 LITERATURE REVIEW

#### 2.1 Overview of poverty in rural areas

Globally, 1.2 billion people are in extreme poverty and more than two thirds of them live in Asia, while about one fourth are in sub-Sahara Africa (SSA) (IFAD, 2002). Poverty in sub-Saharan Africa is still mostly a rural phenomenon despite rapid urbanization since more than 70% of the poor live in rural areas (IFAD, 2007). Agriculture remains a key sector for alleviating poverty in rural areas and has received renewed attention on the development cooperation agenda (World Bank, 2007). Agriculture is still the main economic activity for most rural people, it remains an important source of income for farmer households and contributes to sustainable financing of social-sector services ((Irz *et al.*, 2001). About 50% of Tanzanians are defined as poor and 36% are very poor (URT, 2002). Poverty remains devastating in rural areas where 87% of the poor live, and highest among households who depend on agriculture (URT, 2005a).

Poverty is the result of exclusion from economic, social and political processes that often reinforce each other. Meagre assets, difficulties in grasping the opportunities that

are potentially available and exercising countervailing power, often related to the policy and social context, are determining factors in the situation of the rural poor. Vulnerability to events that are out of their control often exacerbates their poverty situation (World Bank, 2001). The ill-being caused by poverty has many dimensions. Low consumption is only one such dimension, but it is linked to others: malnutrition, illiteracy, low life expectancy, insecurity, powerlessness and low self-esteem. Poverty is also linked to frustrated capabilities due to asset deprivation, inability to afford decent health, education and lack of power (IFAD, 2002). In order to reduce rural poverty in Tanzania, improvement in farm incomes of majority of the rural population is necessary (URT, 2001). In addition, promoting opportunities such as improving market functioning and stimulating economic growth is important in fighting poverty (Wennink *et al.*, 2007).

The poor need technologies to increase output from their assets, and they also need markets to exchange that output freely and to the best advantage. Yet, the poor are dogged by the market power of others, market failure, poor distribution outcomes from market successes and barriers to market access.

Rural areas are dispersed in remote areas, market access problems are most serious, and competition and information least adequate. Action by civil societies, governments, donors and often the poor themselves can greatly improve their relative access and strength in markets. Due to this, the poor are largely excluded from the institutions and partnerships that can enable them to share and control the decisions that affect their lives (IAC, 2004). In fact, widening market access and liberalization increasingly allow rural people to escape poverty through producing non-staples and exchange. In this

process non-farm assets and skills are critical, as are infrastructure and institutions to help small units to maintain market access during globalization (Woolcock, 2001).

Poverty is multidimensional, therefore, poverty reduction efforts have to be multi-targeted and are expected to show wide and diverse dimensions. Poverty alleviation is a complex task, requiring sustained commitment to consistent, yet flexible joint action (IFAD, 2002). The solutions have to straddle different disciplines and must encompass economic, social, political and institutional factors. There are no quick fixes and no easy solutions. No single institution, national or multilateral, public or private, and no single strategy can deal effectively with the different contexts and causes of poverty. Coherent anti-poverty strategy therefore requires stable partnerships, based on trust as well as self interest (Milani, 2005).

## **2.2 Rationale for *Migowe***

Poverty alleviation is not something that governments, development institutions or NGOs can do for the poor. The poor themselves have to seize responsibility, as agents of change, for their own development (IFAD, 2002). This is true due to the fact that empirical evidence throughout the world has shown that agricultural development is a highly location-specific process and it requires location-specific support research by social and technical scientists (Rukuni and Eicher, 1987).

### **2.2.1 *Migowe* as a Farmer Groups and Organisations**

Farmers' organizations and groups in SSA have existed for a long time, even though they presently occur in forms and structures that are different from those in the past and have evolved in many shapes (Wennink *et al.*, 2007). Farmer's organizations exist because farmers have recognized the need and benefits of being organized for a

particular purpose (Wennink and Heemskerk, 2006). The most ancient form of farmers' organization is represented by the 'self-help' groups, where farmers help each other, for example at peak labour periods and for food security purposes. Such groups are based on social traditions and manage the relations of members within their own local society. These still exist today, but are sometimes overlooked as farmers' organizations, maybe because they are informal and often seasonal (e.g., only during harvest time). Yet, they can be important building blocks for networks and genuine, grass root-based farmers' organizations (Wennink and Heemskerk, 2006).

*Migowe* are managed in groups of farmers of the same locality, such as sub village or the entire village. *Migowe* encompass people who interact frequently in various activities. Literature shows that people who grew up together tend to have interacted frequently, formed bonds of affection, internalized norms of cooperation, and are embedded in overlapping spheres of potential cooperation in everything from lending cooking oil to participation in local organizations and mutual business dealings (Gertle *et al.*, 2006). The most important thing to these people is the high level of social capital they have in their daily social and economic interactions.

### **2.2.2 *Migowe* as a Form of Social Capital**

Social capital is generally referred to as the set of trust, institutions, social norms, social networks and collective organizations that shape the interactions of factors within a society and are an asset for the individual and collective of well-being (World Bank, 1999). According to Grootaert and Van Bastelaer (2002) social capital is the value of connectedness and trust between people and as such to one of the five key assets (human, social, physical, financial and natural) for sustainable livelihoods. It is defined as 'the institutions, relationships, attitudes and values that govern interactions among

people and contribute to economic and social development'. The important features of social capital are relations of trust, reciprocity and exchanges, common rules, norms and actions, networks and groups or connectedness (Pretty, 2003). At the macro level, social capital can affect the economic performance and the process of economic growth and development (Fukuyama, 2000). Social capital consists of the stock of active connections among people, the trust mutual understanding, shared values and behaviours that bind the members of human networks and communities which make cooperative action possible (Cohen and Prusak, 2001). There are three types of social capital namely, bonding, bridging and linking social capital.

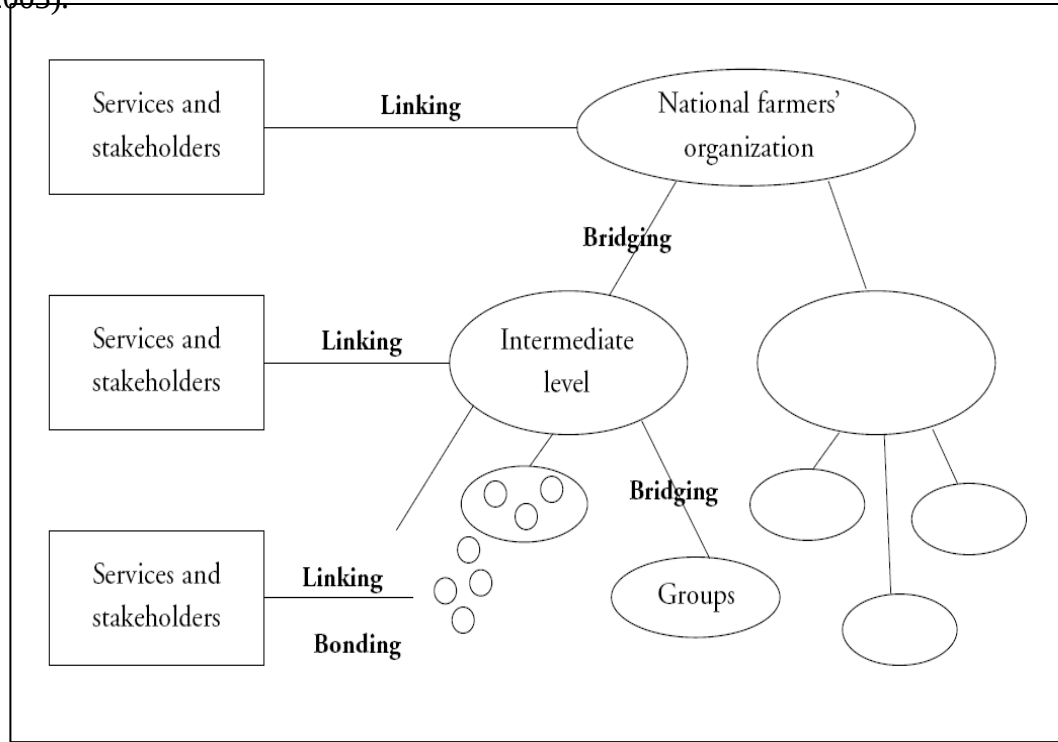
Bonding social capital occurs when socialization is taking place between people who are alike, such as the same age, same race, and same religion. It is referring to as the value assigned to social networks between homogeneous groups of people (Putnam, 2000).

Bridging social capital occurs when making friends with people who are not alike, such as supporters from another football team or other farmer groups at another levels and locality. This is in order to create peaceful societies in a diverse multi-ethnic country. Bridging refers to social networks between socially heterogeneous groups. Bridging social capital is argued to have a host of other benefits for societies, governments, individuals, and communities (Putnam, 2000; Grootaert *et al.*, 2002; Pretty, 2003).

Linking social capital takes place when developing relationships with government authorities, as well as public and private service providers, in order to influence decision-making towards the well-being of their members (Wennink *et al.*, 2007).



These may include interactions with agencies concerned with Agricultural Research and Development (ARD), financial institutions and other development partners (Pretty, 2003).



**Figure 1: Relationship of bonding, bridging and linking social capital**

Source: Wennink *et al.*, 2007

The notion of social capital is a useful way of entering into debates about civil society. It is central to the arguments of reclaiming of public life. It is also now being used by the World Bank and other institutions with regard to economic and societal development (Woolcock, 2001). It is argued that increasing evidence shows that social cohesion is critical for societies to prosper economically and for development to be sustainable (World Bank, 1999).

Social capital allows rural people to resolve collective problems more easily, as they often cooperate with each other. But each individual benefits more by dodging their responsibility, hoping that others will do their work too. Social capital also greases the wheels that allow communities to advance smoothly. Where people are trusting and trustworthy, and where they are subject to repeated interactions with fellow citizens, everyday business and social transactions are less costly. Yet, social capital improves the lot of rural people by widening their awareness of the many ways in which fates are linked.

People who have active and trusting connections to others, whether family members, friends or fellow farmers, develop or maintain character traits that are good for the rest of society. The networks that constitute social capital also serve as conduits for the flow of helpful information that facilitates achieving our goals. Social capital also operates through psychological and biological process to improve individual's lives. Mounting evidence suggests that people whose lives are rich in social capital cope better with traumas and fight illness more effectively (Putnam, 2000).



## CHAPTER THREE

### 3.0 METHODOLOGY

#### 3.1 Description of the Study Area

The study was conducted in selected villages of Njombe District in Iringa Region in the Southern highlands of mainland Tanzania where *Migowe* is practiced (Figure 2). Iringa Region is divided into seven Districts namely Njombe, Iringa rural, Iringa urban, Kilolo, Mufindi, Makete and Ludewa. Njombe District has an area of about 10 668 Sq km. The district is located between 7°5'-36°32' South and 33°44'-36°32 East. It has a population of 419 115 of which 195 182 are male while 223 933 are female (URT, 2005b). The areas that were covered by this study include Ng'anda and Mdasi villages in Igosi ward and Magoda and Kilenzi villages in Uwemba ward, all of which were located in Njombe District.

#### 3.2 Research Design

This study was carried out using a cross sectional survey approach where data were collected at one point in time as recommended by Bernard (1994). The approach is economical in terms of finance and time allocation.

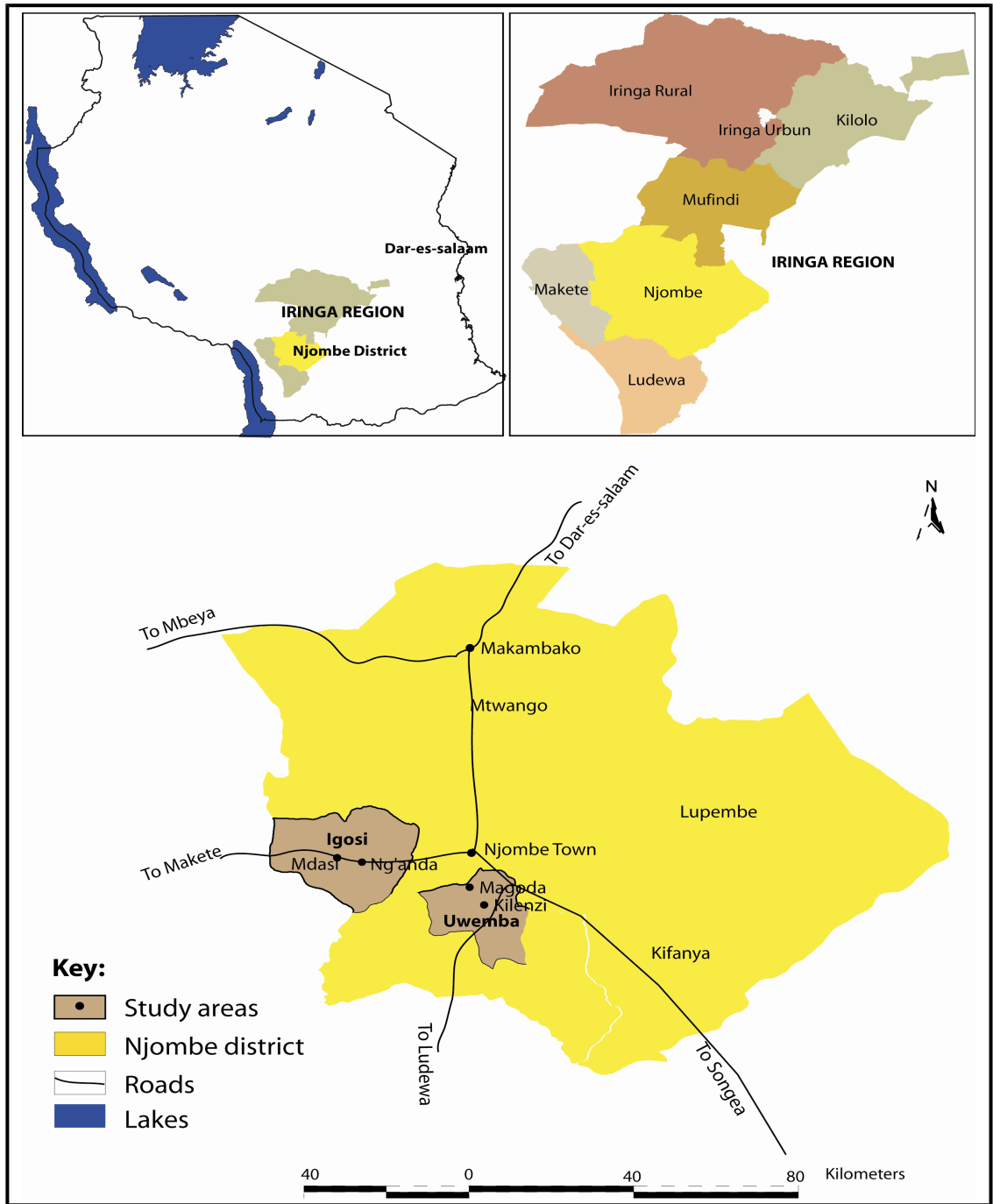


Figure 2: Map of Tanzania showing study areas

### **3.3 Sampling Procedure and Sample Size**

To obtain the desirable population, purposive sampling technique was used to obtain two wards. Two villages were selected from each ward. Purposive technique has been generally recommended in social science research as it focuses directly to the area intended for study (Kothari, 2006). The simple random sampling was used to select 30 respondents from each village, 15 respondents who are participants of *Migowe* and another 15 non-participants. The total sample size was 120 both men and women. There were 60 respondents who are participating in *Migowe* and another 60 who are not participants of *Migowe* (non- *Migowe*). The sampling unit of the research was the head of the households in the study area. The choice of this sample size is justified by the limitation of financial resources, but it fulfils the requirements of the study which are accuracy, representative and reliability to ensure meaningful analysis (Bailey, 1998).

### **3.4 Data Collection**

#### **3.4.1 Primary Data**

Interview schedules (proforma containing a set of questions) were used to get understanding of *Migowe* activities (Kothari, 2006). In this survey, information concerning *Migowe* were gathered. The interview schedules were used to collect data from respondents within a limited span of time. Focus Group Discussions (FGDs) was used to get in-depth information concerning *Migowe*.

There was one FGD in each village. Primary data was also collected from four key informants with more experience in *Migowe* in the study area.

**Table 1: Distribution of participants of FGDs**

Village	Sex		Total
	Male	Female	
Ng'anda	6	5	11
Magoda	11	5	16
Kilenzi	5	3	8
Mdasi	5	16	21
<b>Total</b>	<b>27</b>	<b>29</b>	<b>56</b>

### 3.4.2 Secondary Data

Secondary data were gathered by consulting different publications in the study area and libraries. These include Sokoine National Agricultural Library (SNAL), University of Dar es Salaam Library, Tanzania Library Service, official reports and electronic sources.

### 3.5 Data Analysis

Data from the respondents were verified, coded and summarized before being analysed by using Statistical Package for Social Science (SPSS). In this statistical package, descriptive analysis such as frequencies and percentages were generated. Chi-square was employed to determine association between variables and T-test analysis was employed to compare means of different variables. Qualitative data were analysed using content analysis (Stewart and Shamdasani, 1990).

## CHAPTER FOUR

### 4.0 RESULTS AND DISCUSSION

#### 4.1 Introduction

This chapter presents the results of this study and its discussion. The chapter is divided into the following sub-sections: demographic characteristics of respondents, factors influencing community members in abiding to *Migowe* regulations, role of *Migowe* towards household food security, income and constraints that *Migowe* activities face in the communities.

#### 4.2 Demographic Characteristics of Respondents

Age is an important demographic variable and is the primary basis of classification in statistics, censuses, and surveys (NBS, 2005). The study results showed that the age of respondents ranged from 22 years of age to 65 years old. Of the 120 respondents, about 54 (45.0%) were aged between 31 and 40 years old, followed by 38 (31.7%) who were aged between 41 and 50 years old (Table 2). In comparison, there was no statistical significant difference at  $p > 0.05$  between ages of males and females respondents. The implication of these findings were that both male and female respondents were of the same age, active and economically productive.

Table 2 also shows that of the 120 respondents, 61(50.8%) and 59 (49.2 %) were males and females, respectively. Among male respondents, *Migowe* and non-*Migowe* participants were 29 (47.5%) and 32 (52.5%), respectively, while female respondents were 31 (52.5%) and 28 (47.5%) *Migowe* and non-*Migowe* participants, respectively. These study findings indicated that there was gender balance in participating in *Migowe* activities.



The ability to read and write is an important personal asset, allowing women and men to increase economic opportunities in life. Knowing the distribution of the literate population can help programme managers, especially in agricultural activities to know-how to send messages to the people (NBS, 2005). The study results showed that most of the respondents 93 (77.5 %) had finished primary education, adult education and secondary education were 15 (12.5 %) and 3 (2.5 %) respectively (Table 2). There were no statistical significant differences at  $p \leq 0.05$  between males and females education levels. The study results implied that literacy levels of the respondents was adequate enough to enable them adopt agricultural innovations. A high number of respondents with primary education was attributed to the governments' deliberate efforts since 1977 when universal primary education (UPE) was introduced to all children.

**Table 2: Distribution of demographic characteristics of respondents (N=120)**

Variable	Male	Female	Total	$\chi^2$ -value	P-value
<b>Age</b>					
21-30	5 (8.2)	6 (10.2)	11(9.2)		
31-40	23 (37.7)	31 (52.5)	54(45.0)		
41-50	24 (39.3)	14 (23.7)	38(31.7)	4.88	0.30
51-60	8 (13.1)	8 (13.6)	16(13.3)		
61-70	1 (1.6)	0 (0.0)	1(0.8)		
<b>Total</b>	<b>61 (100)</b>	<b>59 (100)</b>	<b>120(100)</b>		
<b>Education level</b>					
None	1(1.6)	8(13.6)	9(7.5)		
Adult education	8(13.1)	7(11.9)	15(12.5)		
Primary education	51(83.6)	42(71.2)	93(77.5)	6.68	0.083
Secondary school	1(1.6)	2(3.4)	3(2.5)		
<b>Total</b>	<b>61(100)</b>	<b>59(100)</b>	<b>120(100)</b>		
<b>Marital status</b>					
Married	57(93.4)	44(74.6)	101(84.2)		
Single	3(4.9)	13(22.0)	16(13.3)	8.23	0.016
Widow	1(1.6)	2(3.4)	3(2.5)		
<b>Total</b>	<b>61(100)</b>	<b>59(100)</b>	<b>120(100)</b>		
<b>Relationship with head of household</b>					
Head of household	58(95.1)	13(22.0)	71(59.2)		
Spouse	0(0.0)	43(72.9)	43(35.8)		
Son	2(4.9)	0(0.0)	2(2.5)	73.6	0.0
Daughter	0(0.0)	3(5.1)	3(2.5)		
<b>Total</b>	<b>61(100)</b>	<b>59(100)</b>	<b>120(100)</b>		

Note: Numbers in parenthesis are percentages

Married respondents were more dominant 101(84.2%) than other categories, followed by single respondents 16 (13.3%) and widowed were only three (2.5%). Of all the respondents, married men and women were 57 (56.4%) and 44(43.6%), respectively (Table 2). There were statistically significant differences at  $p < 0.05$  between marital status of males and females which reflect the reality in rural Tanzania where most adult women and men are married (Makauki, 2000).

Information about the composition of household heads was also sought. The study results revealed that about half of the respondents, 71(59.2%) were household heads and spouses were 43 (35.8%), while sons and daughters were only three (2.5%) in each

household (Table 2). In addition, male household heads were 58 (81.7%), while 13(18.3%) were female who were single and widowed. There was a statistical significant difference at  $p \leq 0.05$  in relationship with the head of a household between males and females.

#### **4.3 Factors Influencing Community Members to Abide to *Migowe* Regulations.**

The study results indicated that of the 60 respondents who participated in *Migowe*, 31 (51.7%) were females and 29 (48.3%) were males, implying that there was equal participation sex wise in *Migowe* activities at household level. Of the 60 *Migowe* participating respondents, 55 (91.7%) reported that they participated in *Migowe* activities because they wanted to accomplish their planned activities on time, while three (5%) indicated that they wanted to share experiences with their fellow friends. Surprisingly, two (3.3%) respondents reported that they participated in *Migowe* in order to liaise with various institutions, and access loans. Furthermore, of the 60 *Migowe* participating respondents, 28 (46.7%) indicated that they started participating in *Migowe* activities five years ago, while 20 (33.3%) had been involved in *Migowe* for the last two years. Only five (8.3%) respondents indicated participating in *Migowe* at a very young age.

*Migowe* activities included buying pork, which was indicated by 55 (37.7%) of the respondents, followed by crop harvesting 54 (37.0%), and farming reported by 19 (13.0%). Land preparation and milk selling were each reported by nine (6.2%) respondents, respectively (Table 3). Focus group discussions (FGDs) results indicated that buying pork was the most preferred activity in *Migowe* activities.

This was so because farmers got high profits when they sold their pork in a day, and hence solved their financial problems quickly. Also, harvesting potatoes was the

second *Migowe* activity in all the interviewed villages because it had to be completed in a short time to take advantage of the available markets. For example, one member of FGDs said that:

*In this village, potatoes are a cash crop. In order to minimize cost of operations and still be able to fetch high market prices, it is important to join Migowe activities (Personal communication Magoda village, 2007).*

Milk selling was practiced in Magoda village only, and FGDs revealed that long distances to the milk factory resulted in having one or two farmers collecting milk from other *Migowe* members and ferrying it to the milk factory on a rotation basis.



**Plate 1: Mgowe members harvesting potatoes**



**Plate 2: Mgowe members packing potatoes in sacks at a collection point in the Farm**

**Table 3: Most prioritized *Migowe* activities and the reasons (N=120)**

<b>Activity</b>	<b>Responses</b>	<b>%</b>
Buying pork	55	37.7
Crop harvesting	54	37.0
Cultivation	19	13.0
Land preparation	9	6.2
Milk selling	9	6.2
<b>Total</b>	<b>146</b>	<b>100</b>
<b>Reason</b>		
Increase incomes	55	36.9
Increase food security	43	28.9
Labour intensive practices	20	13.4
Timing of agricultural practices	18	12.1
Reduce post harvest loss	11	8.7
<b>Total</b>	<b>147</b>	<b>100</b>

Note: Analysis was based on multiple responses

#### **4.3.1. Reasons for prioritizing *Migowe* activities**

Of the 60 *Migowe* participating respondents, 55 (36.9%) reported that *Migowe* activities helped them to increase household incomes and 43 (28.9%) reported that led to increased household food security. Of the 20 (13.4%) respondents mentioned that activities were labour intensive and needed *Migowe* members to help them. Few, 18 (12.1%) respondents stated that they wanted good timing of agricultural activities like planting, weeding, pest and insect control for increased yields (Table 3). Of all the respondents participating in *Migowe* activities, most of them 57 (95%) reported that they would have sustained economic losses if they had not participated in *Migowe* activities. Also, 54 (90%) of the respondents agreed that the participation purpose was to maintain social relationships (Table 4). Moreover, 43 (27.2%), 28 (17.7%) and 18 (11.4%) of the respondents indicated that if they had not participated in *Migowe* activities, they would have earned less annual household incomes, lost social relationships and lost pork markets, respectively.

**Table 4: Losses obtained by not participating in Migowe (n=60)**

Losses	Response	Frequency	%
Financial loss	Yes	57	95
	No	3	5
Social loss	Yes	54	90
	No	6	10
<b>Financial and social losses</b>			
Reduced income		43	27.2
Loss of social interaction		28	17.7
Loss of communication with fellows		21	13.3
Loss of meat market		18	11.4
Reduced crop harvest		16	10.1

Note: Analysis was based on multiple responses

Farmers have been working in groups ever since farming started, varying from cooperation in harvesting and threshing, collaborative grazing and management of animals (Heemskerk and Wennink, 2004). *Migowe* was done in groups with shared values and behaviours, brought farmers together to achieve their objectives. Different groups of *Migowe* had different number of members and the study findings showed that 19 (31.7%) of the *Migowe* participating members indicated that a *Mgowe* group consisted between 11 to 15 members, 17 (28.3%) indicated 16 to 20 members, while 12 (20%) reported six to ten members (Table 5).

**Table 5: Distribution of number of members in Migowe by village (n=60)**

Number of members	Name of the village				Frequency	%
	Ng'anda	Magoda	Kilenzi	Mdasi		
2 – 5	0	0	0	2	2	3.3
6 – 10	1	0	2	9	12	20.0
11 -15	2	9	4	4	19	31.7
16 – 20	3	5	9	0	17	28.3
> 20	9	1	0	0	10	16.7
<b>Total</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>60</b>	<b>100</b>

#### **4.3.2 Management of *Migowe***

Respondents were asked about the management of *Migowe* in their communities. Of the 60 respondents, 38 (63.3%) reported that there were formal constitutions for managing *Migowe*, while 22 (36.7%) indicated that goodwill and trust governed the implementation of *Migowe* activities in the villages. FGDs revealed that in Ng'anda village all 15 *Migowe* participants reported that good will and trust governed *Migowe* activities and that there were no formal elected leaders. Here respondents said that they knew each other through their daily interactions in various social and economic activities, whereas in Magoda village all 15 *Migowe* participating members indicated having formal constitutions that governed *Migowe* activities and had formally elected leaders. In Kilenzi and Mdasi villages, a mixture of the two management approaches was practiced.

The non *Migowe* participating members were asked to mention the reasons for not participating in *Migowe* activities in their villages. Of the 60 non *Migowe* participating respondents, 41 (37.3%) mentioned that they wasted time in *Migowe* activities, while 16 (14.5%) and 15 (13.6%) respondents indicated that *Migowe* activities delayed their activities and that *Migowe* activities were imperfect, respectively (Appendix III). However, of the 60 non *Migowe* participating respondents, 32 (53.3%) indicated that they understood about the presence of *Migowe* activities in their communities.

Participation is referred to as the act of taking part, be involved or sharing something in common with others as fellows, partners or family members. It is an important aspect in all societal development activities. Of the 60 respondents participating in *Migowe*, 40 (66.7%) stated that all members in their households had equal opportunities to



participate in *Migowe*. Few, 16 (26.7%) of the respondents indicated that household heads made decisions on whether household members should participate in *Migowe* activities (Table 6). Furthermore, FGDs revealed that all household members had equal chances of deciding their participation in *Migowe* activities.

**Table 6: Overall decision to participate in *Migowe* by sex (n=60)**

Category	Male	Female	Total	P-value	$\chi^2$ - value
Members of the household	21(72.4)	19(61.3)	40(66.7)		
Head of the household	8(27.6)	8(25.8)	16(26.7)		
Male only	0(0.0)	1(3.2)	1(1.7)	4.04	0.257
Female only	0(0.0)	3(9.7)	3(5.0)		
<b>Total</b>	<b>29(100)</b>	<b>31(100)</b>	<b>60(100)</b>		

Note: Numbers in parenthesis are percentages

#### 4.4 The Role of *Migowe* in Household Food Security

##### 4.4.1 Size of Farmland Owned and Cultivated

Results in Table 7 show that of the 120 respondents, 29 (24.2%) reported owning 3 to 4 acres of farmland, and of these 14 (48.3%) were *Migowe* members and 15 (51.7%) non *Migowe* members. Of all the respondents, 28 (23.3%) indicated having 5 to 6 acres, of which 18 (64.3%) were *Migowe* members, and 10 (35.7%) non *Migowe* members. It was also found that 19 (15.8%) of the respondents owned 7 to 8 acres, of which 12 (63.2%) were *Migowe* members and 7 (36.8%) non *Migowe* members. About 20 (16.7%) of the 60 respondents reported owning more than 8 acres, of which 12 (60%) were *Migowe* members, and 8 (40%) non *Migowe* members. There was a statistical significant differences at  $p < 0.004$  between acres owned by *Migowe* and non *Migowe* members. These results implied that *Migowe* members owned more acres than non *Migowe* members, perhaps due to opportunities of having more people to work the land, hence more food.

**Table 7: Distribution of respondents' acres of cultivation (N=120)**

Parameter	Categories of respondents		Total	$\chi^2$ - value	P- value
	<i>Migowe</i> members	Non <i>Migowe</i> participants			
<b>Farmland owned</b>					
1-2	4(6.7)	20(33.3)	24(20.0)	15.10	0.004
3-4	14(23.3)	15(25.0)	29(24.2)		
5-6	18(30.0)	10(16.7)	28(23.3)		
7-8	12(20.0)	7(11.7)	19(15.8)		
> 8	12(20.0)	8(13.3)	20(16.7)		
<b>Total</b>	<b>60(100)</b>	<b>60(100)</b>	<b>120(100)</b>		
<b>Acres cultivated</b>					
1-2	13(21.7)	35(58.3)	48(40.0)	18.43	0.001
3-4	23(38.3)	15(25.0)	38(31.7)		
5-6	16(26.7)	8(13.3)	24(20.0)		
7-8	6(10.0)	2(3.3)	8(6.7)		
9-10	2(3.3)	0(0.0)	2(1.7)		
<b>Total</b>	<b>60(100)</b>	<b>60(100)</b>	<b>120(100)</b>		

Note: Numbers in parenthesis are percentages

Apart from acres of farmland owned, of the 120 respondents, 48 (40%) indicated cultivating 1 to 2 acres, of which 13 (27.1%) were *Migowe* members and 35 (72.9%) non *Migowe* members. Also, of all the respondents, 38 (31.7%) reported to have cultivated 3 to 4 acres of different crops, of which 23 (60.5%) were *Migowe* members and 15 (39.5%) non *Migowe* members. Further, it was found that of all the respondents 24 (20%) indicated to have cultivated between 5 and 6 acres, of which 16 (66.7%) were *Migowe* members, and 8 (33.7%) non *Migowe* members (Table 7). There was a statistical significant difference at  $p < 0.001$  between acres cultivated by *Migowe* members and non *Migowe* members. This implied that *Migowe* members had more labour and hence cultivated more acres than non *Migowe* members, which meant more food supply to these households than to non *Migowe* member households.

Based on farmland owned and acres cultivated, we can say that participation in *Migowe* activities was beneficial to most villages and improved farmers' welfare and food security.

#### 4.4.2. Food Crops Grown

The crop sector plays an important role in the Tanzania economy providing jobs, sustenance and income to 4 858 810 rural households growing crops (NBS, 2005). The study results revealed that farmers had crops which were used mainly for food consumption at the household levels. Maize was the food crop cultivated by all respondents in all four villages, while potatoes were a food crop cultivated by 99 (82.5%) of the respondents, and wheat by 80 (66.7%) (Table 8). Results in Table 8 show that of the 120 respondents who cultivated maize, 47 (39.2%) got yields between 1 000 – 1 900 kgs, whereas 29 (61.7%) were non *Migowe* members, and 18 (38.3%) were *Migowe* members, of the 23 (19.2%) respondents, the yield received was indicated between 2 000 – 2 900 kgs, whereas nine (39.1%) of these were non *Migowe* members and 14 (60.9%) were *Migowe* members. Also, peas and beans were cultivated by few respondents. There was a significant difference in yields at  $p < 0.002$  between yield of maize of two groups of farmers (Table 8).

**Table 8: Distribution of respondents' food crop yield by participation in *Migowe***

Crop	Category of respondents		Total	$\chi^2$ - value	P- value
	<i>Migowe</i> participants	Non <i>Migowe</i> participants			
<b>Maize yield in kgs (N=120)</b>					
Below 900	3(5.0)	13(21.7)	16(13.3)		
1 000-1 900	18(30.0)	29(48.3)	47(39.2)		
2 000-2 900	14(23.3)	9(15.0)	23(19.2)		
3 000-3 900	12(20.0)	4(6.7)	16(13.3)		
4 000-4 900	3(5.0)	4(6.7)	7(5.8)	25.05	0.002
5 000-5 900	2(3.3)	0(0.0)	2(1.7)		
6 000-6 900	6(10.0)	0(0.0)	6(5.0)		
7 000-7 900	0(0.0)	1(1.7)	1(0.8)		
8 000-8 900	2(3.3)	0(0.0)	2(1.7)		
<b>Total</b>	<b>60(100)</b>	<b>60(100)</b>	<b>120(100)</b>		
<b>Potatoes yield in Kgs (n=99)</b>					
1 000-9 900	24(44.4)	34(75.6)	58(58.6)		
10 000-19 900	25(46.3)	10(22.2)	35(35.4)		
20 000-29 900	4(7.4)	1(2.2)	5(5.1)	10.22	0.017
30 000-39 900	1(1.9)	0(0.0)	1(1.0)		
<b>Total</b>	<b>54(100)</b>	<b>45(100)</b>	<b>99(100)</b>		

Note: Numbers in parenthesis are percentages

According to Table 8, of the 58 (58.6%) respondents who cultivated potatoes, harvested yields of between 1 000 and 9 900 kgs, whereas of these, 24 (41.4%) were *Migowe* members and 34 (58.6%) non *Migowe* members. There was a statistical significant differences at  $p < 0.017$  between yields of *Migowe* members and non *Migowe* members. In addition, T-test analysis was employed to compare mean yields of maize and potatoes. The results showed significant differences at  $p \leq 0.05$  between mean yields of *Migowe* and non *Migowe* members. *Migowe* members had maize and potatoes mean yields of 13 262.92 kgs, while non *Migowe* members had 7866.08 kgs (Table 9). The implication of these findings was that *Migowe* members produced more yields of food crops compared to non *Migowe* members, hence giving them greater possibility being food secure in their households.

**Table 9: Mean yields and incomes of maize and potatoes**

Category	Respondents	Mean	T – test	P - value
<b>Mean yields (Kgs)</b>				
<i>Migowe</i> members	60	13 262.92	4.03	0.000
Non <i>Migowe</i> members	60	7 866.08		
<b>Mean incomes (TZS)</b>				
<i>Migowe</i> members	60	2 061 158.33	4.434	0.000
Non <i>Migowe</i> members	60	1 142 283.33		

#### 4.4.3. Types of livestock possessed

The livestock sector also plays a significant role in the Tanzania economy providing jobs and income to an estimated 1 745 776 households who keep livestock, representing 36% of the total number of farming households in Tanzania (NBS, 2003). The study results revealed that livestock were possessed in different numbers. While pigs were kept by all respondents in all the study villages, local chickens were kept by 99 (82.5%) of the respondents; goats, cattle and sheep were kept by 36 (30%), 27 (22.5%) and 22 (18.3%) of the respondents, respectively (Table 10). Few respondents kept guinea pigs and rabbits. Pigs and cattle had positive relationship with *Migowe* practices due to selling pork to villagers and milk to the milk factory located in Njombe township. Of the 120 respondents, 75 (62.5%) had one to two pigs, which were kept by 48 (64%) of the non *Migowe* members, and 27 (36%) *Migowe* members. Furthermore, 38 (31.7%) had 3 to 4 pigs which were kept by 12 (31.6%) non *Migowe* members, and 26 (68.4%) *Migowe* members. However, there was statistical significant difference at  $p > 0.00$  between number of pigs kept by *Migowe* and non *Migowe* members.

**Table 10: Distribution of respondents' possession of livestock**

Livestock type	Category of respondents		Total	$\chi^2$ - value	P- value
	<i>Migowe</i> participants	<i>Non Migowe</i> participants			
<b>Pigs (N=120)</b>					
1-2	27(45.0)	48(80.0)	75(62.5)	18.04	0.0
3-4	26(43.3)	12(20.0)	38(31.7)		
5-6	7(11.7)	0(0.0)	7(5.8)		
<b>Total</b>	<b>60(100)</b>	<b>60(100)</b>	<b>120(100)</b>		
<b>Chickens (n=99)</b>					
1-20	41(80.4)	44(91.7)	85(85.9)	5.30	0.259
21-40	8(15.7)	3(6.3)	11(11.1)		
41-60	1(2.0)	0(0.0)	1(1.0)		
61-80	1(2.0)	0(0.0)	1(1.0)		
81-100	0(0.0)	1(	1(1.0)		
<b>Total</b>	<b>51(100)</b>	<b>48(100)</b>	<b>99(100)</b>		
<b>Cattle (n=27)</b>					
1-4	18(94.7)	7(87.5)	25(92.6)	2.83	0.243
5-8	1(5.3)	0(0.0)	1(3.7)		
9-12	0(0.0)	1(12.5)	1(3.7)		
<b>Total</b>	<b>19(100)</b>	<b>8(100)</b>	<b>27(100)</b>		

Note: Numbers in parenthesis are percentages

Table 10 depicts that of the 120 respondents, 27 owned cattle, of which 19 (70.4%) were *Migowe* members and eight (29.6%) non *Migowe* members. Moreover, 19 (70.4%) of the respondents keeping cattle were in Magoda village. There was no statistical significance difference at  $p < 0.243$  between cattle owned by *Migowe* and non *Migowe* members.

Respondents keeping local chickens were 99 (82.5%), of which 85 (85.9%) indicated to keep 1 to 20 chickens of which 41 (48.2%) were *Migowe* members and 44 (52.8%) non *Migowe* members. Other respondents, 11 (11.1%) kept 21 to 40 chickens and eight (72.7%) of these were *Migowe* members and only three (27.3%) were non *Migowe* members. However, there were no statistical significant difference at  $p < 0.259$  between the number of chicken kept by *Migowe* and non *Migowe* members. These study results imply that *Migowe* members who kept pigs were better off than respondents with local

chickens. However, cattle profited significantly to livestock keepers due to selling of milk (Table 10).

#### **4.4.4. Amount of Pork Bought**

The study results indicated that the amount of pork bought ranged from half a kilogram (1/2) to 2½ kilograms per single purchase (Table 11). Of the 120 respondents, 94 (78.3%) respondents indicated to have bought half a kilogram to one kilogram of pork, of which 37 (39.4%) were *Migowe* members and 57 (60.6%) were non *Migowe* members. Also, 23 (19.2%) of the respondents indicated to have bought 1½ kilogram to two kilograms of which 20 (87%) were *Migowe* members and three (13.0%) non *Migowe* members. Only three (2.5%) respondents who were *Migowe* members indicated to have bought 2½ kilograms of pork. There were statistical significant differences at  $p < 0.00$  between pork bought by *Migowe* and non *Migowe* members (Table 11).

Furthermore, study results indicated that of the 120 respondents, 95 (79.2%) reported to had bought pork after every one to four weeks, of which 59 (62.1%) were *Migowe* members and 36 (37.9%) non *Migowe* members. Twenty (16.7%) respondents indicated to have bought pork after every five to eight weeks, of which only one was a *Migowe* member and 19 (95%) were non *Migowe* members (Table 11). These results imply that respondents got frequent pork in their household. These results are contrary to those of NBS (2005) which reported that meat consumption in Tanzania was not common. Moreover, in the FGDs one *Migowe* member said that:

*Migowe helps us to eat pork frequently at household level. Migowe also assists us to improve income and household food security (Personal communication, Mdasi village, 2007).*

**Table 11: Distribution of amount and interval of pork bought (N=120)**

Parameter	Category of respondents		Total	$\chi^2$ - value	P- value
	<i>Migowe</i> participants	<i>Non Migowe</i> participants			
<b>Amount of pork bought in Kilograms</b>					
0.5 - 1.0	37(61.7)	57(95.0)	94(78.3)		
1.5 - 2.0	20(33.3)	3(5.0)	23(19.2)	19.82	0.00
2.5 - 3.0	3(5.0)	0(0.0)	3(2.5)		
<b>Total</b>	<b>60(100)</b>	<b>60(100)</b>	<b>120(100)</b>		
<b>Interval of buying pork in weeks</b>					
1-4	59(98.3)	36(60.0)	95(79.2)		
5-8	1(1.7)	19(31.7)	20(16.7)		
9-12	0(0.0)	3(5.0)	3(2.5)	26.77	0.00
Above 13	0(0.0)	2(3.3)	2(1.7)		
<b>Total</b>	<b>60(100)</b>	<b>60(100)</b>	<b>120(100)</b>		

Note: Numbers in parenthesis are percentage

#### 4.4.5 Experience of Food Shortage

Respondents were asked to state if they had ever experienced food shortages in their households. The study findings indicated that of the 120 respondents, 118 (98.3%) reported to have not experienced food shortages in their households. Additionally, the study results showed that 38 (32.2%) of the respondents indicated that family labour abundance was a reason for the absence of food shortages in their households.

This was reported by non *Migowe* members. Others, 24 (20.3%) respondents stated that hired labour was also responsible for the absence of food shortages in their households of which six (25%) were *Migowe* members, and 18 (75%) non *Migowe* members. About 28 (23.7%) and 26 (22.0%) respondents reported that *Migowe* practices combined with hired labour respectively explained the absence of food shortages in their households (Table 12). When asked if *Migowe* had any contribution to the households' food security, all respondents agreed that it had an outstanding



contribution. These responses were supported by one member of FGDs who narrated that:

*Without Migowe you may kill your family members through malnutrition. Look at those households where both parents do not participate in Migowe, they are vulnerable to food insecurity almost every year, even their households' income is low. Their children have poor quality school uniform, they have high rate of school drop-outs, especially those in secondary schools (Personal communication, Ng'anda, 2007).*

**Table 12: Distribution of reasons for self sufficient in food security by participation in Migowe practices (n=118)**

Parameter	Category of respondents		Total	$\chi^2$ - value	P- value
	Migowe participants	Non Migowe participants			
<b>Reason for not having food shortages</b>					
Migowe practice	28(46.7)	0(0.0)	28(23.7)	100.0	0.00
Migowe and hired labour	26(43.3)	0(0.0)	26(22.0)		
Hired labour	6(10.0)	18(31.0)	24(20.3)		
Family labour	0(0.0)	38(65.5)	38(32.2)		
Own labour	0(0.0)	2(3.4)	2(1.7)		
<b>Total</b>	<b>60(100)</b>	<b>58(100)</b>	<b>118(100)</b>		

Numbers in parenthesis are percentages

## 4.5 The role of Migowe in household income

### 4.5.1 Respondents' crop values

Household incomes are central in the wellbeing of all family members, as well as towards poverty alleviation. In the study area, all respondents practiced mixed farming: grew crops and kept livestock. Results in Table 13 below show that of the 120 respondents, 83 (69.2%) valued their maize at between TZS 100 000 and 490 000 of which 34 (41.0%) were Migowe members and 49 (59.0%) non Migowe members. Also, 21 (17.5%) of the respondents valued their maize at between TZS 500 000 and 890 000, of which 17 (81.0%) were Migowe members and four (19.0%) non Migowe members. There was statistical significant differences at  $p > 0.00$  between maize values

of *Migowe* and non *Migowe* members implying that *Migowe* members had higher values of maize than non *Migowe* members.

**Table 13: Distribution of respondents' food crop values**

Parameter	Category of respondents		Total	$\chi^2$ - value	P- value
	<i>Migowe</i> participants	<i>Non Migowe</i> participants			
<b>Maize value in TZS (N=120)</b>					
Below 10 000	0(0.0)	5(8.3)	5(4.2)		
10 000 – 490 000	34(56.7)	49(81.7)	83(69.2)		
500 000 – 890 000	17(28.3)	4(6.7)	21(17.5)	<b>23.20</b>	<b>0.000</b>
900 000 – 1 290 000	8(13.3)	1(1.7)	9(7.5)		
1 300 000 – 1 690 000	1(1.7)	0(0.0)	1(0.8)		
3 400 000 – 3 790 000	0(0.0)	1(1.7)	1(0.8)		
<b>Total</b>	<b>60(100)</b>	<b>60(100)</b>	<b>120(100)</b>		
<b>Potatoes value in TZS (N=99)</b>					
100 000 – 990 000	17(31.7)	28(62.2)	45(45.5)		
1 000 000 – 1 990 000	13(24.1)	13(28.9)	26(26.3)		
2 000 000 – 2 990 000	20(37.0)	3(6.7)	23(23.2)	<b>16.91</b>	<b>0.002</b>
3 000 000 – 3 990 000	2(3.7)	0(0.0)	2(2.0)		
4 000 000 – 4 990 000	2(3.7)	1(2.2)	3(3.0)		
<b>Total</b>	<b>54(100)</b>	<b>45(100)</b>	<b>99(100)</b>		

Note: Numbers in parenthesis are percentages

Of the 99 respondents who cultivated potatoes, 45 (45.5%) valued their crop at between TZS 100 000 and 990 000, of which 17 (37.8%) were *Migowe* members and 28 (62.2%) non *Migowe* members. Also, 26 (26.3%) respondents had valued their potatoes at between TZS 1 000 000 and 1 990 000, of which half of them were *Migowe* members. Similarly, 23 (23.2%) of the respondents had valued potatoes at between TZS 2 000 000 and 2 990 000 of which 20 (87.0%) were *Migowe* members and three (13.0%) non *Migowe* members. Furthermore, the T-test analysis showed that there were significant differences at  $p < 0.05$  between mean income of maize and potatoes between *Migowe* and non *Migowe* members.

*Migowe* members had maize and potatoes mean income of TZS 2 061 158.33, while non *Migowe* members had TZS 1 142 283.33 (Table 9). Additionally, there was a significant difference at  $p < 0.002$  between values of potatoes of *Migowe* and non *Migowe* members. These results imply that *Migowe* members had relative advantages in income compared to non *Migowe* members in potato production and hence the practice dealt with poverty effectively in rural areas.

#### **4.5.2 Respondents' Livestock Values**

Livestock keeping is considered a major source of household incomes, a way of storing wealth, solving social and cultural problems, as well as a source of food. Results in Table 14 below indicate that of the 120 respondents who kept pigs, 51 (42.5%) had valued income from pigs to be between TZS 50 000 and 200 000, of which 15 (29.4%) were *Migowe* members and 36 (70.6%) non *Migowe* members. Also, 18 (15.0%) of the respondents valued income from pigs at between TZS 351 000 and 500 000, of which 15 (85.3%) were *Migowe* and three (16.7%) non *Migowe* members. Only four *Migowe* members indicated to have valued income from pigs at between TZS 651 000 and 800 000. There was a statistical significant difference at  $p < 0.00$  between income values from pigs by *Migowe* and non *Migowe* members. Of the 120 respondents, 27 (22.5%) kept cattle, of which 24 (88.9%) valued its income at between TZS 200 000 to 800 000, of which 17 (70.8%) were *Migowe* and seven (29.2%) non *Migowe* members. Two (10.5%) *Migowe* members had valued income from cattle at between TZS 801 000 to 1 400 000, while only one non *Migowe* member valued income originating from cattle at between TZS 2 601 000 to 3 200 000. There was no statistical significant differences at  $p > 0.200$  between income values from cattle by *Migowe* and non *Migowe* members. According to these results, respondents with high production of crops and livestock had

better incomes, implying that poverty alleviation strategies in rural areas could be enhanced through improving these two important combinations by adopting the *Migowe* practices.

**Table 14: Distribution of respondents' livestock values**

Parameter	Category of respondents		Total	$\chi^2$ - value	P- value
	<i>Migowe</i> participants	<i>Non Migowe</i> participants			
<b>Pigs value in TZS (N=120)</b>					
50 000-200 000	15(25.0)	36(60.0)	51(42.5)	21.38	0.000
201 000-350 000	21(35.0)	18(30.0)	39(32.5)		
351 000-500 000	15(25.0)	3(5.0)	18(15.0)		
501 000-650 000	5(8.3)	3(5.0)	8(6.7)		
651 000-800 000	4(6.7)	0(0.0)	4(3.3)		
<b>Total</b>	<b>60(100)</b>	<b>60(100)</b>	<b>120(100)</b>		
<b>Value of cattle in TZS (n=27)</b>					
200 000 – 800 000	17(89.5)	7(87.5)	24(88.9)	3.22	0.200
801 000 – 1 400 000	2(10.5)	0(0.0)	2(7.4)		
2 601 000 – 3 200 000	0(0.0)	1(12.5)	1(3.7)		
<b>Total</b>	<b>19(100)</b>	<b>8(100)</b>	<b>27(100)</b>		
<b>Chickens value in TZS (n=99)</b>					
1 000 – 50 000	15(29.4)	31(64.6)	46(46.5)	16.36	0.012
51 000 – 100 000	24(47.1)	13(27.1)	37(37.4)		
101 000 – 150 000	8(15.7)	2(4.2)	10(10.1)		
151 000 – 200 000	1(2.0)	1(2.1)	2(2.0)		
201 000 – 250 000	2(3.9)	0(0.0)	2(2.0)		
351 000 – 400 000	1(2.0)	0(0.0)	1(1.0)		
451 000 – 500 000	0(0.0)	1(2.1)	1(1.0)		
<b>Total</b>	<b>51(100)</b>	<b>48(100)</b>	<b>99(100)</b>		

Note: Numbers in parenthesis are percentages

#### 4.5.3 Slaughtering of Pigs

Pig husbandry was common among respondents in all villages in the study area. Of all the respondents, most 109 (92.4%) indicated to have slaughtered one pig at once in a day, while nine (7.6%) said two pigs at once in a day. Of all respondents, all non *Migowe* members and 51 (85%) *Migowe* members indicated to slaughter one pig at once in a day, while nine (15%) *Migowe* members slaughtered two pigs at once in a

day (Table 15). There was a statistical significant difference at  $p < 0.002$  between number of pigs slaughtered by *Migowe* and non *Migowe* members.

Of the 120 respondents, 52 (44.4%) respondents reported to slaughter a pig after every one year. This practice was reported by 35 (67.3%) non *Migowe* members and 17 (32.7%) *Migowe* members. Also, 48 (41.0%) of the respondents who reported to have slaughtered pigs after every six months, 34 (70.8%) were *Migowe* and 14 (29.2%) non *Migowe* members (Table 15). There was statistical significance differences at  $p < 0.004$  between frequencies of slaughtering pigs of *Migowe* and non *Migowe* members. The implication of these results is that *Migowe* members had higher incomes from the sale of slaughtering pigs compared to non *Migowe* members. This further proves that working together (participation) by people in the rural areas improved their incomes.

**Table 15: Distribution of slaughtering pigs of respondents (n=118)**

Number of pigs slaughtered at once	Category of respondents		Total	$\chi^2$ - value	P-value
	<i>Migowe</i> participants	Non <i>Migowe</i> participants			
1	51(85.0)	58(100.0)	109(92.4)	9.42	0.002
2	9(15.0)	0(0.0)	9(7.6)		
<b>Total</b>	<b>60(100)</b>	<b>58(100)</b>	<b>118(100)</b>		
<b>Interval of slaughter of pigs</b>					
Three Months	1(1.7)	2(3.5)	3(2.6)	15.23	0.004
Four months	2(3.3)	2(3.5)	4(3.4)		
Five months	6(10.0)	4(7.0)	10(8.5)		
Six months	34(56.7)	14(24.6)	48(41.0)		
One year	17(28.3)	35(61.4)	52(44.4)		
<b>Total</b>	<b>60(100)</b>	<b>57(100)</b>	<b>118(100)</b>		

Note: Numbers in parenthesis are percentages

Further, study results revealed that *Migowe* members had an advantage in selling pork within a short period of time than non *Migowe* members. Of all the respondents, 34 (56.7%) *Migowe* members reported that the selling of pork lasted four hours, while 17

(28.3%) reported for six hours. Of the 60 respondents, 12 (20%) non *Migowe* members reported selling pork in two days, while 48 (80%) reported that it took more than two days (Table 16). When respondents were asked if they had observed any differences in selling pork with and without *Migowe*, about 117 (97.5%) said that there were significant differences in selling pork through *Migowe* members. This was because *Migowe* members had many and reliable customers who bought pork within a short time. Moreover, in the FGDs one *Migowe* member said that:

*There is a scramble during purchasing pork of Migowe members than pork of non Migowe members as every Migowe member needs to buy it.*  
(Personal communication, Ng'anda village, 2007).

**Table 16: Contribution of *Migowe* to households' incomes (n=60)**

<b>Contribution of <i>Migowe</i> to household income (n=60)</b>	<b>Responses</b>	<b>%</b>
Increased market of pork	<b>44</b>	<b>39.3</b>
Increase area for crop cultivation	<b>32</b>	28.6
Increased knowledge of livestock keeping	<b>13</b>	11.6
Increased food supply	<b>13</b>	11.6
Easy selling of produce	<b>7</b>	6.3
Reduced time for selling pork	<b>3</b>	2.7
<b>Total</b>	<b>112</b>	<b>100</b>
<b>Time taken</b>	Frequency	%
<b>With <i>Migowe</i>(n=60)</b>		
Less than 3 hours	9	15.0
4 hours	34	56.7
6 hours	17	28.3
<b>Total</b>	<b>60</b>	<b>100</b>
<b>Without <i>Migowe</i>(n=60)</b>		
2 days	12	20.0
More than two days	48	80.0
<b>Total</b>	<b>60</b>	<b>100</b>

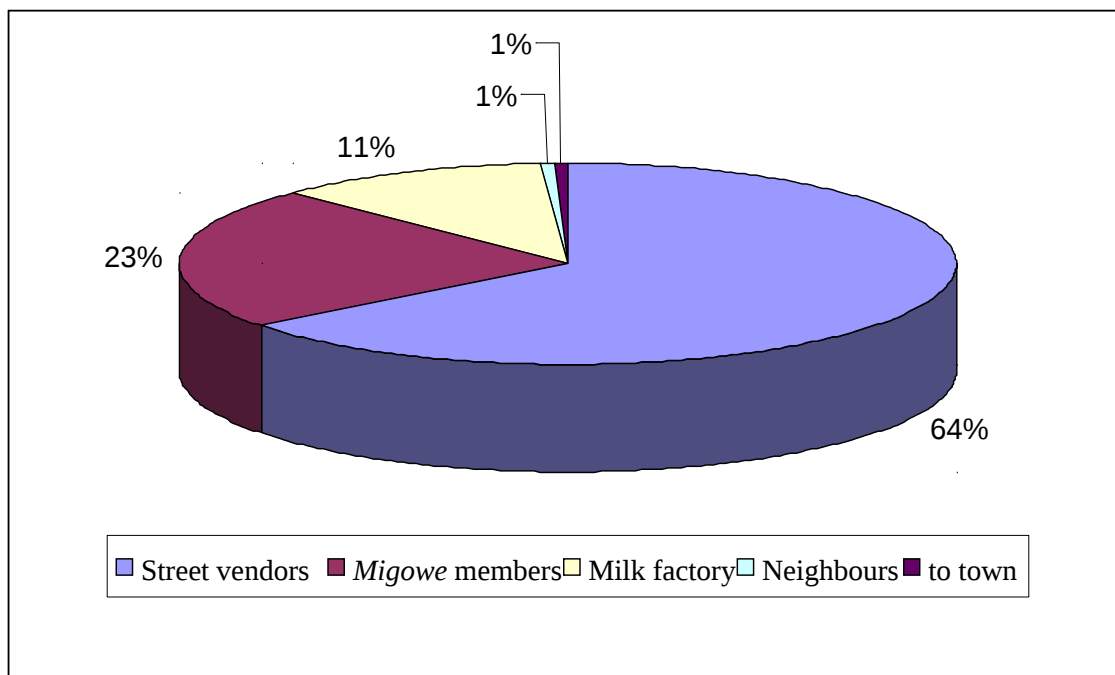
#### 4.5.4 Contribution of *Migowe* to Household Income

Results in Table 16 show that 44 (39.3%) of the respondents who reported that *Migowe* contributed to their income through increased sale of pork, while 32 (28.6%) said that

*Migowe* contributed to income through increased crop acreage. Further, 13 (11.6%) of the responses stated that *Migowe* contributed to income through increased knowledge and skills in livestock keeping and food production. These findings imply that *Migowe* members had varieties of ways for improving their household incomes, hence they were economically better-off than non *Migowe* members. These findings collaborated the social capital theories and evidence from Narayan (1997), Narayan and Pritchard (1999) and Le-Ferrara (1999) on household income increases in Tanzania.

#### **4.5.5 Selling of Farmers Produce**

The poor in rural areas need markets to sell their products freely and to the best advantage. The study findings showed that due to lack of market access, farmers rely on fellow farmers in selling their products. Fig. 3 below indicates the results of multiple response which recorded that 120 (64.0%) depended on street vendors to sell their produce, 43 (23.0%) on *Migowe* members and 21 (11.3 %) on the milk factory. These results suggest that most farmers depend on the informal markets which were not reliable, making it difficult to improve their household incomes. However, they mainly depend on selling their produce to their fellow *Migowe* members.



**Figure 3: Distribution of markets of respondents' products.**

Social capital permits rural people to resolve communal problems more easily, through combining and cooperation amongst their interlocutors. *Migowe* members were asked the extent to which they depended on their fellow *Migowe* members to sell produce, especially pork and live local chickens. More than three quarters 50 (83.3%) of the *Migowe* members reported to depend on *Migowe* members to buy their products by about 91 to 100%, while eight (13.3%) reported depending on *Migowe* members for about 81 to 90%, and only two (3.3%) reported depending on *Migowe* members for about 71 to 80% (Table 17).

#### **4.6 Constraints Facing Migowe Activities and the Future Plans in the Community**

The study results in Table 17 indicated that of the 60 *Migowe* participating members, seven (36.8%) reported that delayed payment from fellow members after selling pork was a problem, while four (21.1%) stated that some irresponsible members created a



setback in performance of *Migowe* activities in their communities. These results are contrary to the observations made by Putnam (2000) who argues that trust in each other willingly and continued interactions with fellow citizens in every day business together with social interaction reduces costs of transactions.

**Table 17: Distribution of extent of dependency on Migowe**

Category (%) (n=60)	Frequency	%
71-80	2	3.3
81-90	8	13.3
91-100	50	83.3
<b>Total</b>	<b>60</b>	<b>100.0</b>
<b>Problems faced in Migowe (Analysis based on multiple responses)</b>		
Delay of payment from members	7	36.8
Irresponsible members	4	21.1
Members resignation	2	10.5
Lack of funds	2	10.5

Table 18 below shows that of the 60 respondents participating in *Migowe*, 34 (21.9%) suggested that each *Migowe* member should increase the number of pigs kept to get more profit, while 30 (19.4%) recommended reducing the interval of slaughtering pigs by *Migowe* members. Also, 15 (9.7%) respondents suggested that *Migowe* members should join SACCOs and keep the money safely and access loans. In addition, during FGDs, *Migowe* members reported that instead of slaughtering pigs after every six and five months or one year, they should do it in two to three months. Also, joining SACCOs was indicated as a way enabling them to get subsidized fertilizers for their groups. Members also recommended to have regular training in livestock keeping in order to improve household incomes and food security.

**Table 18: Distribution of respondents' top five future plans to improve *Migowe***

<b>Plan category</b>	<b>Responses</b>	<b>%</b>
Increase number of pigs kept per member	34	21.9
Reduce interval of slaughter	30	19.4
Join SACCOs	15	9.7
Training in livestock keeping	13	8.4
Increase number of members	13	8.4

Note: Analysis was based on multiple responses

## CHAPTER FIVE

### 5.0 CONCLUSION AND RECOMMENDATIONS

#### 5.1 Overview

This chapter presents conclusions and recommendations based on the study findings. The chapter is divided into three sub-sections: conclusions, recommendations and recommendations for further studies.

#### 5.2 Conclusion

This study has shown that respondents interviewed were 61(50.8%) males and 59 (49.2 %) females. Most of the respondents 101 (84.2%) were aged between 31 and 50 years old. Further, the study results showed that most respondents 93 (77.5 %) had finished primary education, implying that literacy levels of the respondents was high for them to adopt agricultural innovations. *Migowe* participating respondents mentioned that they participated in *Migowe* activities because they wanted to accomplish their planned activities on time. Activities that people were involved in *Migowe* included buying pork, crop harvesting, land preparation and milk selling.

Moreover, the study revealed that buying pork was the most preferred activity in *Migowe* activities because farmers got high profits when they sold their pork in a day, and hence solved their financial problems quickly. Also, harvesting potatoes was the second *Migowe* activity in all the interviewed villages as it had to be completed in a short time to take advantage of the available markets. Respondents participating in *Migowe* activities, showed that *Migowe* helped them to increase their household incomes and food security, also labour intensive activities needed *Migowe* members to be accomplished on time. *Migowe* participating members reported that they would had sustained economic losses if they had not participated in *Migowe* activities. Also, they

agreed that it was to maintain social relationships in the communities. Moreover, respondents indicated that if they had not participated in *Migowe* activities they would have earned less annual household incomes, lost social relationships and lost pork markets.

The study results revealed that *Migowe* members had an advantage of selling pork within a short period of time than non *Migowe* members, they indicated to had sold pork lasting four to six hours, while non *Migowe* members indicated to had sold pork lasting for two days or more than two days. Respondents reported that *Migowe* contributed their income through increased sell of pork, increased area of crop cultivation, through increased knowledge and skills in livestock keeping and food production. The study result had revealed that respondents depended on street vendors, their fellow *Migowe* members and milk factory to sell their produce. Also, it was revealed that most farmers depended on the informal markets which were not reliable, making it difficult to improve their household incomes.

Moreover, it was reported that delayed payment from fellow members after selling pork was a problem to some of the *Migowe* members. *Migowe* members suggested that each member should increase the number of pigs kept to get more profit, reduce the interval of slaughtering pigs and *Migowe* members should join SACCOs and keep the money safely and get loans. In addition, *Migowe* members suggested that instead of slaughtering pigs after every six and five months or one year, they should do it two to three months interval.

Generally, it can be said that *Migowe* has significant contribution for poverty alleviation to low-income rural people. *Migowe* help them in improving their income and food security through easily selling of pork, increased areas for cultivation and easy harvesting of crops as a result of working together. *Migowe* seem to favour most poor people than richer ones as they cannot afford to utilize hired labour for their farm activities especially during peak season. While rich people can afford timely agricultural practices by use of hired labour, drought animal power and even tractors, *Migowe* are the easy and possible solution for poor people in rural areas.

### **5.3. Recommendations**

In view of the generated study findings and conclusions drawn, the study recommends the following to be done to speed up the initiatives for rural poverty alleviation;

1. Farmers should be encouraged to continue working in groups of people with homogeneous social norms and values. This will promote collective action at the community level and help local people act to alleviate poverty.
2. Local Government Authorities (LGAs) through its various projects and programmes and other stakeholders should support the already formed groups of *Migowe* members by providing financial loans and agricultural inputs in order to improve their production hence alleviate poverty in rural areas.
3. LGAs in collaboration with other development partners should facilitate strongly held *Migowe* members to liaison with

institutions which have an interest of working with farmers in development platform like financial and research institutions in order to support them for what they are doing so as to improve production.

4. *Migowe* members should be facilitated to have networks with other groups of *Migowe* members within and outside the district so as to have more advanced relationships. This will enable to exchange ideas of market strategies within members for improving their activities and hence alleviate poverty.
5. The government should publicize this type of traditional cooperation throughout the country with similar activities to all farmers as it has shown to accelerate initiatives for poverty alleviation in rural areas where most low income people to live.

#### **5.4 Recommendations for Further Research Study**

This study recommends for further studies because findings presented in this study are results of micro and cross sectional survey design. The major problem of micro and cross-sectional studies is that they cannot represent the total population of the country. Therefore, there is a need for longitudinal studies to be conducted so as enable generalization of the observations.

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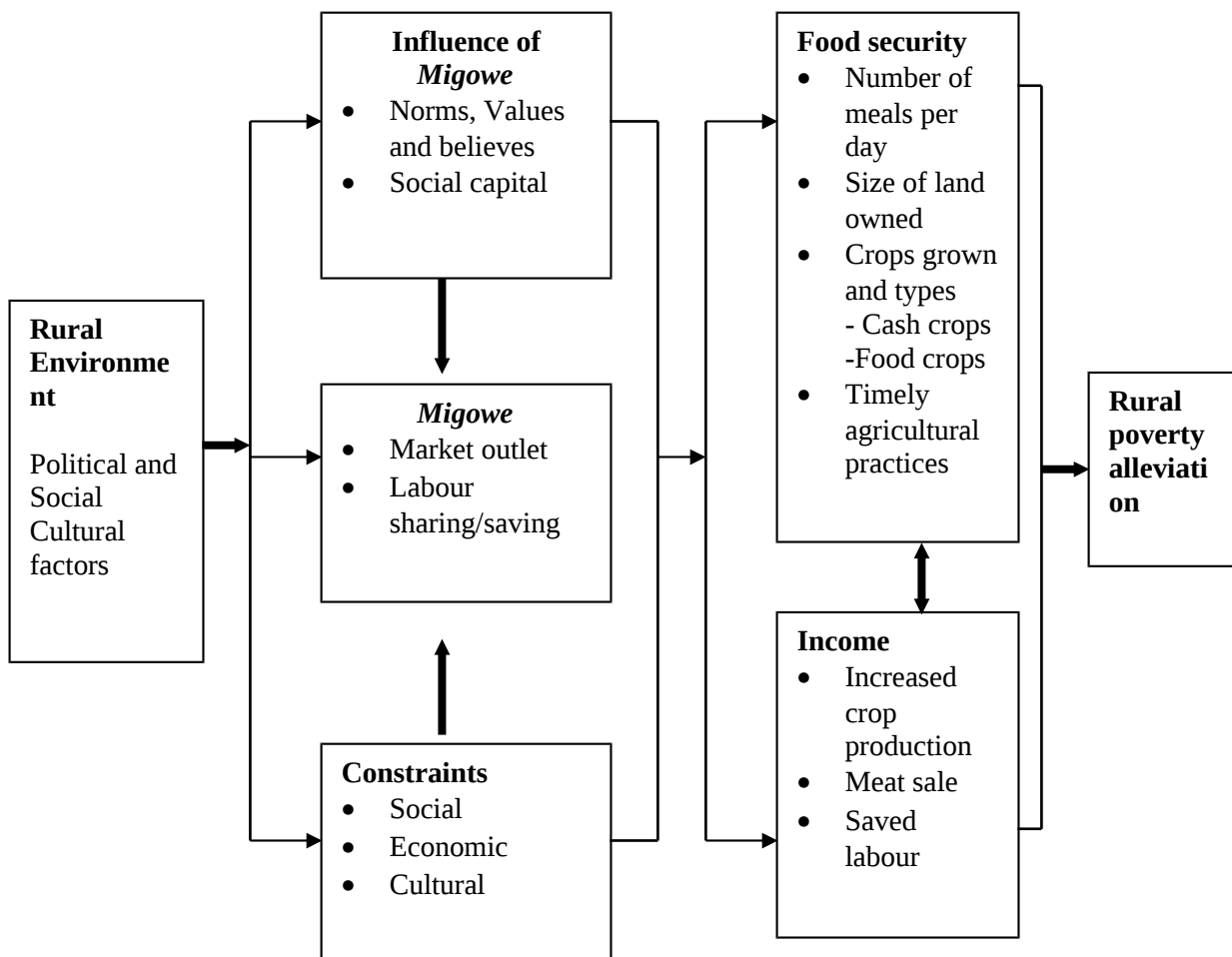
## APPENDICES

### Appendix 1: Operation definition of variables

Variable	Operational definition (Indicators)
<ul style="list-style-type: none"> <li>• Age</li> <li>• Sex</li> <li>• Marital status</li> <li>• Level education</li> <li>• Income of the farmers</li> <li>• Marketing systems</li> </ul>	<ul style="list-style-type: none"> <li>Ranges of years of births</li> <li>Being male or female</li> <li>Being male, separated, divorced, or single</li> <li>Highest level of formal schooling attained</li> <li>Amount gained in TZS per month</li> <li>Facilities for selling and buying farmer products</li> </ul>
<ul style="list-style-type: none"> <li>• Availability of savings and credit scheme</li> <li>• Level of technology</li> </ul>	<ul style="list-style-type: none"> <li>Financial facilities for offering loans to farm</li> <li>Level of skills and implements used in production</li> </ul>
<ul style="list-style-type: none"> <li>• Norms and values</li> <li>• Level of social interactions experiences</li> </ul>	<ul style="list-style-type: none"> <li>Shared believes and ideas among societal members</li> <li>Level of sharing their ideas and among societal members</li> </ul>
<ul style="list-style-type: none"> <li>• Household size members</li> <li>• Poverty</li> <li>• Size of land owned</li> </ul>	<ul style="list-style-type: none"> <li>Number of permanent household</li> <li>Using less than a dollar a day</li> <li>Total area of land used by a farmer for agricultural activities</li> </ul>
<ul style="list-style-type: none"> <li>• Types of livestock owned</li> </ul>	<ul style="list-style-type: none"> <li>Different types of livestock the farmer posses</li> </ul>

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Number of livestock owned</li> <li>• Crops grown and types</li> </ul> | <p>Total possession of farmers livestock</p> <p>Types of food and cash crops grown by a farmer</p>                     |
| <ul style="list-style-type: none"> <li>• Social Capital</li> </ul>   | <p>Set of trust, social norms, networks and organizations that shapes of interactions of actors within the society</p> |
| <ul style="list-style-type: none"> <li>• Food Security</li> </ul>  | <p>Having enough food to eat throughout the year</p>   |
- 

Appendix II: Conceptual framework



**Figure 4: Conceptual framework of the role of *Migowe* towards rural poverty alleviation**



**Appendix III: Reasons for not participating in *Migowe* and understanding of  
*Migowe* from Non *Migowe* members**

<b>Reasons</b>	<b>Frequency</b>	<b>Percentage</b>
Wastage of time	41	37.3
Delay in important activities	16	14.5
Work of <i>Migowe</i> not perfect	15	13.6
A lot of self commitment	5	4.5
No freedom to plan for my own	9	8.2
Few farmland	9	8.2
Reduced time in my farm	11	10.0
Not interested	4	3.6
<b>Understanding of <i>Migowe</i> from Non <i>Migowe</i> members</b>		
Working together in the community	32	53.3
Wastage of time	26	43.3
Labour and market sharing	2	3.3
<b>Total</b>	<b>60</b>	<b>100.0</b>

#### Appendix IV: Respondents' future plan to improve migowe activities

Category	Responses	Percentage
Increase number of pigs kept per member	34	21.9
Increase amount of meat bought	6	3.9
Increase price of pork to members	3	1.9
Improve system of communication to	4	2.6
Reduce interval of slaughter	30	19.4
Formalize groups	5	3.2
Elect/choose leaders	4	2.6
Improve quality of meat sold	8	5.2
Training in livestock keeping	13	8.4
Increase number of members	13	8.4
Have a market building	3	1.9
Improve transport facility	3	1.9
Help members in paying school fees	3	1.9
Training in record keeping	6	3.9
Donation to increase funds of the group	2	1.3
Improve more solidarity among members	2	1.3
Solicit funds for the group	1	0.6
Join SACCOS	15	9.7
<b>Total responses</b>	<b>155</b>	<b>100.0</b>

**Appendix V: Interview Schedule**

**SOKOINE UNIVERSITY OF AGRICULTURE**

**DEVELOPMENT STUDIES INSTITUTE**

**THE ROLE OF *MIGOWE* TOWARDS RURAL POVERTY ALLEVIATION IN  
NJOMBE DISTRICT**

**INTERVIEW SCHEDULE FOR FARMERS**

My name is ..... I am from Sokoine University of Agriculture and I am conducting a research on the role of *Migowe* towards rural poverty alleviation. The aim of this research is to know the overall contribution of *Migowe* towards poverty alleviation. Your answers will help to make this research successful.

Do you have any question before we start?

Yes

No

**SECTION A: Geographical location**

**Village:** .....

**Ward:** .....

**District:** .....

**Date:** .....

**Questionnaire number:** .....

**SECTION B: Background information**

B1. Name of respondent	B2. Age	B3. Sex [1] Male [2] female	B4. Marital status [1] Married [2] single [3] widow [4] divorce [5] Separated	B5. Highest level of education [1] None [2] Adult education [3] Primary education [4] Secondary education [5] Tertiary education	B6. Main economic activities [1] Farmer [2] Livestock keeper [3] Mixed farming [4] Businessman [5] Employed [6] Others	B7. Relation with Head of household [1] Head of household [2] Spouse [3] Son [4] Daughter [5] Others
		1 2	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5 6	1 2 3 4 5

**SECTION C. Factors influencing community members to abide to *Migowe* regulations.**

C1. Do you participate in *Migowe* activities?

- [1] Yes
- [2] No

C2. If answered No in C1 above, give reasons

- [1] .....
- [2] .....
- [3] .....

C3. If answered Yes in C1 above, how long have you been participating in *Migowe* activities?

- [1] Since I started to depend on myself
- [2] Since last year
- [3] Since 2 years ago
- [4] Since 5 years ago

C4. How many activities are you involved in *Migowe*?

- [1] Land preparation and cultivation
- [2] Harrowing and crops harvesting
- [3] Brick making and crops harvesting
- [4] Buying meat, cultivation and crops harvesting

C5. What activities are given more priority in *Migowe* practices?

- [1] .....
- [2] .....
- [3] .....

C6. What are the reasons for the activities to be given a priority?

- [1] .....
- [2] .....
- [3] .....

C7. What makes you participate in *Migowe*?

- [1] To accomplish my planned activities in time
- [2] To share experiences with my friends
- [3] To accomplish my planned activities in time
- [4] To acquire status in the society

C8. In *Migowe* activities how many members are you?

- [1] 2-5
- [2] 5-10
- [3] 10-15
- [4] 15-20
- [5] More than 21

C9. What is used to control *Migowe*?

- [1] Constitution
- [2] By laws
- [3] Norms and values of the society

C10. Do you think that you can lose something if you don't participate in *Migowe*?

- [1] Yes
- [2] No

C11. Name the loss that you may incur by not participating in *Migowe*

- [1] .....
- [2] .....
- [3] .....

C12. Is the loss a financial one?

- [1] Yes
- [2] No

C13. Is the loss a social one?

- [1] Yes
- [2] No

C14. Who has an overall decision about participating in *Migowe* activities?

- [1] Members of the household
- [2] Head of the household
- [3] Male only
- [4] Female only

**SECTION D: Role of the *Migowe* towards household food security**

D1. What is the size of your farmland in acres?

- [1] 1-2
- [2] 2-4
- [3] 4-6
- [4] 6-8
- [5] More than 8

D2. Among these how many acres do you cultivate per year? .....

D3. What type of labour do you use to cultivate those acres?

- [1] Family labour
- [2] My own labour
- [3] *Migowe* practice
- [4] Hired labour

D4. What type of technology do you use to cultivate your farm?

- [1] Hand hoe
- [2] Plough
- [3] Tractor

D5. What is the contribution of crops to your household food security in the last season?

Answer by filling the table below

	Type of Crop	Yield (Kg)	Value in Tshs
1			
2			
3			

D6. What type of livestock do you have? Answer by filling the table below

S/N	Type of Livestock	Number of Livestock	Value in Tshs
1			
2			
3			

D7. Did you experience food shortage sometimes in year 2005 and 2006?

[1] Yes

[2] No

D8. If answered Yes in question D7, what month(s) of the year and why?

[1] Month..... Reason.....

[2] Month..... Reason.....

[3] Month..... Reason.....

[4] Month..... Reason.....

D9. What are the coping strategies used when faced with food shortage?

[1] .....

[2] .....

D10. If answered No in question D7 above, what makes you self sufficient in food security?

[1] My own capability

[2] By using *Migowe* practice

[3] By using family labour

[4] By using hired labour

D11. How many kilograms of pork do you buy for your household through *Migowe*?.....

D12. At what interval do you buy pork for your household through *Migowe*?.....

D13. Do you think *Migowe* has contributed towards your household food security?

[1] Yes

[2] No

**SECTION E: Role of *Migowe* towards household income**

E1. What are major sources of income in your household contributed through *Migowe*?

Answer by filling the table below

S/N	Source of Income	Quantity/size	Value in Tshs
1			
2			
3			
4			

E2. What is your market for produce mentioned in E1 above?

[1].....

[2].....

[3].....

E3. Do you sell live animals?

[1] Yes

[2] No

E4. If answered Yes in E3 above, which livestock gives you more profit?.....

[1] Goat

[2] Sheep

[3] Pig

[4] Cattle

E5. Do you slaughter your pig and sell pork?

[1] Yes

[2] No

E6. How frequent do you slaughter pig per year?

[1] Ones per month

[2] Ones per two months

[3] Ones per three months

[4] Ones per four months

[5] Ones per five months

[6] Ones per six months



E7. What is the interval between one slaughter of pig of one member and another?

- [1] 1 Week
- [2] 2 Weeks
- [3] 3 Weeks
- [4] 4 Weeks

E8. How many pigs do you slaughter at once?

- [1] 1
- [2] 2
- [3] 3
- [4] More than 3

E9. Who are the reliable customers when you slaughter pigs? Answer by filling the table

below

S/N	Type of Customer	Percentage (%)
1	Any passerby	
2	<i>Migowe</i> members	
3	My relatives	
4	My neighbors	

E10. How long do you take to sell your pork?

- [1] Less than 3 hours
- [2] 4 hours
- [3] 6 hours
- [4] More than 6hours

E11. How long did you take to sell your pork without *Migowe* Members?

- [1] Less than 6 hours
- [2] 1 day
- [3] 2 days
- [4] More than 2 days

E12. Do you observe any difference when you sell your pork and those who don't sell through *Migowe*?

- [1] Yes
- [2] No

E13. Do you think *Migowe* has contributed towards your household income?

- [1] Yes
- [2] No

E14. If your answer in question E 13 is Yes, explain how *Migowe* have contributed

.....  
 .....

**SECTION F: Constraints which face *Migowe* activities in the community**

F1. Do you experience problems in *Migowe* practice?

- [1] Yes
- [2] No

F2. If answered Yes in F1 above, which type of problem are these?

(List in order of priority)

- [1].....
- [2].....
- [3].....

F3. How do you solve the problems mentioned in question F2 above?

- [1] Sanction the deviant
- [2] Negotiate with deviate
- [3] Punish deviant
- [4] Send to court the deviant
- (5) leave the problems as they are

F4. What are future plans for improving *Migowe* practice?

- [1] .....
- [2].....
- [3].....
- [4].....

**THANK YOU FOR YOUR COOPERATION**

**Appendix VI: Interview Schedule**

**SOKOINE UNIVERSITY OF AGRICULTURE**

**DEVELOPMENT STUDIES INSTITUTE**

**THE ROLE OF *MIGOWE* TOWARDS RURAL POVERTY ALLEVIATION IN  
NJOMBE DISTRICT**

**INTERVIEW SCHEDULE FOR NON *MIGOWE* PARTICIPANTS**

My name is ..... I am from Sokoine University of Agriculture and I am conducting a research on the role of *Migowe* towards rural poverty alleviation. The aim of this research is to know the overall contribution of *Migowe* towards poverty alleviation. Your answers will help to make this research successful.

Do you have any question before we start?

Yes

No

**SECTION A: Geographical location**

**Village:** .....

**Ward:** .....

**District:** .....

**Date:** .....

**Questionnaire number:** .....

**SECTION B: Background information**

B1. Name of respondent	B2. Age	B3. Sex [1] Male [2] Female	B4. Marital status [1] Married [2] Single [3] Widow [4] Divorce [5] Separated	B5. Highest level of education [1] None [2] Adult education [3] Primary education [4] Secondary education [5] Tertiary education	B6. Main economic activities [1] Farmer [2] Livestock keeper [3] Mixed farming [4] Businessman [5] Employed [6] Others	B7. Relation with Head of Household [1] Head of household [2] Spouse [3] Son [4] Daughter [5] Others
		1 2	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5 6	1 2 3 4 5

**SECTION C. Factors influencing community members to abide to *Migowe* Regulations**

C1. What is your understanding about *Migowe*?

- [1] Labour and market sharing
- [2] Working together
- [3] Wastage of time

C2. Do you participate in *Migowe* activities?

- [1] Yes
- [2] No

C3. If answered No in C2 above, give reasons

- [1] .....
- [2] .....
- [3] .....

C4. Do you think that you can lose something if you don't participate in *Migowe*?

- [1] Yes
- [2] No

C5. If answered Yes in C4 above, what is that loss?

- [1] .....
- [2] .....
- [3] .....

**SECTION D: Role of the *Migowe* towards household food security**

D1. What is the size of your farmland in acres?

- [1] 1-2
- [2] 2-4
- [3] 4-6
- [4] 6-8
- [5] More than 8

D2. Among these how many acres do you cultivate per year? .....

D3. What type of labour do you use to cultivate those acres?

- [1] Family labour
- [2] My own labour
- [3] *Migowe* practice
- [4] Hired labour

D4. What type of technology do you use to cultivate your farm?

- [1] Hand hoe
- [2] Plough
- [3] Tractor

D5. What is the contribution of crops to your household food security in the last season?

Answer by filling the table below

	Type of Crop	Yield (Kg)	Value in Tshs
1			
2			
3			

D6. What type of livestock do you have? Answer by filling the table below

S/N	Type of Livestock	Number of Livestock	Value in Tshs
1			
2			
3			

D7. Did you experience food shortage sometimes in year 2005 and 2006?

[1] Yes

[2] No

D8. If answered Yes in question D7, what month (s) of the year and why?

[1] Month..... Reason.....

[2] Month..... Reason.....

[3] Month..... Reason.....

D9. What are the coping strategies used when faced with food shortage?

[1] .....

[2] .....

[3] .....

D10. If answered No in question D7 above, what makes you self sufficient in food security?

[1] My own capability

[2] By using *Migowe* practice

[3] By using family labour

[4] By using hired labour

D11. How many kilograms of pork do you buy for your household through *Migowe*?.....

D12. At what interval do you buy pork for your household through *Migowe*?.....

D13. Do you think *Migowe* has contributed towards your household food security?

[1] Yes

[2] No

**SECTION E: Role of *Migowe* towards household income**

E1. What are major sources of income in your household?

Answer by filling the table below

S/N	Source of Income	Quantity/size	Value in Tshs
1			
2			
3			

E2. What is your market for produce mentioned in E1 above?

[1].....

[2].....

[3].....

E3. Do you sell live animals?

[1] Yes

[2] No

E4. If answered Yes in E3 above, which livestock gives you more profit?.....

[1] Goat

[2] Sheep

[3] Pig

[4] Cattle

E5. Do you slaughter your pig and sell pork?

[1] Yes

[2] No

E6. How frequent do you slaughter pig per year?

[1] Ones per month

[2] Ones per two months

[3] Ones per three months

[4] Ones per four months

[5] Ones per five months

[6] Ones per six months

E7. How many pigs do you slaughter at once?

[1] 1

[2] 2

[3] 3

[4] More than 3

E8. Who are the reliable customers when you slaughter pigs? Answer by filling the table

Below

S/N	Type of Customer	Percentage (%)
1	Any passerby	
2	<i>Migowe</i> members	
3	My relatives	
4	My neighbors	

E9. How long do you take to sell your pork?

[1] Less than 3 hours

[2] 4 hours

[3] 6 hours

[4] More than 6hours

E10. Do you observe any difference when you sell your pork and those who sell through

*Migowe*?

[1] Yes

[2] No

E11. In your opinion, *Migowe* has contribution to the household income?

[1] Yes

[2] No

**THANK YOU FOR YOUR COOPERATION**



**Appendix VII: Interview guide (checklist) for Focused Group Discussion (FGD)**

Why community members participate in *Migowe*?

What are the major economic activities done through *Migowe*?

Is there any benefit by participating in *Migowe* activities?

How many people are involved in one *Mgowe*?

Who has more power to decide to participate in *Migowe*?

How many acres do you cultivate per year through *Migowe*?

What criteria do you use to choose members of *Migowe*?

What is the difference between *Migowe* of the past and the one practiced now?

Who controls *Migowe* operation in your village?

What are the benefits of *Migowe* in household income?

What are the benefits of *Migowe* in household food security?

How many times do you slaughter pigs per month for *Migowe*?

How many kilograms of pork do you sell in your *Migowe*?

What general problems do you encounter in operating *Migowe* practice?

What is the effect of increased population to *Migowe*?

What is your opinion on how to improve *Migowe* practice?

**Appendix VIII: Key Informants guide**

**Location .....**

**1. Division**

**2. Ward**

**3. Village**

**Position .....**

**Sex .....**

**Age .....**

- Why community members participate in *Migowe*?
- What is the evolution of *Migowe*?
- Is there any benefit by participating in *Migowe* activities?
- What is the difference between *Migowe* of the past and the one practiced now?
- What is your opinion about the operation of *Migowe* in your area?
- Is there any contribution of *Migowe* towards poverty alleviation?
- What is your opinion on how to improve *Migowe* practice?

**Appendix IX: Relating objectives, variables, method to use and data sources**

Research question	Variables	Method of data collection	Method of data analysis
<b><i>To identify factors that influence community members to abide to Migowe regulations in a bid to alleviate rural poverty (specific objective 1).</i></b>			
What are the reasons for participating in <i>Migowe</i> ? What benefits are obtained in participating in <i>Migowe</i> ? What loses obtained without participating in <i>Migowe</i> ? What are kinship pattern used? Who are active participants of <i>Migowe</i> ? Who has a decision making about <i>Migowe</i> between head of household and other?	Norms and values Level of social interaction Level of social capital	Interview schedules Focused group discussion	Descriptive analysis Content analysis
<b><i>To assess the contribution of Migowe towards household food security (specific objective 2).</i></b>			
What are the size of farmland do you own? What are the size of farmland do you cultivate? What are frequencies of slaughtering of pigs? What are amount of pork consumed by household per month?	Size of farmland owned Number and type of livestock Crops grown Level of technology	Interview schedules	Descriptive analysis Chi-square T-test Content analysis
<b><i>To examine the contribution of Migowe towards household income improvement (specific objective 3).</i></b>			
What are the main sources of income of the household? Which are the reliable sources of income? Frequencies of slaughtering of pigs?	Income Number and type of livestock Marketing systems	Interview schedules	Descriptive analysis Chi-square T-test Content analysis
<b><i>To identify constraints facing Migowe activities in the communities (specific objective 4).</i></b>			
Is there any existence of <i>Migowe</i> constraints? What are types of <i>Migowe</i> constraints? What are the mechanisms of harmonization? What are the future plans?	Norms Values	Interview schedules Focused group discussion	Descriptive analysis