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## **LIST OF ABBREVIATIONS**

AA	Authorized Association
AIDS	Acquired Immune Deficiency Syndrome
CBC	Community Based Conservation
CBNRM	Community Based Natural Resource Management
CBO	Community Based Organization
CHF	Community Health Fund
CSR	Corporate Social Responsibility
DC	District Commissioner
DFID	Department for International Development

## **ACKNOWLEDGEMENT**

A report like this is certainly not a product of the consultants alone but a result of concerted efforts between the consultants, the client, and other various individuals and institutions. We thus wish to convey our sincere gratitude to World Wildlife Fund-Tanzania Office for entrusting us to carry out this important study. From the very beginning of this work, we benefited a lot from the views we got from various officials of WWF especially Dr. Hussein Sosovele. We worked with him not only in determining the study approach to be adopted, but also in planning the study as well as in designing the research instruments. His views and ideas helped us a great deal in adopting an appropriate methodology for carrying out the baseline.

While in the field, we benefited immensely from the District Natural Resources Officers

## **EXECUTIVE SUMMARY**

### **Background**

The intention of the government to designate Wildlife Management Areas (WMAs) that

## **Socio-Economic Status of Communities**

Considering demographic and living standards of the people, majority of them showed that households were male-headed by 60.2%, a typical indicator for most African families. It was also learnt that many men/women are married to a single wife/husband. More than four-fifths (85.2%) had age range of 20 – 39 and 40 – 64 years old. These age groups represent economically productive groups since they fall within the range of 15 to 64 years old.

Most of the respondents indicated that the people of Idodi and Pawaga divisions are primary level leavers by 74.0%. This implied that the entire study sample had good literacy capacity able to read and write, and hence could be easily adopt business skills

## **Major Economic Activities**

Agriculture, livestock keeping and business-related activities are the major socio-economic engagements in the area. Major crops cultivated are rice and maize - rice being mainly produced as a dominant cash crop, especially in Pawaga division. Comparing productive activities that people engage in, more males were seen to deal

## **CHAPTER ONE**

### **INTRODUCTION AND THE SETTING OF THE STUDY**

#### **1.1 Introduction and the Background**

The idea that local people participate in the designing, implementation and monitoring of their development programs which will play a leading role in determining their future destiny, has been the cornerstone of development policy and planning in Tanzania. Since independence there have been noticeable efforts from the government of Tanzania aimed at making sure that the local communities are involved in development process programs to instil their ownership and hence sustainability of the developmental interventions. For the latter to happen it is imperative that the local communities benefit directly from development programs or projects that are implemented in their localities. It is within this context that the Ministry of Natural Resources and Tourism has been grappling with devolving the management of natural resources to the local communities and the private sector.

#### **1.2 Wildlife Policies and the Evolution of Wildlife Management Areas (WMAs) and Community-Based Natural Resources Management (CBNRM)**

This new paradigm to managing natural resources was prompted by the realization (by governments and donors alike) that the hitherto existing natural resources management practices under the government (e.g. Fines and fences, garrison conservation etc) had been found wanting. Governments were becoming constrained in terms financial, human and infrastructural resources needed to effectively manage the vast natural resources in their countries (Kessy *et al.*, 2003). At the same time and as a consequence of the foregoing degradation of the natural resources base was going on unabated, due to poorly defined ownership and use rights (*Ibid.*).

CBNRM as an alternative natural resources management approach comprise a corpus of interventions that seek to improve on the management of renewable natural resources “through devolving certain rights to these resources and for the ostensible benefits of the owners and thus managers of these resources”. Such interventions aim at rebuilding functioning natural resources management institutions among the local communities that had been destroyed as a result of state control of both land and natural resources. This rebuilding includes but not limited to creating a sense of ownership of these resources and devolution of clear rights to the local communities/people as incentives for their commitment to conservation.

### 1.3

natural resources management and planning process while at the same time strengthening local level governance and generate tangible social, economic and financial benefits to the communities. In line with the foregoing, the Wildlife Sector Review Task Force in 1995 pointed out that “it is essential to the future of wildlife management in Tanzania that local communities amongst the wildlife should derive direct benefits from it”.

In a move to further the above community based conservation initiatives, the government issued the wildlife Policy of Tanzania (1998) which called for the establishment of Wildlife Management Areas (WMAs) on community lands adjacent to protected areas. This was a new category of multiple land use areas whose central focus would be wildlife conservation and a means to effect CBC activities related to wildlife conservation in Tanzania. The policy envisaged that under this new form of wildlife conservation (WMAs), the local communities “will have full mandate of managing and benefitting from their efforts. The overall policy objective was to to increase the direct econo



issued. The absence of legal backing has now been taken care of under Part V of the Wildlife Conservation Act, 2009 which provides for the establishment and management of the Wildlife management Areas and benefit sharing (URT:194).

At the time of conducting this baseline a total of 16 WMAs have been officially gazetted. These WMAs included Ipole, Uyumbu, Burunge, and Ngarambe-Tapika etc. These WMAs included Ipole, Uyumbu, Burunge, Nagrambe-Tapika etc. Some of these WMAs are now engaged in tourism related businesses where revenue is generated. The anticipated objective of benefits to the local communities has already started to show as part of the income accrued from activities in 0 0 15(i)2- WMAs s istu-181(b)-3()-5rued d th01(s16(e)6(m)-6ra)9(m)-6(b-3(e)-3

It is within this context and background that WWF contracted Health and Development International Consultants to undertake a socio-economic baseline survey that will generate data and information on the socio-economic status in the 5 WMAs. This information will generate indicators that are going to be used to monitor changes arising from the intervention as well as determining the level of changes in the key indicators of incomes, number of households involved in tourism related businesses in the villages within WMAs, rural livelihoods, status of biodiversity and reported cases of poaching, and infrastructure services. The baseline data is presented below after delineating the study and limitations thereof.

The baseline survey study was carried out in 5 WMAs namely, MBOMIPA (Iringa Rural District), Ipole (Sikonge District), Ikona (Serengeti District), Enduimet (Longido District) and Burunge (Babati District). The baseline study reports of these 5 WMAs have been presented separately. This report is for MBOMIPA WMA.

#### **1.4 The Profile of Iringa Rural District**

Iringa Rural District is one of the 7 administrative districts of Iringa Region. Others are Iringa Urban, Kilolo, Mufindi, Njombe, Ludewa and Makete. The district was established under the Local Government Act. No. 7 of 1982. It occupies an area of 20,576 km<sup>2</sup> of which only 9,857.5 km<sup>2</sup> are habitable, whereas the rest are occupied by national parks, forests, rocky mountains and water bodies. The district

## **1.6 Major economic activities**

### **1.6.1 Agriculture**

Agriculture is by far the most mainstay of the economy of Iringa Rural District with approximately 95% of population practicing mainly mixed farming at subsistence level. The major crops cultivated are maize and rice. Others include sunflower, cowpeas, tobacco, pyrethrum, groundnuts, potatoes and vegetables. Maize is the main staple food as well as cash crop, but its productic-271(f81(cro)9(p)-3(, )] TJET)128The( )5f adsh6fr, cowa econa

vast area of the district land is covered with Miombo woodlands having dominant trees of *Brachystegia* and *Acacia* species.

The Midland Zone has little natural forest cover. Patches of natural forests are also found especially along the hill slopes and some valleys where farming has not taken place. The Lowland Zone is widely covered by natural forests. The rest of the area is left for wildlife management under Ruaha National Park and MBOMIPA.

Emphasis has been put on environment conservation programs especially tree planting. Substantial achievement in a forestation programs has come from huge assistance of Danish government (DANIDA) by funding Iringa Soil and Water Conservation Project (HIMA) and Natural Woodlands and Catchment Forest Conservation Project (MEMA).

### **1.7.2 Wildlife**

Iringa Rural District is rich in wildlife that spread across areas of different status ranging from a Nation Park, Game Controlled Areas and Wildlife Management Area under MBOMIPA. Currently, Ruaha National Park covers an area of 20,226 km<sup>2</sup> after the inclusion of Usangu Game Reserve in 2008 - becoming the largest national park in Tanzania and East Africa.

Ruaha National Park represents transition zone where Eastern and Southern African species of fauna and flora overlap. It is a home to Greater and Lesser Kudu. The communities forming MBOMIPA retain 25% of game fees from tourist hunting and all sales accruing from resident/local hunting.

### **1.7.3 Fisheries**

There are several areas in which fishing is highly practiced, especially in the lowland zone where river Little Ruaha and other small rivers flow across. Commercial fishing is hugely done around Mtera dam. Mtera dam is the main source of cold fish supply to Iringa Urban areas, Dodoma, Morogoro, Mbeya, Ruvuma and Dar es Salaam regions.

There are around 90 fish ponds for domestic consumption all over the district, together with subsistence fishing carried out along different rivers and swamps/ponds. The fishing industry is not well developed due to several reasons including lack of modern fishing vessels and preservatives.

## **1.8 Social services**

### **1.8.1 Education**

The district Council has 144 primary schools with over 60,000 pupils of which,

Alongside this there are HIV/AIDS and health facility committees to ensure that the population receives appropriate and affordable health services.

#### 1.8.4 Infrastructure

Iringa Rural District Council has 1,659 kilometers of roads accessible throughout the year. There are two highways connecting the district to Morogoro-Dar es Salaam and Mbeya, and Dodoma regions. The sector of transport plays a significant role in accessing and connecting productive rural areas to potential markets in urban areas.

### 1.9 The Profile of MBOMIPA

#### 1.9.1 Background

**MBOMIPA** is an acronym for Kiswahili words: “**Matumizi Bora ya Malihai Idodi na Pawaga**”; that refer to sustainable use of wildlife resources in Idodi and Pawaga divisions. It is a wildlife management area (WMA) consisting 21 villages; 9 villages from Idodi division and 12 villages from Pawaga division. Initially, MBOMIPA was a government project managed by Wildlife Division and Tanzania National Parks (TANAPA) under the Ministry of Natural Resources and Tourism (MNRT).

Since 1997 MBOMIPA was funded by the British government through the Department for International Development (DFID) until 2002. The establishment of MBOMIPA is a result of a government Wildlife Policy adopted in 1998 to enable communities adjacent to core protected areas organize themselves and fully participate in the sustainable use and management of wildlife resources.

When DFID ended funding in 2002, the people of Idodi and Pawaga divisions decided to unite and takeover the project. The project was changed to a community association/organization to cater for management of wildlife resources. The name for an association had to remain MBOMIPA because by then it was already famous and well understood by most people of Idodi and Pawaga divisions. In 2007 MBOMIPA was upgraded and registered to become an Authorized Association (AA) and as well consequently got Wildlife Resources User Rights. Figure 1 shows the MBOMIPA project area.



## Figure 2: Organisation Structure of MBOMIPA

MBOMIPA WMA occupies an area of 776.67 km<sup>2</sup> with a human population size estimated at 58,954; of which 28,470 (48.29%) are men and 30,484 (51.71%) are women inhabiting 10,203 households according to the population and housing census of 2002. The area covered by MBOMIPA is divided into four tourist zones:

- Lunda zone for game viewing, hotel and lodge construction
- Tungamalenga zone for game viewing, hunting and camping
- Mkupule/Kinyangesi zone for tourist hunting
- Kinyangesi zone for game viewing

After attaining legal status, apart from conservation obligations, MBOMIPA is entitled to carry out tourist hunting, game viewing, enter contracts/agreements with local and foreign investors for construction of camps and lodges.

### 1.9.3 Objectives of MBOMIPA



#### **1.9.4 Major activities**

- Conducting educational seminars and meetings on environment and natural resources management to villagers and their local leaders
- Sensitizing villages to allocate their land areas for wildlife management area
- Forming, facilitating and organizing village environment management committees
- Identifying and selecting qualified village game scouts (VGS) in each member village to participate in WMA patrolling
- Patrolling all zones under MBOMIPA WMA

#### **1.9.5 Socio-economic gains**

Since 2002, MBOMIPA has distributed a total of T.Sh123,022,000/= to member villages for development activities, especially social services such as health and education and more notably is the sponsorship of one orphan from each village to secondary school. The rest of the income is spent on running the office and allowances to VGS. Major income generating sources include:

- Tourist hunting
- Village membership fees
- Rest house renting
- Investment agreements
- Donor agencies
- Training fees charged to various institutions

#### **1.9.6 Other Achievements**

- Decline of poaching and illegal hunting incidences
- Increased environmental awareness
- Increased number of wild animals due to relatively effective and efficient poaching control
- Strengthened efforts and cooperation with key stakeholders in wildlife management
- Improved neighbourhood relationship, coordination and cooperation among WMA member villagers
- Increased tourist business-related activities
- Increased community support activities/projects from donors and/or partners

### **1.9.7 Problems and challenges facing MBOMIPA**

- Wild animals, especially elephants, warthogs, monkeys and lions invading and destroying crops and livestock
- Lack of patrol vehicles
- Lack of skilled personnel in wildlife management and administration
- Poor infrastructure to accommodate and facilitate tourist operations and activities
- Limited funds to train and support VGS
- High demand of village projects to be supported by MBOMIPA
- Conflicting complaints on the quota distributed equally to member villages

### **1.9.8 Strategic plan to improve MBOMIPA**

MBOMIPA has put down a strategic plan to implement the following activities by 2012:

- Build good relationship and coordination among all 21 member villages of Idodi and Pawaga divisions
- Organize meetings and seminars to share ideas and concerns geared to improve the oeee oeeMBOMIR01eerns o

## 1.10 Ruaha National Park

Ruaha National Park represents transition zone where Eastern and Southern African species of fauna and flora overlap. It is a home to Greater Kudu (*Tragelaphus strepsiceros*) and Lesser Kudu (*Tragelaphus imberbis*) which cannot be found anywhere else in the world.

Ruaha National Park is the largest National Park in Africa with 20,226 km<sup>2</sup> after the annexation of Usangu Game Reserve in Mbeya Region. It is located in the middle of Tanzania about 130 km from Iringa town. The name of the park "**Ruaha**" was derived from the Hehe ethnic word **luvaha**" which means "**river**". River Ruaha flows along its South-Eastern margin and is the focus for game viewing and other tourist activities. The river harbours hippos and crocodiles, and is the only source of water for wildlife during dry season.

The park history dates way back to 1910 when it was gazetted as Saba Game

## CHAPTER TWO

### THE TERMS OF REFERENCE, APPROACH AND METHODOLOGY

#### 2.1 Objectives of the Baseline Survey and Scope of Work

The main objective of the baseline survey for all WMAs was:

“To obtain socio-economic data and information on the households in the five selected WMAs that will form a basis for evaluating the impact of the FCI on rural income”

The specifically socio-economic baseline survey was supposed to:

- a) Identify the sources and type of income in selected villages forming WMAs.
- b) Evaluate expenditure patterns in selected villages forming each WMA.
- c) Asses living conditions such as the status of houses, livelihood assets, land uses production trends etc.
- d) Evaluate existing economic activities in the selected WMAs.
- e) Assess availability and quality of infrastructure services such as health,

## **2.2 Area of the study**

This study was carried out in MBOMIPA WMA. This WMA is located in Iringa Rural District in Iringa Region and borders Ruaha National Park. It comprises a total of 21 villages with an estimated total population of 58,954; of which 28,470 are men and 30,484 are women, as updated accordingly after the population and housing census of 2002

For qualitative data, the type for sampling informants was purposive. The informants were selected based on the extent to which they were familiar with either WMAs or village development politics. It was thought that due to their experience and exposure, they would provide useful knowledge on the socio-economic situation in the WMAs. Using this approach, we managed to recruit the following people/groups for FGDs and in-depth interviews.

*At Respective Study District*

District Natural Resources Officer  
District Game Officer  
District Land Officer  
District Community Development Officers

*At Village/Research Site Level*

Random or purposive sample of villagers/community members (M + F =713)  
21 Village Chair Persons  
5 administrative officials of the MBOMIPA WMA  
21 Village Executive Officers  
1 Natural Resources Conservation Officer who work at ward level  
Ward Executive Secretaries  
3 Wild Game Officers working in the Study Area  
6 Village Game Scouts

Villages with similar socio-ecological characteristics such as settlement pattern, social services density, climatic factors, and geographical landscape were lumped together



## 2.3.2



### **2.3.2.2 A quick-scan of income generating activities at village level**

While in villages, we car

## Investments in the WMAs



Organizing group discussions around these issues revealed to us how diversified people's views are as well as areas of consensus among and within communities. Finally, this helped us gauge what the majority

# CHAPTER THREE

## SOCIO-DEMOGRAPHIC CHARACTERISTICS AND ECONOMIC STATUS

### 3.1 Population Characteristics and Social Relationships

#### 3.1.1 Population Characteristics

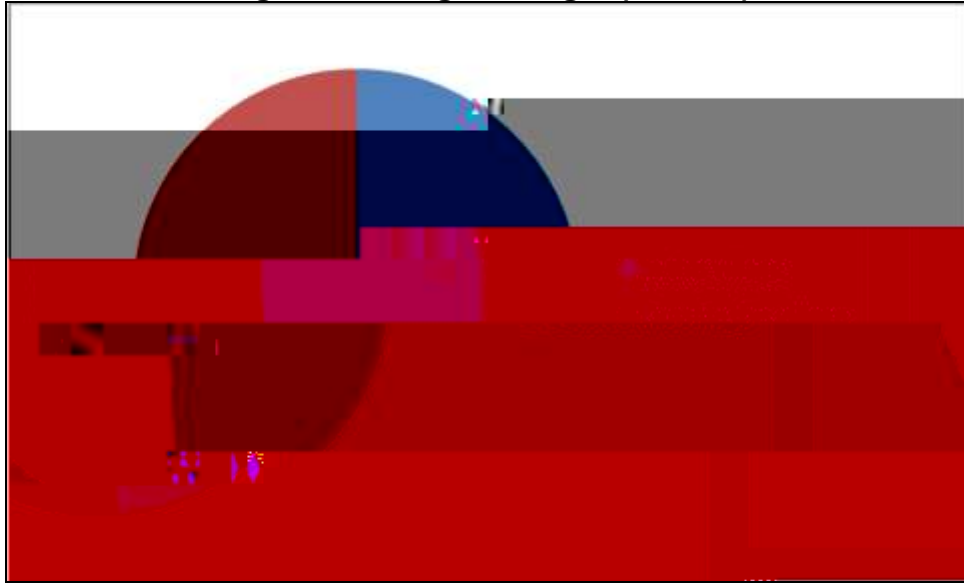
##### 3.1.1.1 Household Headship

According to URT 2006, the head of a household is a member of the household who is acknowledged by other members of the same household as their head. In most African traditions and customs, the household is the basic unit of social structures (Lubida, 2004; de Sherbinin, 2006). The heads of households or their immediate in the familial hierarchy were the respondents in this study. Results in Figure 4 show that the majority of the households (60.2%) were male-headed. As described by Manyong *et al.* 2008, such male-dominated household headship is typical to most countries situated in Sub-Saharan Africa.

### 3.1.1.2 Residence in Current Villages.

The study further showed that the majority (51%) of households originated from other areas and had migrated to the current villages of residence as indicated in Figure 5.

**Figure 5: Village of origin (N = 700)**



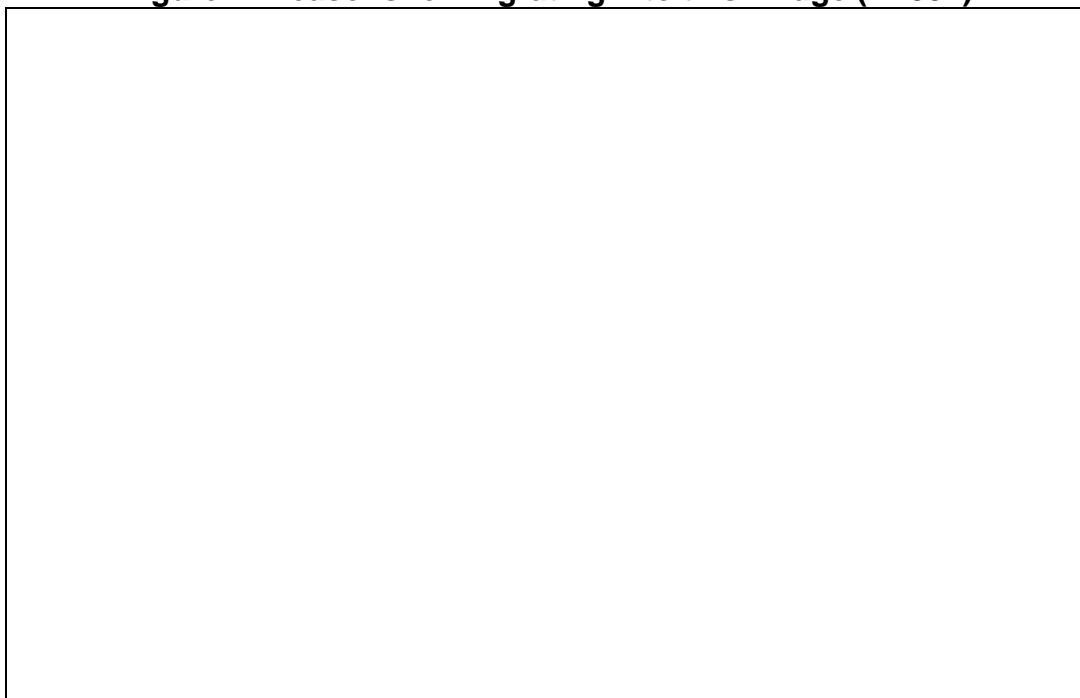
Duration of stay in the current village differed from one household to another as indicated in Figure 6. The figure shows that more than 90 percent of households have stayed in their respective villages for more than nine years, which is enough to understand the WMA as an AA (it was registered in 2007).

**Figure 6: Households percentage years of stay in current villages**



When asked about why they had migrated to the current villages, households had various reasons as revealed in Figure 7.

**Figure 7: Reasons for migrating into this village (N=357)**



Farming and the influence of family and friends were the major reasons mentioned by most households as reasons for migrating to their respective villages. It could be argued that the existence of vast and fertile land in most villages surrounding MBOMIPA was the underlying factor that attracted such migration.

For marriages, it was learnt that many men/women were married to a single wife/husband. This could be assigned to the fact that the area is dominantly Christian which advocates one wife per husband. Polygamists are few at 12.9 percent as compared to 60.1 monogamists. Interestingly though, the number of singles is similar to the number of cohabiting respondents at 5.8 and 6.6 percent respectively.

While conducting IDIs and FGDs (as shown in Plate 2), it was pointed out that polygamous marriages are declining due to both living hardships and as a response to HIV/AIDS campaigns that encourage couples to abide to one faithful and safe partner.

Plate 2: Session of Focus G 0 09 1 121.34gup DisoBT1 0 0 1 312.05 5473.89F(S)2(e)



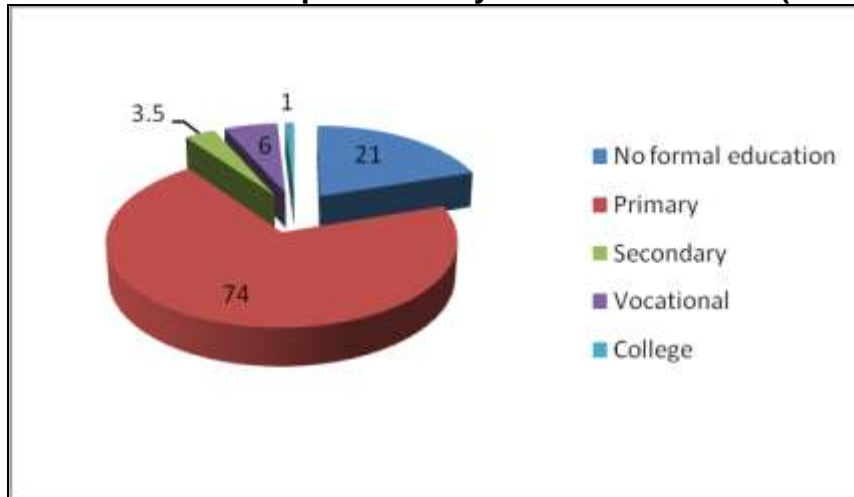
strong, energetic and participants in the various household economic activities and hence are productive in their households and community at large. The substantial engagement of energetic and dynamic age groups in the timber businesses also signifies the sustainability of the enterprise.

**Table 2: Age of respondents**

Age group	N	Percentage
-----------	---	------------

21.7 percent were found to have had no formal education. This is an especially high rate of illiterate people especially because all of the villages in the study had at least one primary school within easy access. It could be argued however that this percentage is made up of pastoralists like Maasai, Sukuma and Mang'ati who are not settled with their livestock.

**Figure 8: Distribution of respondents by level of education (N=709)**



This data showed however that the majority study sample had good literacy capacities in terms of reading and writing and hence could easily adopt business skills and strategies which could improve their household incomes. As described by Nkonya *et al.*, 2004, high education levels can be an opportunity for agricultural development since education normally has a significant influence on a household's income strategies, land management and efficient labour use. Manyong *et al.* (2008) argue that years of schooling above four years permit the candidate to read and write, which is an

### **3.1.1.6 Households level of education by sex**

Some parents tend to regard girls as only future wives waiting to be married, so they don't encourage them to join schools. This is seen in Table 5 w

Another respondent from Nyamahana Village commented:

*is a woman but a man is the one who makes decisions. Nowadays we discuss and agree on family issues. There is a change as we see many women facing men with more confidence an*

A growing understanding and concern on matters with regards to gender equality is quite encouraging despite of the continuing challenges.

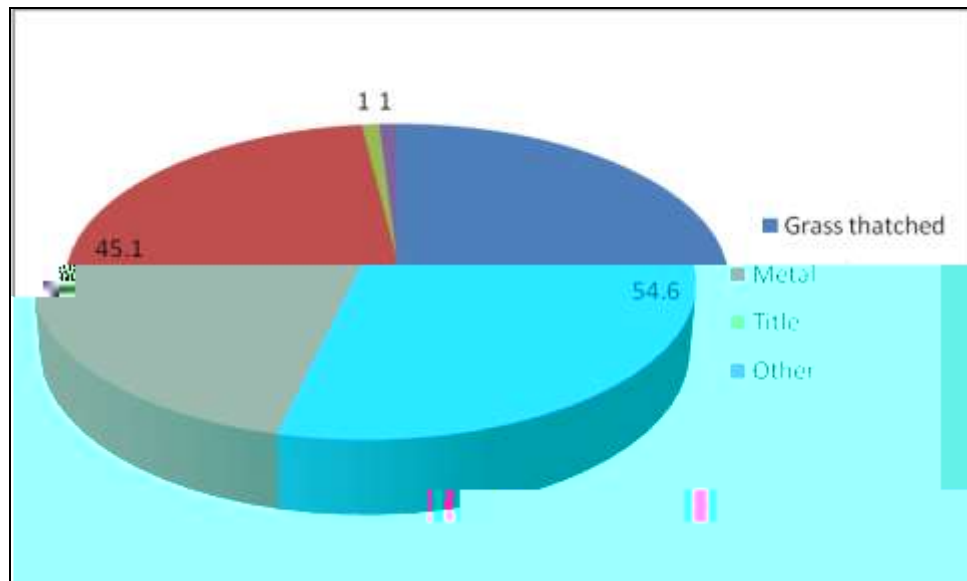
Table 4 shows decision making trends at the household level, whereby shared agreement and cooperation

**3.1.2.3 Religious beliefs**

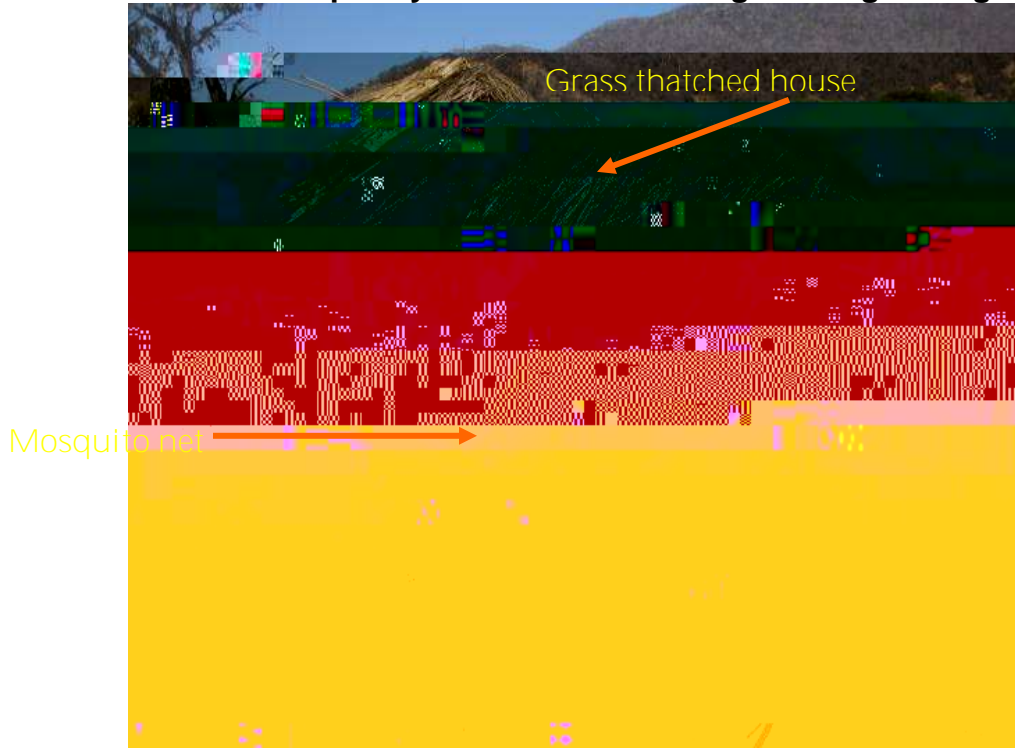
**Plate 4: House built of burnt bricks at Mahuninga Village**



Building houses seems to be relatively cheap because making bricks is an activity that is done within the homestead (Plate 4). However more than half of the sample population have their houses roofed with grasses (Figure 9) possibly due to the high prices of corrugated iron sheets. Some grass thatched houses are extremely poorly built (Plate 5). While conducting qualitative data collection some respondents said they buy one sheet per year and that it can take more than 7 years to complete the whole house.



**Plate 5: One of the poorly built houses at Tungamalenga Village**



Other housing conditions assessed as indicator of livelihood asset are indicated in Figure 10.

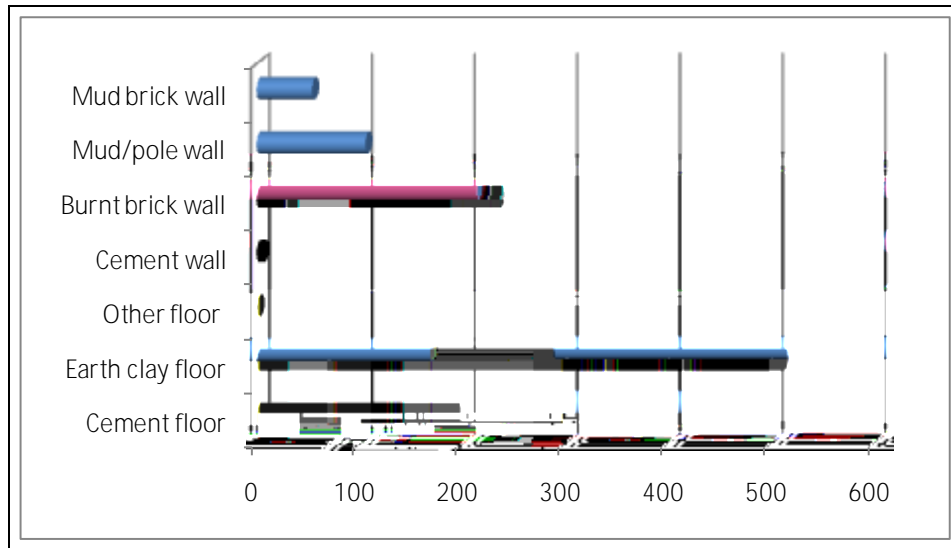
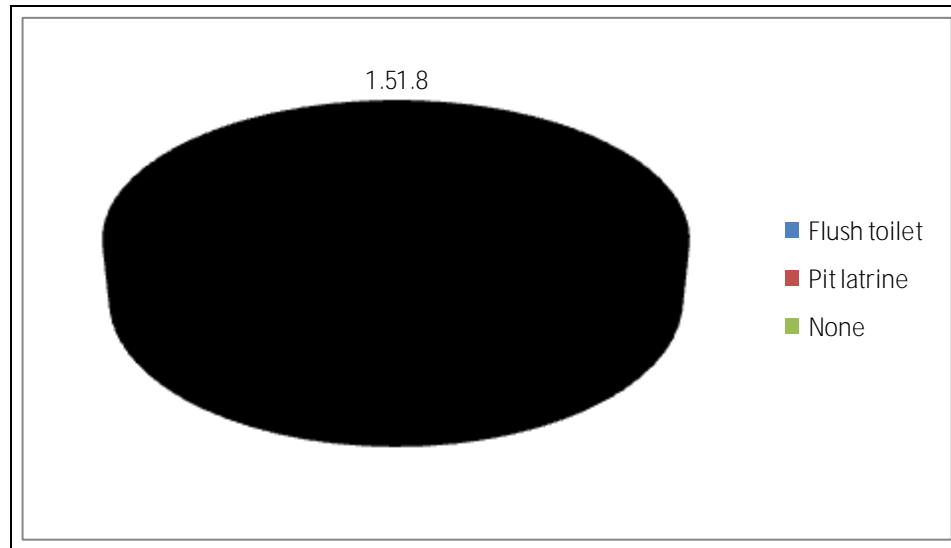


Figure 10 shows a large proportion of houses made with an earth clay floor though the general move towards constructing improved housing (i.e. burnt bricks/block walls and cement floors) is encouraging and continued work is needed in terms of ensuring a good quality of life.

**3.1.3.2 Socio-economic dimensions**





Another respondent confidently said that

## ownership of disposable assets

The analysis of a household's non-essential or disposable assets like radios, mobile phones and televisions was used as an indicator of disposable income. Table 6 shows that most respondents owned radios (about 70%) and cell-phones (39.3%).

Other physical assets owned included television sets, DVD/VCD, refrigerators and satellite dishes. Radio and cellular phones were used as a means for communication for normal communication as well as for business purposes especially for the rice market in Iringa town. One respondent affirmed that some development indicators are conspicuous in most villages. He said: *mobile phones that help us to contact traders when our produces are ready for market. Approximately 30 percent of villagers possess mobile handsets, and all major network providers (VodaCom, tiGO an*

Experiences from Mali and Uganda show that the local (community) radio was the main medium for disseminating market information, since it was cost effective and efficient (Mukhebi *et al.*, 2007). This also could be applied in the study villages as most households owned radios.

Sex      TV      VCD/DVD      Satellite



## **3.2 Main Economic Activities Existing in the WMA**

### **3.2.1 Agriculture**

chemical fertilizers. A number of respondents showed that they came from various areas to Idodi because of naturally fertile soils in both divisions. It was revealed that high quality rice comes from Idodi. As a result, prices are high and sometimes expensive because transporting it to Iringa town for special milling machines increases the cost. Farmers of Pawaga division produce more rice than Idodi, sometimes using it to exchange with maize, besides earning cash money. Farms are either permanently owned or on lease to landless villagers. Generally, more than 90 percent of the people in Idodi and Pawaga divisions depend on agriculture for their livelihoods.

Education Level	Cash crop	Food crop	Livestock	Petty business	Wage labour	Horticulture	Casual labour	Others	Total
No formal education	62	118	35	11	1	3	4	0	770
Primary	295	402	57	41	2	9	15	9	830
Secondary	20	12	6	6	1	0	3	1	49
Vocational	1	4	0	1	0	0	1	1	8
College	1	0	0	0	0	0	0	0	1

\*Multiple responses were allowed

### 3.2.2 Challenges facing agriculture

- Unreliable rainfalls and insufficient irrigation schemes
- Wild animals damaging unharvested crops
- Low prices offered during harvesting time
- Unreliable markets
- Lack of storage facilities such as godowns

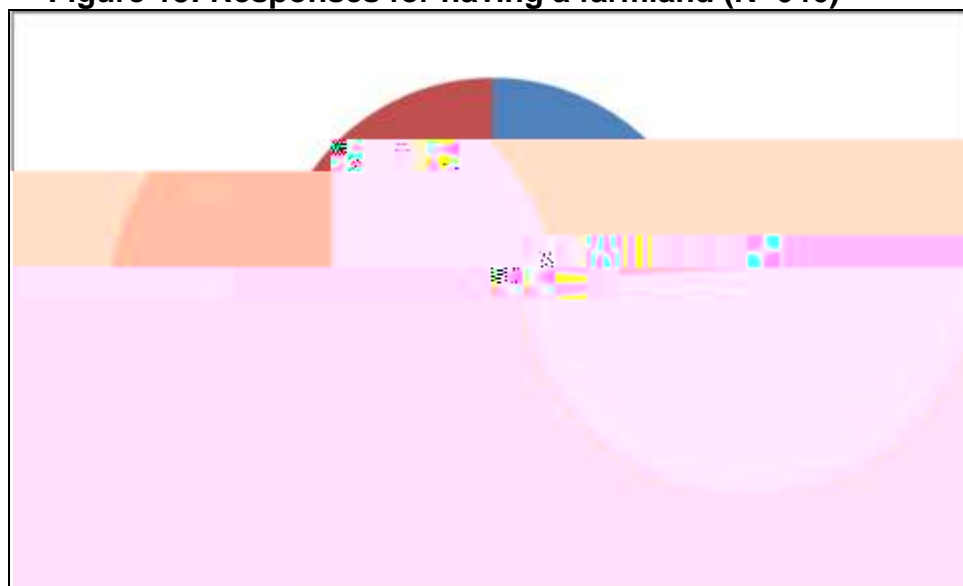
The need for new constructed irrigation canals and others for rehabilitation is a major demand found in all the 21 villages visited.

### 3.2.3 Livestock keeping

In recent years, livestock keeping is becoming an increasingly dominant economic practice among Sukuma, Maasai, Mang'ati and Barbaig who have settled permanently in Idodi and Pawaga divisions. The presence of migrant



**Figure 13: Responses for having a farmland (N=646)**



Tungamalenga village is a relatively growing small town due to the presence of tourist attractions and hence tourist-related businesses. Moreover, there are tented camps, lodges and game viewing points that make tourists spend both time and money there. There are also game sanctuaries, especially reptiles, where species of snakes are bred and farmed. These tourist activities have become a major source of income at Tungamalenga rural township.

In Pawaga division, the main source of income is rice. Rice is used as both a cash and food crop. Pawaga division is famous for paddy cultivation across all villages. Itunundu village is a centre for collecting all rice from all corners of Pawaga villages.

Nowadays there are traders who go straight to farmers to collect bags of rice. Some dare to even sell their raw unharvested rice in their respective paddies, but at a low and regrettable price. A price of rice per 20 litre bucket is very low being sold at 3,500 – 4,000 shillings during harvesting time from May to June, but increases during cultivation from December to March of the following year. It seems that very few farmers wait for this price hike that occurs after harvesting. In so doing traders take advantage in buying the product at a throw away price.

Apart from the rice business, there are other businesses that help people generate income. These include petty trading and other small scale businesses such as kiosks, catering services and vending roast meat. Itunundu is a fast growing rural township as evidenced by scattered light





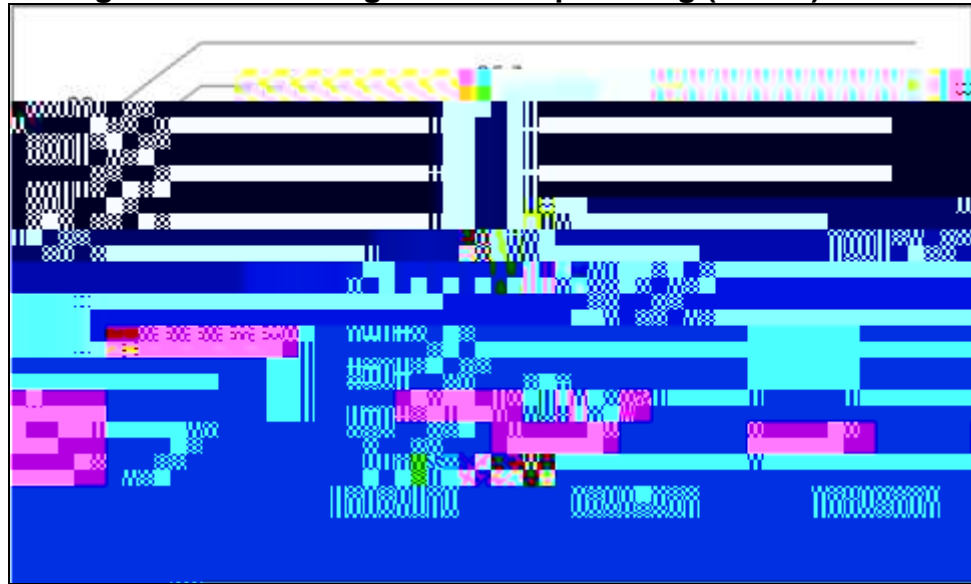
Continuing pressure on scarce natural resources for both human beings and wild animals poses a major threat to their future sustainable existence.

Huge herds of cattle owned by Sukuma, Maasai and Mang'ati have led to competition in claiming grazing areas that are used by farmers for agricultural practices. In some areas wildlife, livestock and farmers compete in controlling a single source of water. Just below the mountain foot, there is one source of water in Idodi village which serves wildlife, livestock and domestic water for villagers. Regular occurrences of wildfires, illegal tree cutting, overgrazing, and encroachment of agricultural farms in the WMA also pose a challenge to the natural resources in the WMA villages.

Poaching used to be a threat to wildlife management in the past, but since the implementation of Wildlife Management through community based natural resources management, it has reasonably declined with only a few cases that are nevertheless effectively controlled by MBOMIPA through their village game scouts.

**Figure 14: Frequencies of poaching (N = 648)**

**Figure 15: Percentage trends of poaching (N=648)**



Revenues made

Livestock used for meat, cultivation, hides, dairy and manure

Water sources mainly Ruaha river and hot springs

Wetlands that are habitat for aquatic life, birds and serve as water sources during dry season whereby crops are – locally called “**vinyungu**”

Ecotourism for tourist attractions and entertainment

Human resources as a potential labour force for socio-economic development. When human resources are fully supported and trained they can help conserve sustainably the natural resources and in turn improve their livelihoods as well



explanation can find evidence to support their theses. In some cases however, large household size has a significant contribution to economic and domestic activities (URT, 2006).

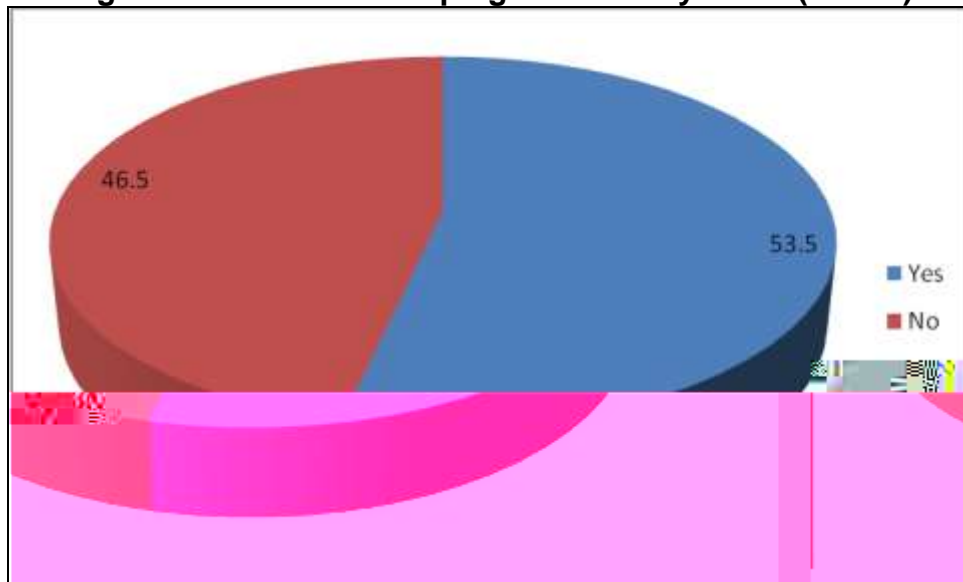
**Figure 16: Number of income earners in a household**



#### 4.1.2 Livestock keeping

When asked if they have livestock, more than 53 percent of households said yes, claiming to use them for different purposes such as a source of income, security and for traditional rituals.

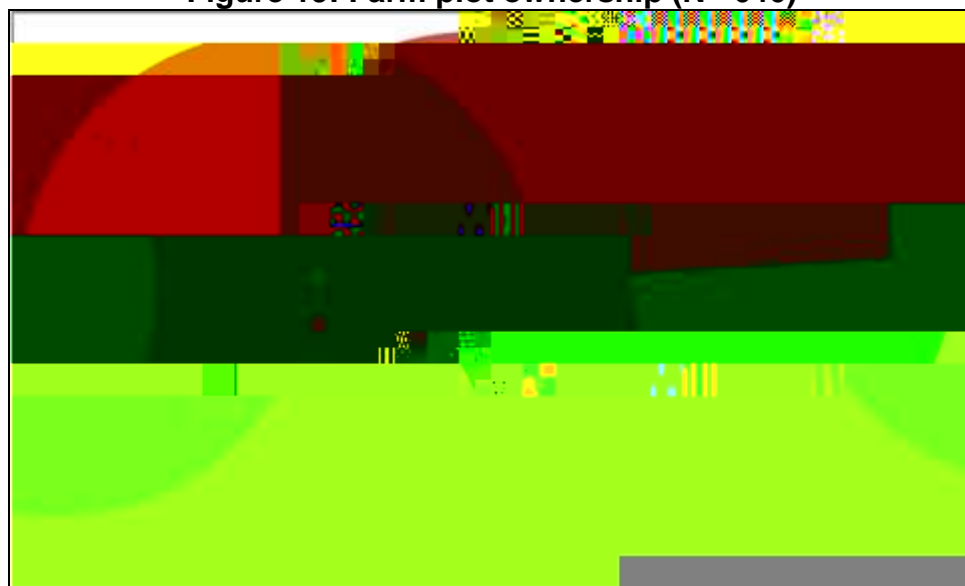
**Figure 17: Livestock keeping in the study areas (N=697)**



**Table 11: Levels of livestock keeping in the study area**

Number of livestock

**Figure 19: Farm plot ownership (N =646)**



Indeed, households owned farm plots of different sizes ranging from less than 1 acre to more than 10 acres per household (Table 12).

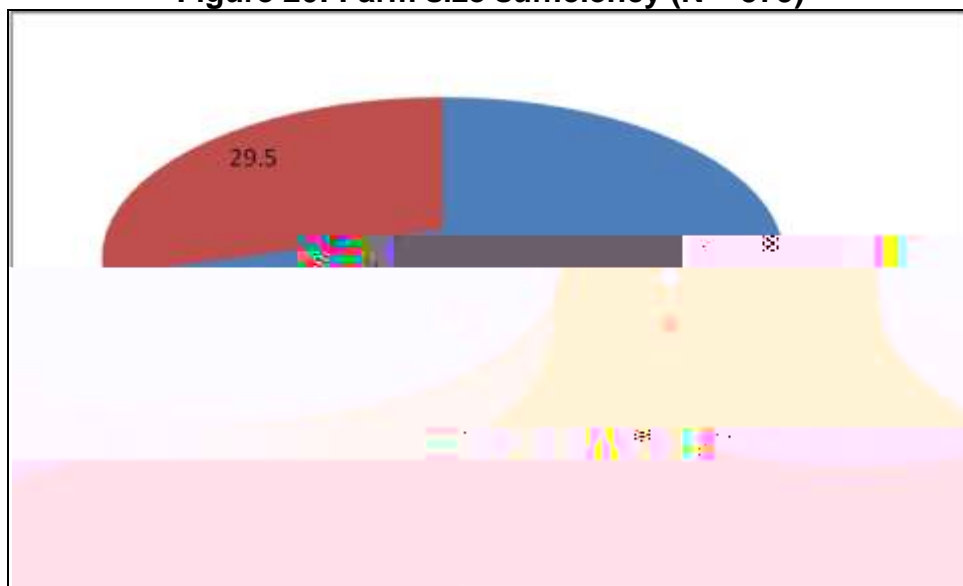
**Table 12: Household ownership of farm plots (acreage)**

Acreage (Size)	Frequency (N)	Percentage
Less than 1	44	8.0
1-2	197	35.7
3 – 5	174	31.5
6-10	106	19.2
More than 10	31	5.6
<b>Total</b>	<b>552</b>	<b>100.0</b>

The majority (94.4%) of respondents owned land of no more than 5 ha which they considered not to be enough for future farm activities. Other studies pointed out that about 70% of the farmers in Tanzania cultivate less than one ha of land which is not enough even for subsistence crop production (Uliwa and Fischer, 2004). The results still show the importance of land as a primary asset for survival and development in the study area, since it supports the livelihoods of most rural people.

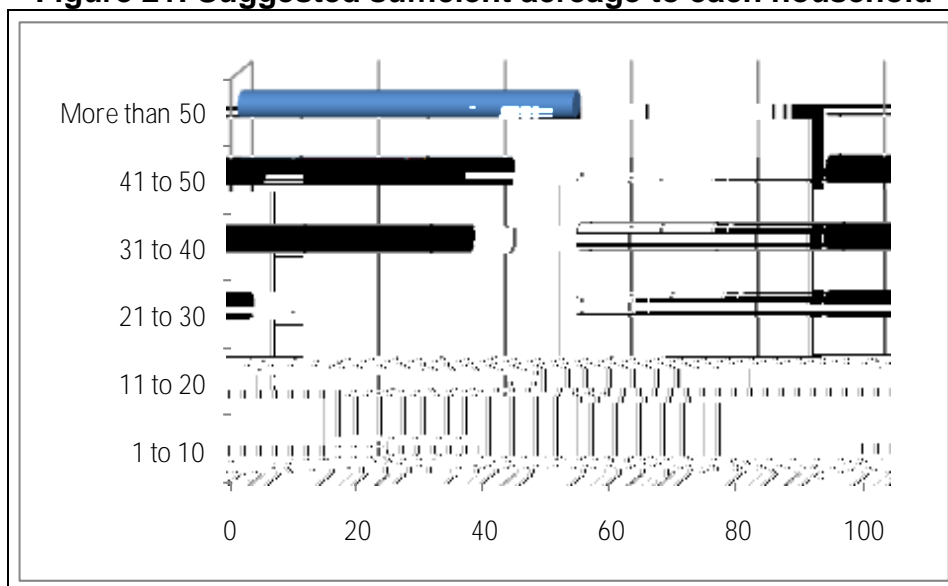
Most of the respondents found their farm sizes insufficient for their on-farm activities (Figure 20).

**Figure 20: Farm size sufficiency (N = 579)**



Householdssuggested a suitable land size for their farming activities as indicated in Figure 21.

**Figure 21: Suggested sufficient acreage to each household**



#### 4.1.4 Crop harvest

Crop harvest has been facing ups-and-downs and farmers have a perception of a good season in terms of harvest. Table 13 shows ranges of good harvest of maize as reported by households.



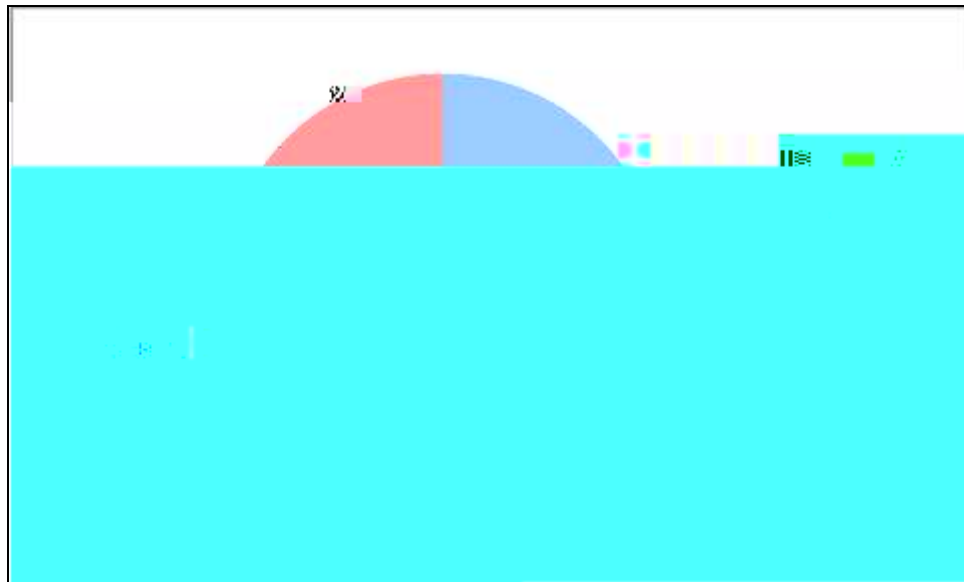
**Table 13: Crop (maize/rice) harvest**

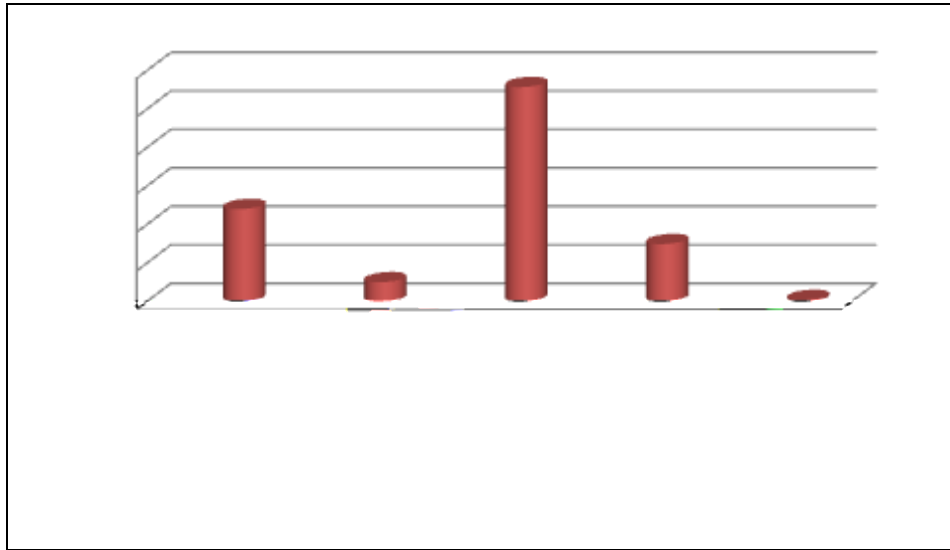
Harvest (sucks)	Frequency (N)	Percentage
Less than 1	6	1.8
1-10	17	5.1
11 – 20	41	12.3
21-30	38	11.4
31-40	71	21.3
41-50	45	13.5
More than 50	115	34.5
<b>Total</b>	<b>333</b>	<b>100.0</b>

**4.2**

still weak. Close to 43 percent of the respondents had no access to formal financial services.

A substantial proportion of households (42.5%) in the study area had no access to credit facilities possibly due to a lack of sound collateral and higher interest rates. The results depict that small scale farmers and those working in small and medium enterprise (SMEs) sectors are still facing a major constraint in accessing formal financial services despite their availability in the study area. This may in turn limit their capacity to survive, prevent them from upgrading their farming activities and business skills and even in many cases, block expansion of their markets and improved management towards raising their productivity; all of which form the basis for successful enterprise and hence an increased households' incomes. Lack of access to credit reflects the reluctance by the commercial banks to give loans to these traders possibly because of the high risk of default. Talking about the lending schemes by the commercial banks Albee, 1994 insisted that evidence indicates that such schemes work best when lending is given to creditworthy clients with good projects who are unable to obtain loans because of a lack of collateral. She also cites Barger, 1989 who noted that commercial bank schemes had generally failed to reach many poor borrowers.





#### 4.4 Economic and Ecological Status of the WMA

MBOMIPA WMA is ecologically blessed with biodiversity ranging from wildlife, forests, fertile soils, water bodies and magnificent scenery of topographic features especially undulating mountains. The great Ruaha and little Ruaha rivers pass and join with the WMA proximity. The River Ruaha is a lifeline to wild animals found in the WMA and in the park where there is a high density of animal populations. The River Ruaha is also the only source for the Mtera dam where hydropower of national significance is harnessed.

Having such attractive ecological systems, Ruaha National Park has grown into a main destination for local and foreign tourists. However, due to increasing pressure of both human activities and grazing areas for livestock and wildlife, there is a potential danger of degrading the ecological status of the park and indeed the WMA.

As discussed in previous sections, competitive trends for scarce natural resources is clearly evidenced by the continuing conflict for grazing areas between farmers and livestock keepers. The ever increasing demand for irrigation agriculture also causes the water levels of the Ruaha River and hence the Mtera dam to decline, resulting in an economical and ecological slow down. It is widely known that when rivers feeding Mtera dam recede, the water levels needed to generate electricity also recede, causing unprecedented power rationing and consequently economical slow down. Conserving the WMA in a sustainable way indeed benefits both the community of MBOMIPA and hence definitely the nation at large.

#### **4.5 Contribution of the WMA on Village Revenues and their Common Expenditure**

All 21 villages that constitute MBOMIPA WMA get an equal share of revenue accruing from tourist operations as monitored by the MBOMIPA association. In recent years each village has been receiving more than 2 million shillings per year. The revenues provided by MBOMIPA are commonly spent for:

- Building classrooms and houses for teachers
- Constructing modern school toilets
- Constructing and/or rehabilitating local government offices in member villages
- Sponsoring orphans who successfully join secondary education
- Supporting construction of dispensaries

## CHAPTER FIVE

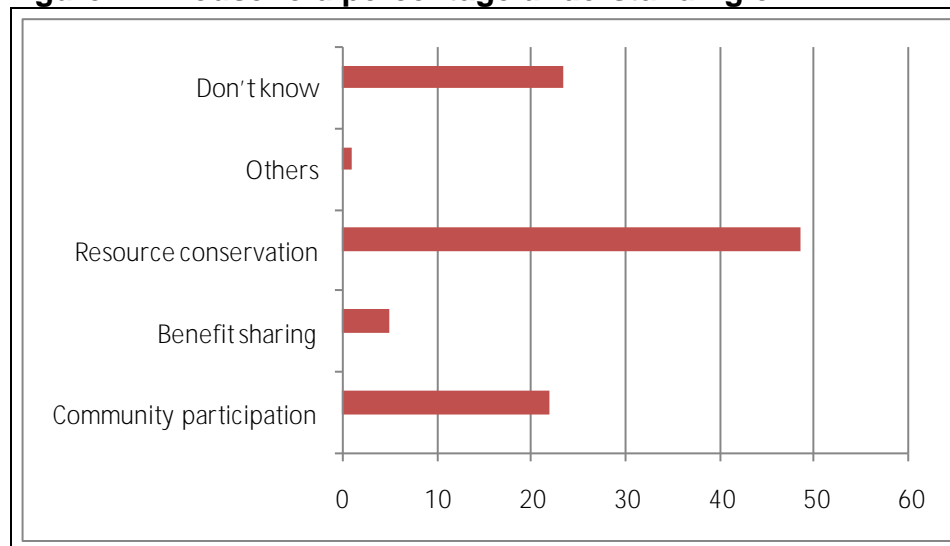
### PROGRAMME AND WILDELIFE MANAGEMENT AREAS

#### 5.1 Peoples Knowledge, Awareness and Attitudes towards WMA

Villagers are well informed on MBOMIPA - a name widely known and famous with regards to wildlife conservation. The WMA is not clearly understood unless someone mentions MBOMIPA to mean WMA. To many villagers MBOMIPA means an institution responsible for safeguarding wild animals and conserving the environment. They are also aware of the benefits they get, especially the money distributed equally to all 21 member villages, which is used mainly to support social services, such as schools and dispensaries.

People referred to their understanding of the WMA due to the value attached to it as shown in Figure 24.

**Figure 24: Household percentage understanding of WMA**



However, about 24% of households were not aware of the WMA, which calls for need of intensive awareness campaigns.

## 5.2 Resources

Many people have widely accepted the efforts being made by MBOMIPA to conserve natural resources and the benefits accruing from it. While conducting qualitative data collection tools (IDIs, FGDs, Observations and quick scans), a good number of respondents said that revenues from MBOMIPA have helped them, as opposed to the past, having no burden of social service contributions, especially schools and dispensaries.

Their approval for continuing to support conservation initiatives is seen in the way they respond swiftly to nominate village game scouts needed for regular patrols. Whenever village labour force is needed, the whole communit,



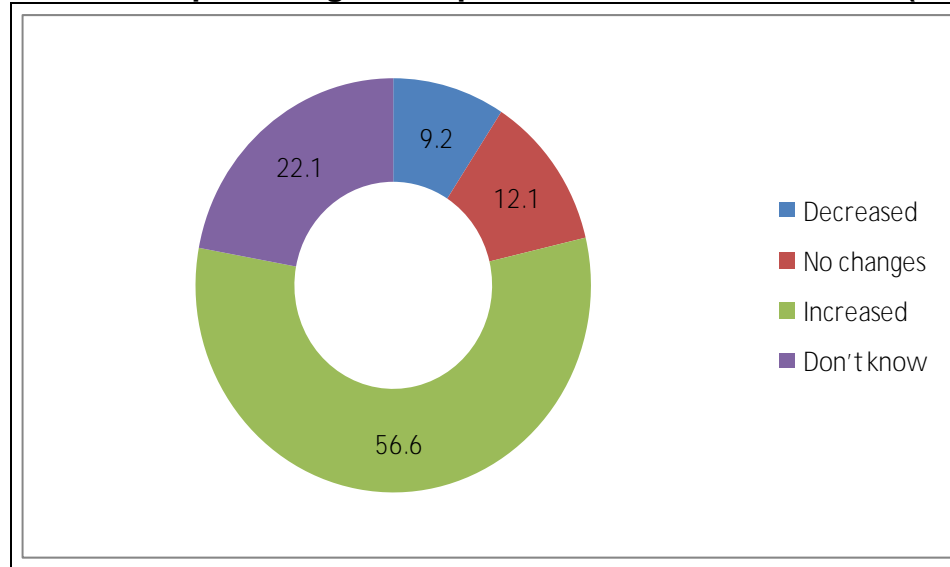
**Figure 26: Household percentage on whether benefit sharin**



#### 5.4 Impact of WMA on Livelihoods

The impact of the WMA on people's livelihoods was positively acknowledged in both divisions. About 57 percent of households interviewed had the opinion that the WMA has led to improved livelihood assets in the surrounding villages. However, 22.1% of households described not knowing of any impact of the WMA (Figure 27). This again calls for more awareness campaigns and sensitization of the WMA activities in the surrounding area.

**Figure 27: Household percentage on Impact of WMA on Livelihoods (N=687)**



This situation could however be the result of many people not being aware of the WMA in that they were knowledgeable only of the existence of MBOMIPA. It should be understood that WMA is an English acronym, which is a foreign and unpopular language in the study area. This situation could have comouflaged its importance as most people failed to relate it to MBOMIPA.

#### 5.5 Overall assessment of WMA

Despite of isolated cases of dismay, many households rated WMA as “good” for business (Figure 28). This is a possible way of enforcing future sustainable management practices that are people-oriented as many people understand the importance of the venture.

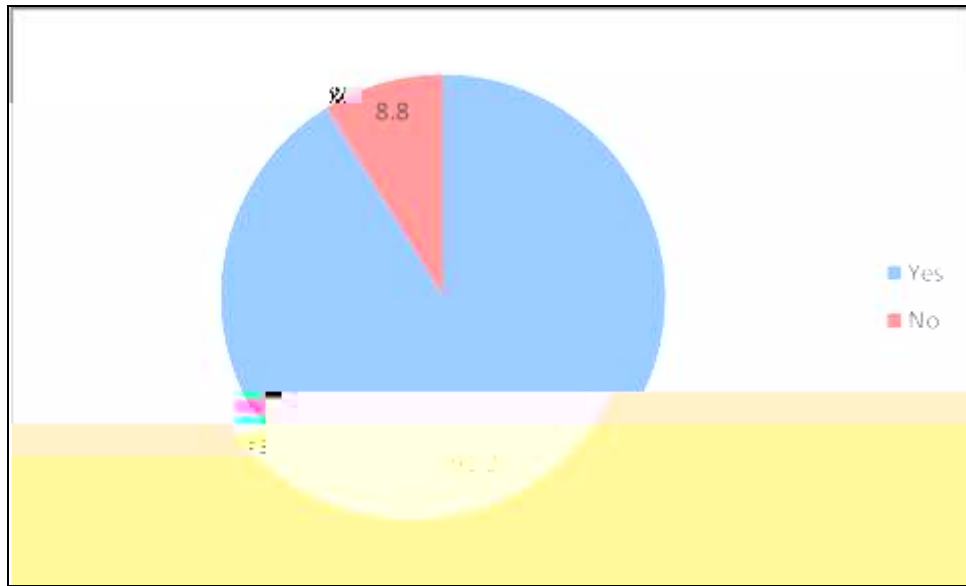


some of the main challenges. It is thus urged that the two issues be looked at critically to ensure the sustainability of the WMA. Other challenges such as the need for professional management of the WMA and clear/transparent financial contributions of the WMA were also highlighted as needed with immediate urgency.

## **5.7 Programs**

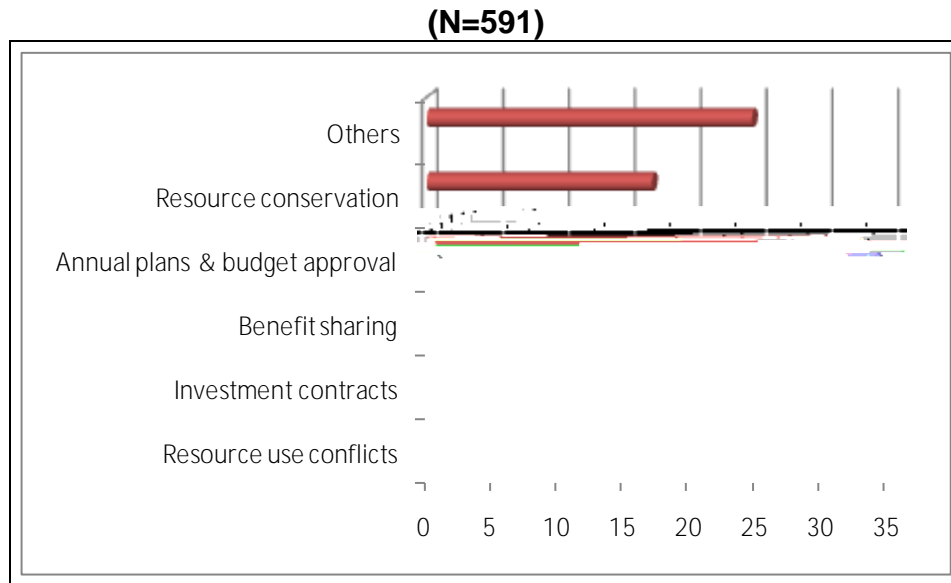
**-for Work**

While administering qualitative data, most respondents showed an



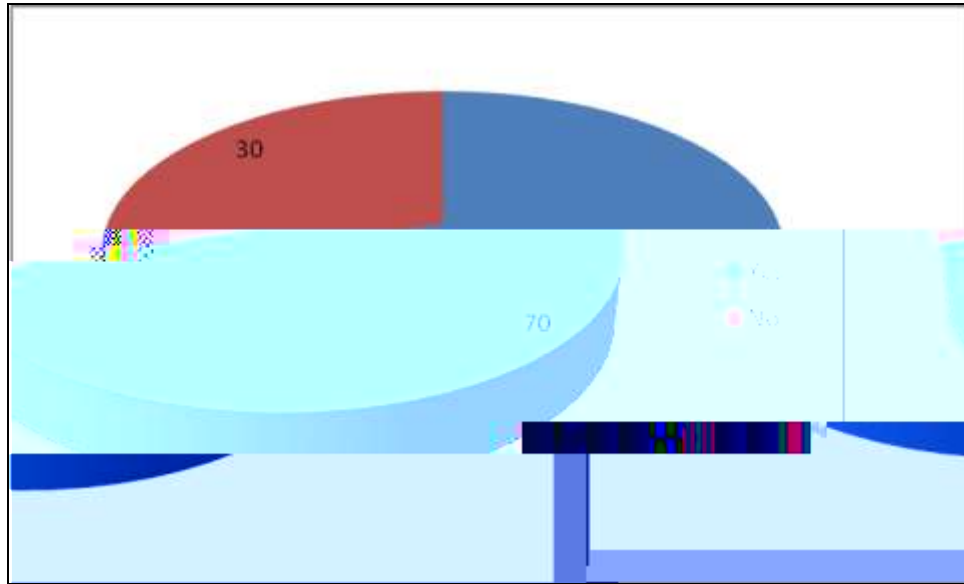
### 5.8.2 Main issues discussed in village general meetings

It was fascinating to note that among the common agendas discussed in villages general meetings were annual plans and budget approval, resource conservation, benefit sharing, and resource use conflicts; all of which also reflect the activities of the WMA.



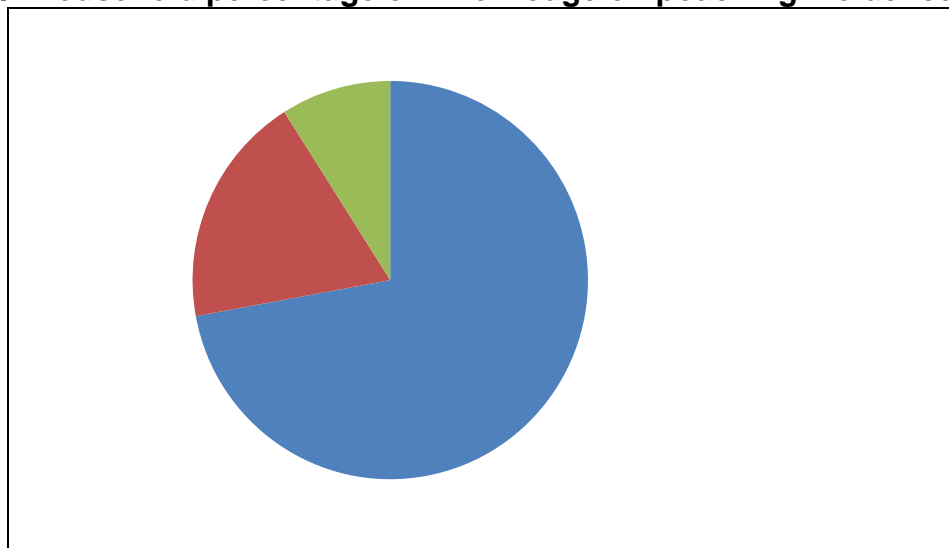
Investment contracts are also important to ensure WMA sustainability as people need to

**Figure 32: Househ**



Such inclusion of the WMA in village meetings is recommendable and can be one of the reasons why poaching incidences have tremendously declined in the study area after the institutionalization of the WMA.

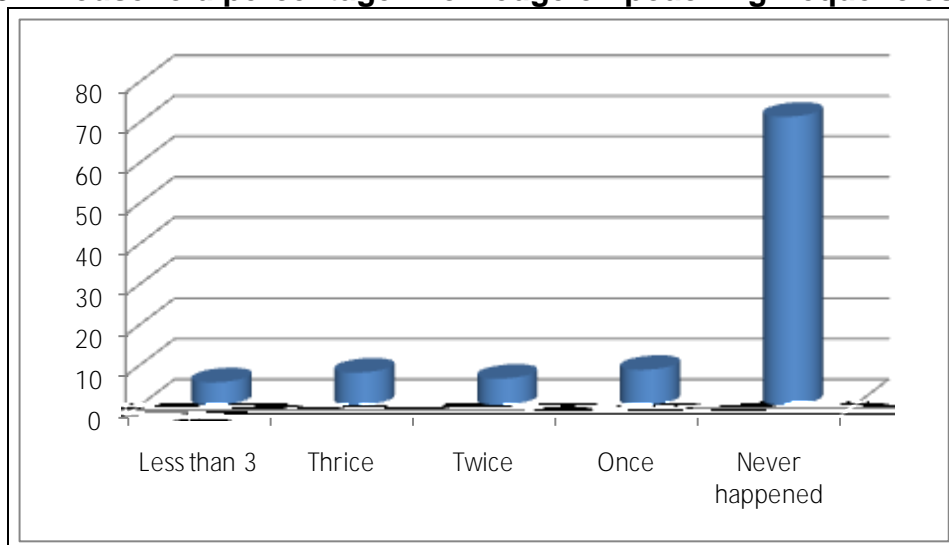
**Figure 33: Household percentage on knowledge on poaching incidences (N=708)**



### 5.9.2 Poaching Frequencies

All research tools showed a tremendous decline of major poaching events and in all cases, people acknowledged the WMA for the declining trends of poaching in their respective areas. Figure 34 shows poaching has never happened in recent years in the respective study villages. The remaining sporadic events were associated with minor poaching events such as fishing in rivers and collection of ropes in conserved areas.

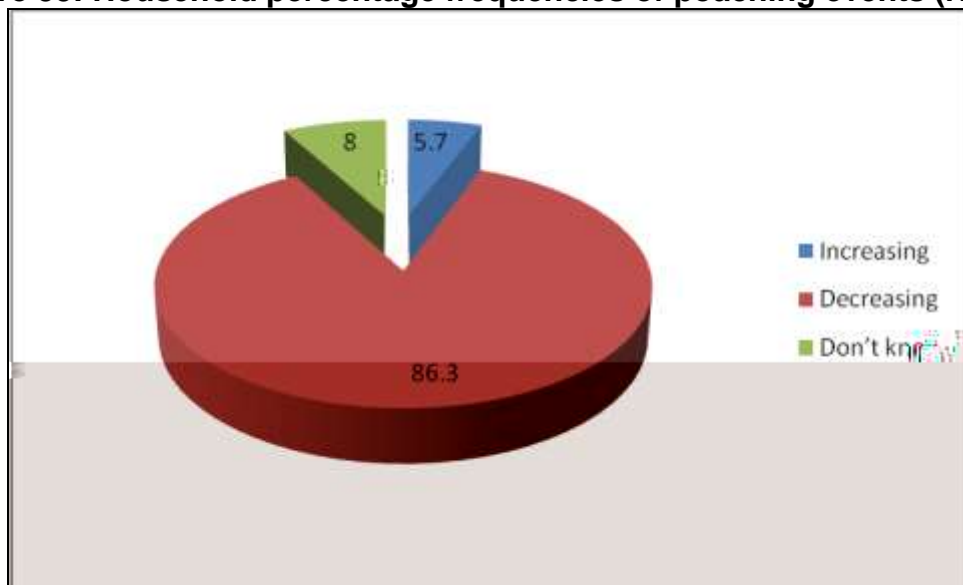
**Figure 34: Household percentage knowledge on poaching frequencies (N=413)**



### 5.9.3 Poaching Trends

A large proportion of households (more than 86 percent) had the opinion that poaching events are declining. More efforts should also be directed to the remaining percentage of those who said that it was either increasing or didn't know (Figure 35). The aim should be for zero poaching incidences acknowledged by people. More sensitization efforts towards encouraging people to do away with poaching, strengthening the WMA, ensuring a trickle down effect and strengthening of VGS should be a matter of necessity. At all stages of WMA management, participatory approaches should be central.

**Figure 35: Household percentage frequencies of poaching events (N=648)**



## 5.10 Conflicts and Conflict resolutions in the study area

### 5.10.1 Conflicts knowledge

So far, the WMA has shown positive results in resource management and its efforts to ensure successful people-centred development through participatory resource management and is encouraging and worth appraisal. However, some conflicts have been seen to emerge from the successful stories of the WMA, and these conflicts need to be addressed in a democratic and civil way while respecting human dignity. Figure 36 shows that more than 66 percent of households acknowledged to know of the existence of conflicts related to WMA.





**Figure 37: Household percentage on anticipated activities (N=393)**



Thus, while thinking of improved WMA management, such kind of trickle down effects should at all times be observed and measured so that people are not misled.

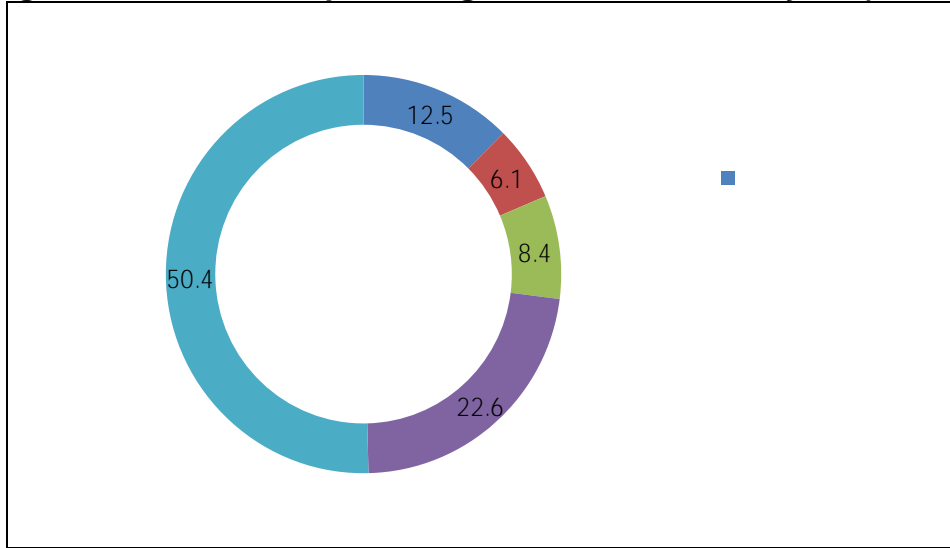
### 5.12 Impact of WMA on Wildlife

Respondents as well noticed the importance of the WMA to wildlife. The increased abundance of wildlife, decline in destructive behaviour and provision of reproductive grounds were the leading suggested positive impacts of the WMA to wildlife (Table 18).

**Table 18: Impact of WMA on wildlife**

Impacts	Frequency	Percentage
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**Figure 38: Household percentage on fire events last year (N=690)**



Results from this study however show an encouraging decline of bush-fire events (Figure 38). People acknowledged this positive event as being due to the insurmountable efforts made by the WMA towards addressing the effects of bush-fires among other attributes. On the other hand, more concentrated efforts are still needed to

## **CHAPTER SIX**

### **SOCIO-ECONOMIC CHARACTERISTICS AT VILLAGE LEVEL**

#### **6.1 Population Characteristics of villages**

**Table 20: Population size for MBOMIPA WMA Villages (Pawaga Division)**

<b>Pawaga Division</b>	<b>Village</b>	<b>Female</b>	<b>Male</b>	<b>Total</b>
------------------------	----------------	---------------	-------------	--------------

Comparing population by sex, the number of women seems to surpass that of men in most villages except in Kitisi, Nyamahana, Malinzanga and Idodi where the number of men is slightly higher than that of women.

On other hand, the villages of Pawaga division have their village populations ranging

are more men engaging than women. But on the other hand, where other small scale businesses grow, women are seen outnumbering men. And, as business opportunities scale up so does the population size of women - a trend signifying that petty trading in rural areas involves more women than men

Pawaga division is famous in Iringa and neighbouring regions for its long standing rice farming. Although there are other economic activities in small scale such as fishing, trading and horticulture, rice farming is a major lifeline for almost all households in the area (Table 33). Even Maasai, Sukuma and Mang'ati pastoralists, also have rice farms alongside livestock keeping. It clearly seems that there is no any household without a rice farm permanently owned or on lease.

## **6.2.2 Village income levels**

### **6.2.2.1 Idodi Division**

In administering the survey questionnaire many respondents failed to properly calculate their annual incomes

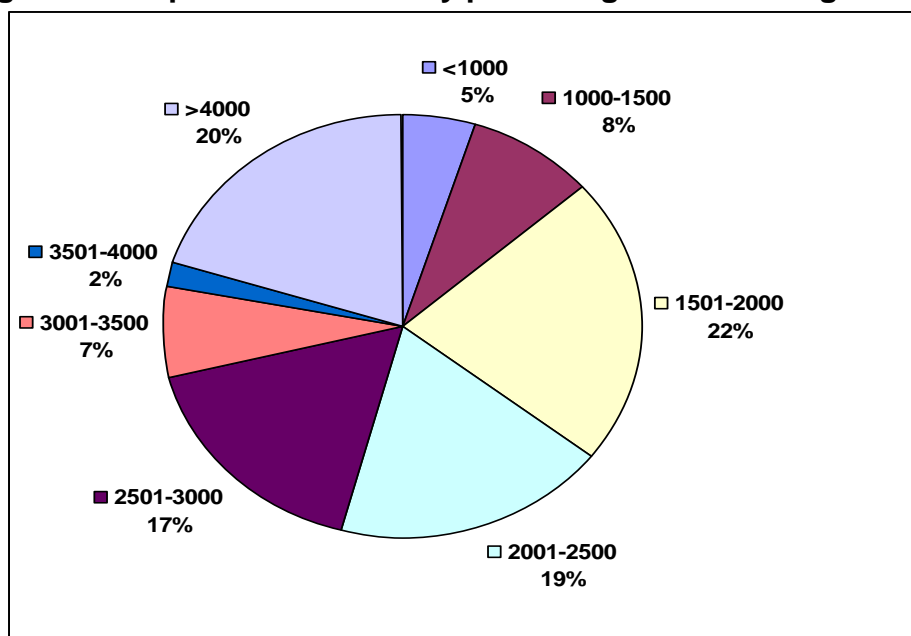


### **6.2.2.2 Pawaga Division**

Annual average income per household for villages of Pawaga division is slightly above that of Idodi division villages (Figure 42). Sales of rice are probably a factor as people of Pawaga generate substantial amounts of money. Generally, their incomes end up sustaining them during the time of paddy cultivation to harvesting as they have no any other major economic activity/source of income apart from rice. However, livestock keepers find life relatively easier as they depend on both rice and animals for selling meat. Having rice as the only major source of income in Pawaga division is sometimes a risky business because many households suffer hunger disaster whe

respectively, 43.3% and 42.1% of respondents had over T.Sh 4,000 household expenditure per day, whereas over 50% of respondents from other household expenditure per day clustered

**Figure 43: Expenditure levels by percentage at Malinzanga Village**



In Figure 44, the majority of respondents at Mapogoro village expend their incomes at two different extreme ends, as it was seen that most of them use below T.Sh 1,000 then decline and sharply rise to use T.Sh 4,000 per household per day.

**Figure 44: Expenditure levels by percentage at Map(4264(e)-24 396.989..1 0 1 122.78 45**



**Table 24: Household expenditure per day for Nyamahanga Village**  
Frequency

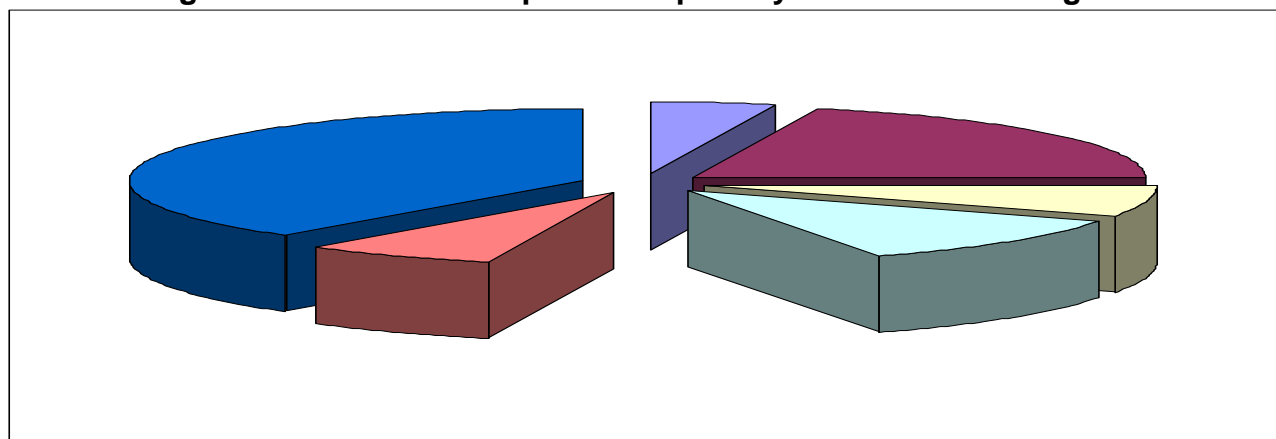
**Table 26: Household expenditure per day for Kinyika Village**

	Frequency	Valid Percent
1000 - 1500	1	2.6
1501 - 2000	4	10.5
2001 - 2500	1	2.6
2501 - 3000	5	13.2
3001 - 3500	2	5.3

**Table 28: Household expenditure per day for Mboliboli Village**

	Frequency	Percentage
< 1000	1	3.2
1000 - 1500	2	6.5
1501 - 2000	5	16.1
2001 - 2500	1	3.2
2501 - 3000	4	12.9
3501 - 4000	4	12.9
4001+	14	45.2
Total	31	100.0

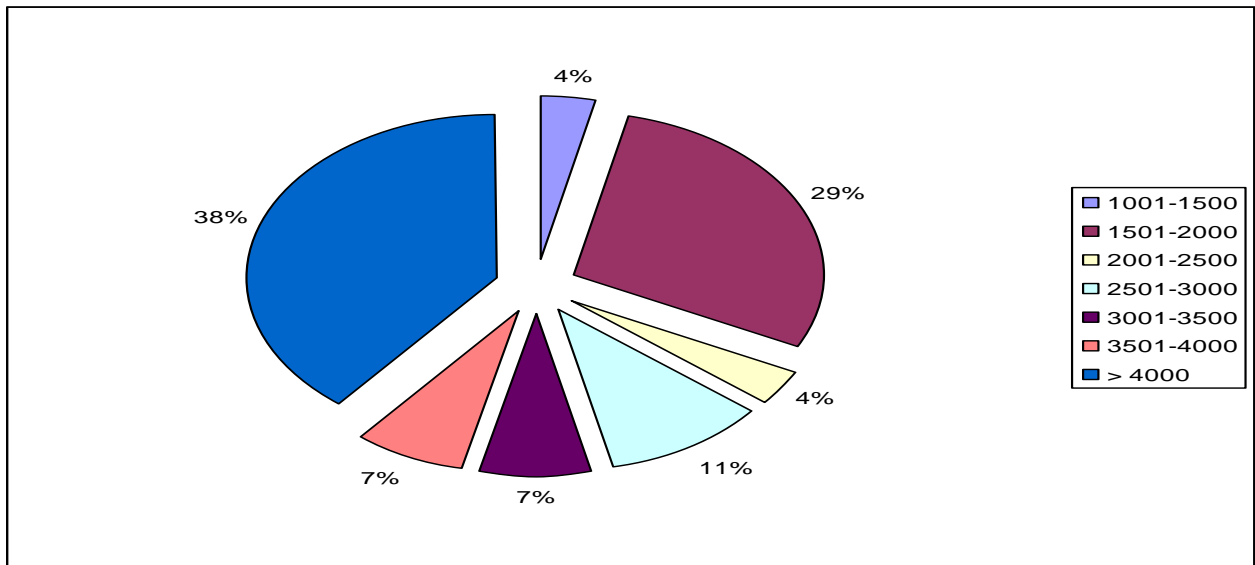
**Figure 47: Household expenditure per day for Itunundu Village**



N=44

Itunundu village, as highlighted in previous sections above, is a central trading location in Pawaga where only 39% of total sample size responded to expend their incomes above T.Sh 4,000 per household per day (Figure 47 above). However, it is not surprising to see that it is closely related to Ilolo Mpya village which, as observed in the study, it is ranked as the second trading center, where 38% of the sample size indicated to expend more than T.Sh 4,000 per household per day - more of the same to Itunundu (Figure 47 & 48).

**Figure 48: Household expenditure per day for Ilolo Mpya Village**



**Figure 49: Household expenditure per day for Isele Village**

For Isele village (Figure 49) above, we learn that more people of the representative sample size expend t







## **6.4 Socio-economic standards at village level**

### **6.4.1 Availability and quality of social services**

#### **6.4.1.1 Education**

Social services have been generally highlighted in sub section 1.8 above, a section that shows quantity of social services in Iringa Rural District, and detailed cross tabulations are broadly discussed in chapter three. However, social services in villages comprising MBOMIPA WMA differ from one village or division to the other. Ed1 0 0 15966re pter threTJTBT1.



## **6.5 Socio-economic standards at village level**

### **6.5.1 Availability and quality of social services**

#### **6.5.1.1 Education**

is a major plight. The situation is worse in villages where there are no health services because people have to work long distances to get the services..

#### **6.5.1.4 Infrastructure**

Iringa Rural District Council is making efforts to make sure that rural roads are passable throughout the year. There are main roads (gravel) entering MBOMIPA WMA from Iringa urban. The first one passes through Kalenga to the villages of Nyamahana, Idodi, Mapogoro, Tungamalenga and all the way to head quarters of Ruaha National Park at Msembe sub village. This road is passable throughout the year and regularly rehabilitated. During the rainy season however its accessibility is difficult and sometimes limited. It has a short cut that diverts at Nyamahana village to the main entrance of Ruaha National Park. A rough earth road to villages of Makifu and Mahuninga is accessible, but the condition of earth roads to Kitisi, Malinzanga and Mafuruto were reported to worsen during the rainy season with potholes scattered all the way.

The second main road (also gravel) goes to Pawaga division. It begins at Mkwawa University College of Education through undulating rocky mountains to the villages of Luganga, Magozi, Ilolo Mpya, Mkombilenga, Kimande and Itunundu. This road is well maintained due to its economic significance, especially transporting rice. Roads to Kinyika, Kisanga, Mboliboli and Mbuyuni are accessed with difficulty > the good news is that during the survey there were major rehabilitations going on. Apparently, the villages of Isele and Magombwe (Table 30) have no roads; they are accessed only on foot through difficult narrow pathways.

#### **6.5.2 Living standards at village level**

Living standards in most villages are more or less similar, although standards are slightly higher in villages where average annual household incomes are higher (T.Sh 600,000 to 700,000) as analyzed above in Idodi division (Figure 41). Taking into account housing conditions as an indicator for the level of living standards, Tungamalenga, Nyamahana, Idodi, Mapogoro and Malinzanga have far better houses as compared to low household income earners in the villages of Kitisi, Mafuruto, Makifu and Mahuninga (Plates 4 & 5 above).

Higher living standards are also reflected in Pawaga div(s )-3(e)-3s c-11(n)-7k-2(a)-3(w)TB rg0 0 1 F



**Table 29: Availability and quality of social services at village level in Idodi Division**

<b>Division</b>	<b>Ward</b>	<b>Villages</b>
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**Table 31: Average annual income levels for Common entrepreneurship groups**

Village	Average annual income levels for common entrepreneurship groups (T.Sh)
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**Table 32: Key Parameters at Village Level in Idodi Division**

Village	Population Size			Main economic activities (income generating activities)	Social services available	Average annual income per household	Daily average expenditure per household	Types of business/production groups
	Total	Female	Male					
Mahuninga	<b>2913</b>	<b>1547</b>	<b>1366</b>	Agriculture (rice, maize and groundnuts), livestock keeping (cattle, goat, poultry and swine) and petty trading	Primary school, piped tape water, dispensary, earth road and mobile phones	<b>450,000</b>	<b>3,500</b>	Local brew and food vending (Mama Lishe) groups mainly involving women. Men surface mainly in selling rice, maize, groundnuts, kiosks and livestock products

Mapogoro	<b>5403</b>	<b>2601</b>	<b>2802</b>	Agriculture (rice, maize and groundnuts), livestock, small businesses and credit services	Primary, dispensary, surface water, earth road and mobile communication	<b>600,000</b>	<b>4,500</b>	Some kiosks mostly owned by men. Food vending groups run by majority women. Rice and maize purchases mainly controlled
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**Table 33: Key Parameters at Village Level in Pawaga Division**

Main economic activities	Social services available	Average annual income per household	Daily average expenditure per household	Types of business/production groups
Agriculture (paddy), livestock keeping and small businesses (mainly rice and household items)	Primary and secondary school, health center, piped and surface water (river Ruaha), passable earth road and communication facilities (mobile phones)	<b>800,000</b>	<b>&gt;5,000</b>	Rice wholesaling is a dominant and blossoming business mostly done by male traders. Petty trading and food vending mostly involve women. Kiosks and shops are more or less equally owned by both sexes. The central market mostly embraced by women selling various types of food and fruits. Several power tillers on hire are owned by well-off men. Bars attract both sexes
Agriculture (paddy), livestock keeping and trading (mainly rice)	Primary, secondary school and health center (shared with Itunundu village), piped and surface water	15013.30316223.1204urf		

Kinyika	<b>1595</b>	<b>861</b>	<b>734</b>	Agriculture (paddy) and livestock keeping
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## **CHAPTER SEVEN**

### **CONCLUSIONS AND RECOMMENDATIONS**

#### **7.1 Conclusions**

The empowerment and implementation of managing natural resources through community based conservation (CBC) has been a major step to achieving the government intent as stipulated in the Wildlife Policy of Tanzania, adopted in 1998. This approach has instilled confidence and deepened ownership of the people to their surrounding natural resources, which in particular for this study, greatly refers to wildlife resources and their supportive ecosystems.

The benefits that come from joint management of natural resources among villages forming the WMA, have been widely accepted and inspired people to fully participate in community based natural resource management, especially wildlife resources and other tourist attractions. The availability of social services, for instance, every village having a school that is supported by MBOMIPA as a result of having a WMA, is quite encouraging for people to continue appraising their association.

The challenges are many, but the willingness and readiness of the people to fully participate in projects related to the conservation of natural resources will certainly trigger commendable s

the people and member villages. Also in this regard, poaching incidences, environmental degradation and conflicting competition on scarce resources will continue to decline significantly.

## **7.2 Recommendations**

MBOMIPA as an association needs more institutional and capacity support

Major economic activities practiced in MBOMIPA member villages, particularly agriculture and livestock keeping require modernized irrigation systems and respectively proper allocations for grazing areas, that will certainly help improve rural livelihoods and natural resources management.

People's morale to participate in community based conservation is a major step and entry point for the implementation of effective conservation strategies and fostering the wildlife policy into successful enforcement

Conflicting competition in controlling farming and grazing areas between wildlife, farmers and pastoralists needs immediate crackdowns.



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## Appendix 1

ADMINISTRATION

INTERVIEWER VISITS				
	1	2	3	FINAL VISIT
DATE	_____	_____	_____	DAY [ ][ ]
INTERVIEWER'S NAME	_____	_____	_____	MONTH [ ][ ]
INTERVIEWER NO	_____	_____	_____	YEAR [ ][ ][ ][ ]
RESULT***	_____	_____	_____	INTERVIEWER [ ][ ]
	_____	_____	_____	RESULT [ ]
APPOINTMENTS: NEXT VISIT: DATE TIME	_____	_____		TOTAL NUMBER OF VISITS [ ]
<p><i>RESULTS CODE</i></p> <p>1. COMPLETED</p> <p>2. POSTPONED/INCOMPLETE</p> <p>3. ABSENT FOR SHORT PERIOD OF TIME</p> <p>4. REFUSED</p> <p>5. LANGUAGE BARRIER/INCAPACITATED</p> <p>6. OTHER _____</p>				<p>You have to return</p> <p>You have to return</p>

FIELD  
SUPERVISOR/EDITOR

NAME \_\_\_\_\_

DATE \_\_\_\_\_

After the informed consent has been read, understood, and agreed, record the time the interview starts [ ][ ][ ][ ]

No.	Question and filters	Coding categories	Skip to
<b>SECTION A: SOCIO - DEMOGRAPHIC CHARACTERISTICS</b>			
A1	Sex of the respondent	1 Male 2 Female	A1 [ ]
A2	In what year, month and date were you born?	A2 Date of birth [DD/MM/YYYY] A2-1 1	



4 Family and friends  
5 Pol





	transport facilities?	B20-4 1 Yes 2 No Oxen/Donkey cart B20-5 1 Yes 2 No Other - Specify_____	B20-4 [ ] B20-5 [ ]
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B21	Roof material	1 Thatch 2 Metal 3 Tile 4 Other (specify)_____	B21 [ ]
B22	Floor material	1 Lime and stone 2 Cement and sand 3 Earth /Clay 4 Tiles 5 Other _____	B22 [ ]
B23	Wall material	1 Cement block 2 Burnt bricks 3 Mud and poles	

	If not go to section D		
C32	How much do you earn from wildlife ventures/activities? 1. Photographic Tourism [ ] 2. Hunting Tourism [ ] 3. Curio goods selling [ ] 4. Direct employment [ ]	1 0 – 20,000 2 20,001 – 50,000 3 50,001 – 100,000 4 100,001 – 150,000 5 150,000 and above	C32 [ ]
C33	Do you experience changes in earnings from wildlife ventures/activities	1 Yes 2 No 3 Do not know	C 33 [ ]
C34	If yes, what are the changes	1 Increased earning 2 Decreased earning	C 34 [ ]
C35	When did the changes start?	1 2003-2005 2 2006-2008 3 2009 to date	C 35 [ ]
C36	What do you consider to be the cause of these changes (PROBE)	_____ _____ _____ _____	
C37	In case of declining earnings what are your coping mechanisms	1 Increase effort 2 Decrease effort 3 Dispose assets 4 Migration 5 Diversification of livelihood activities 6 Others(specify)_____	C37 [ ]

SECTION D: PEOPLE'S ATTITUDES, PERCEPTIONS AND VIEWS TOWARDS EXISTING CBNRM PROGRAM/WMA.

		5.Never had a meeting	
D41	If yes in what did you discuss about?	1 Resource use conflict 2 Investment contracts 3 Benefit sharing mechanisms 4 Approval of annual plans and budgets 5 Resource conservation 6 Others (specify)	D41 [ ]
D42	Have you discussed about the operation of WMA in village assembly?	1 Yes 2 No	D42 [ ]
D43	Are you aware of any project in your village that has benefited from income from the WMA	Mention _____ _____ _____	
D44	Are there poaching incidences in this village?	1 Yes 2 No 3 Don't know	D44 [ ]
D45	If yes in the last year, how often did you have poaching incidences in this village?	1 More than three times 2 Thrice 3 Twice 4 Once 5 Never happened	D45 [ ]
D46	In your opinion are poaching incidences increasing or decreasing?	1 Increasing 2 Decreasing 3 Don't know	D46 [ ]
D47	Have ever experienced any disputes and conflicts related to wildlife management in this village?	1.Yes 2. No	D47 [ ]
D48	If yes,what type of disputes and conflict are related to wildlife management in your village?	1 Village boundaries 2 Wild animal attack 3 Destruction of crops by wild animals 4 Misunderstanding between Villagers and investors 5 Disagreement on benefit sharing mechanism 6 Others (specify)	D48 [ ]
D49	With the establishment of WMAs what are the potential productive activities did you anticipate	1 Cash crop farming 2 Food crop production 3 Small business (food-vending,) 4 Wage employment	D49 [ ]

	WMA? Would bring to the village?	<ul style="list-style-type: none"> <li>5 Horticulture</li> <li>6 Handcrafts for sale</li> <li>7 Water vending</li> <li>8 Game meat business</li> <li>9 Tourist guide</li> <li>10 Others</li> </ul>	
D50	Has the WMA had any impact on the condition of the wildlife in your area?	<ul style="list-style-type: none"> <li>1 Increase abundance (in situ)</li> <li>2 Provides reproduction grounds</li> <li>3 Stop habitat destruction</li> <li>4 Bringing species back</li> </ul>	D50 [    ]
D51	In the last year, how often did you have fire incidences in this village?	<ul style="list-style-type: none"> <li>1 More than three times</li> <li>2 Three times</li> <li>3 Two times</li> <li>4 Once</li> <li>5 Never happened</li> </ul>	D51 [    ]
D52	In your opinion has WMAs been beneficial to you or to your area?	<ul style="list-style-type: none"> <li>1.Yes</li> <li>2.No</li> <li>3.Don't know</li> <li>4.No response</li> </ul>	D52 [    ]
D53	If yes, what benefits?	<ul style="list-style-type: none"> <li>1 Increased incomes</li> <li>2 Reduced poaching incidences and practices</li> <li>3 Conserves resource for future generations</li> <li>4 Reduces conflicts</li> <li>5 Improves livelihood</li> <li>6 Provides access/security to resources(property rights)</li> <li>7 Other</li> </ul>	D53 [    ]
D54	Do you think the system of sharing the benefits accrued from WMAs is fair?	<ul style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ul>	D54 [    ]
D55	Overall, how has WMA impacted your livelihood?	<ul style="list-style-type: none"> <li>1 Decreased</li> <li>2 No changes</li> <li>3 Increased</li> <li>4 Don't know</li> </ul>	D55 [    ]
D56	Overall, do you think that WMA has been good or bad for businesses?	<ul style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> <li>3 Don't know</li> </ul>	D56 [    ]

D57	<p>In your opinion, what are some of the problems with WMA?</p>	<ol style="list-style-type: none"> <li>1 Too many regulations</li> <li>2 Regulations not well enforced</li> <li>3 Reduce benefit</li> <li>4 Causes conflicts</li> <li>5 Erodes traditional authority</li> <li>6 Inequity</li> <li>7 Other</li> </ol>	D57 [    ]
D58	<p>Mention the infrastructural problems among the following in your village?</p> <ol style="list-style-type: none"> <li>1 Road</li> <li>2 Schools</li> </ol>		

E64		
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- 4 Between 3 to 5 acres
- 5 Between 6 to 10 acres
- 6 More than 10 acres
- 7 No response

		4 Others(Specify)
E71	What is the pattern of expenditure among men/women(depends on whom you are interviewing)	<hr/> <hr/> <hr/> <hr/>
E72	Do you have access to credit?	





## **Maswali ya kawaida kuhusu jamii**

### **1. Baada ya kujuliana hali au kusalimiana, anza majadiliano kwa kuwauliza watu kuhusu jamii yao. Maswali yanaweza kulenga kwenye mambo yafuatayo:**

Ukubwa wa jamii, aina ya watu, aina ya taasisi za elimu na afya, shughuli kuu za kiuchumi, umbali kutoka wilayani au mji wa karibu.

Dadisi kuhusu: Historia ya kijiji, aina ya wenyeji kama ni wahamiaji au la. Idadi ya kaya, idadi ya wanawake, wanaume, vijana, wazee, walemavu nk.

Je, kwa kawaida nani huwa wakuu wa kaya? Wanaume au wanawake?

Je, katika kaya zenu nani huwa anatoa maamuzi kuhusu shughuli za uzalishaji mali?

Ni nani anayetoa maamuzi kuhusu namna ya kutumia rasilimali za kaya?

Ni shughuli zipi ambazo huwa hupendelewa kufanywa na wavulana na wasichana?

Je, kuna mgawanyo sawa wa rasilimali kati ya wavulana na wasichana katika jamii yenu?

### **2. Waruhusu watu waeleze mabadiliko muhimu yanayotokea kwenye kijiji chao**

#### **Mathalani, dadisi mambo yafuatayo:**

Mabadiliko ya kijamii na kiuchumi yaliyojitokeza kijijini kwao katika miaka kumi iliyopita. Je kuna maendeleo? Je, hali inakuwa bora au imebaki vilevile au imekuwa mbaya zaidi?

Je, huduma za kijamii kama elimu, afya na barabara zikoje tangu miaka kumi iliyopita?

Je, zimekuwa nzuri au zinazidi kuwa mbaya? Waeleze mabadiliko yaliyojitokeza kwenye huduma hizi.

Kwa ujumla hali ya maisha ikoje?

Je, vipi hali ya makazi - hali nyumba zao?

Je, kuna maji, umeme?

Je, wanadhani makazi yao yamekuwa yakiendelea na kuwa bora au hakuna mabadiliko? Dadisi ili watoe sababu za majibu yao.

Je, wanakijiji wanatumia vyanzo vipi vingine katika shughuli mbalimbali, kama vile kupikia?

### **3. Maswali kuhusu hali ya uchumi, mapato na matumizi:**

Waruhusu washiriki wa majadiliano waeleze matatizo makubwa yanayowakabili hapo kijijini kwao. Waeleze matatizo ya kijamii, kiuchumi nk.

Ni shughuli zipi za kiuchumi zinafanyika hapo kijijini? Waeleze ni shughuli zipi zina umuhimu zaidi kwao. Kama ni kilimo waeleze aina ya mazao na wayapange kufuatana na umuhimu wake.

Ni shughuli zipi za kibiashara zinafanyika hapo kijijini? Je, ni zipi zinahusiana na utalii?

Je, biashara ya utalii ni muhimu hapo kijijini?

Nani anamiliki sana biashara za kitalii? Je, kijiji kinapata faida gani na biashara hizi? Wana kijiji au wageni?

Je, kijiji kinatoza kodi ya aina yoyote kwa hawa watu?

Je, mnadhani watalii wameongezeka kwenye haya maeneo yenu au wamepungua au wamebakia palepale?

Je, kwa wastani shughuli zote za kiuchumi zinawaletea mapato ya kiasi gani kwa familia au kwa kijiji?

Je, mapato yenu yatokanayo na shughuli za kiuchumi hutumika vipi? Je, mnadhani watu wanayatumia mapato yao vizuri? Toeni sababu za majibu yenu.

Je, hali ya umaskini ikoje hapa kijijini kwenu? Njia zipi mnazitumia ili kutatua tatizo hili? Je kuna mafanikio?



## Appendix 3

### In-depth Interview Guide

#### **MUONGOZO WA MAHOJIANO YA KINA (IN-DEPTH INTERVIEWS)**

Katika utafiti huu, lengo kubwa la majadiliano ni kuelewa hali ya maisha ya wana vijiji kwenye maeneo ya hifadhi ya wanyamapori (WMAs). Tunataka kujua hali yao kiuchumi, shughuli zao za kiuchumi, mapato, matatizo ya kijamii na kiuchumi wanayoyakabili na jinsi wanavyojitahidi

## **2. Waruhusu watu waeleze mabadiliko muhimu yanayotokea kwenye kijiji chao**

Kwa mfano dadisi mambo yafuatayo kwa viongozi wa vijiji na wataalamu mbalimbali waishio hapo kijijini:

Mabadiliko ya kijamii na kiuchumi yaliyojitokeza kijijini kwao katika miaka kumi iliyopita. Je kuna maendeleo? Je hali inakuwa bora au imebaki vilevile au imekuwa mbaya zaidi?

Huduma za kijamii kama elimu, afya na mabarabara zikoje katika miaka kumi iliyopita? Je zimekuwa nzuri au zinazidi kuwa mbaya? Waeleze mabadiliko yaliyojitokeza kwenye huduma hizi.

Kwa ujumla hali ya maisha ikoje? Je vipi hali ya makazi-Hali nyumba zao? Je kuna maji, umeme? Je wanadhani makazi yao yamekuwa yakiendelea na kuwa bora au hakuna mabadiliko.-Dadisii ili watoe sababu za majibu yao.

## **4. Maswali kuhusu hali ya uchumi, mapato na matumizi:**

Waruhusu washiriki wa majadiliano waeleze matatizo makubwa yanayowakabili hapo kijijini kwao. Waeleze matatizo ya kijamii, kiuchumi nk.

Ni shughuli zipi za kiuchumi zinafanyika hapo kijijini katika kipindi hichi? Waeleze ni shughuli zipi zina umuhimu zaidi kwao. Kama ni kilimo waeleze aina ya mazao na wayapange kufuatana na umuhimu wake.

Ni shughuli zipi za kibiashara zinafanyika hapo kijijini? Je ni zipi zinahusiana na utalii? Je biashara ya utalii ni muhimu hapo kijijini?

Nani anamiliki biashara za kitalii? Je kijiji kinapata faida gani na biashara hizi? Wana kijiji au wageni? Je kijiji kinatoza kodi ya aina yoyote kwa hawa watu? Mhojiwa aeleze aina ya rasilimali za kiuchumi zilizoko hapo kijijini-na jinsi zinavyotumika.

Je biashara ya utali imeongezeka au kupungua au imebakia palepale. Je kijiji kinafaidika vipi? Je kwa wastani shughuli zote za kiuchumi zinawaletea mapato ya kiasi gani kwa familia au kwa kijiji?.

Je mapato yenu yatokanayo na shughuli za kiuchumi hutumika vipi? Je mnadhani watu wanayatumia mapato yao vizuri? Toeni sababu za majibu yenu.

Je yapo masoko ya kutosha kwa bidhaa zenu? Je ni masoko ya aina gani? Ni mazao gani hayana masoko? Kwa nini?

Je hali ya umaskini ikoje hapa kijijini kwenu? Njia zipi mnazitumia ili kutatua tatizo hili? Je kuna mafanikio?

## **4. Uelewa kuhusu maeneo ya hifadhi ya wanyamapori**

Mruhusu mhojiwa akueleze dhana yake ya WMA kwa kirefu. Je wananchi wanajua kikamilifu dhana hii? Je wanahusika vipi? Kwa nini kijiji chao kijiunga na umilikaji wa mali ha (WMA)?

Je, watu wanapata faida gaini?

Aeleze faida au hasara ya kuwa wanachama wa WMA iliyo kwenye maeneo yao. Aeleze

kuhusu uongozi wa WMA na namna jinsi viongozi wanavyochaguliwa.  
Je hali ya maisha yao imebadilika tangu walipoanzisha hiyo WMA? Je kuna matatizo gani mnayapata kwenye WMA yenu? Mnayatatua vipi?  
Ni shughuli zipi wananchi au kijiji kinazifanya zinazohusiana na WMA? Je mapato ya kiasi hutokana na shughuli hizo?  
Nini ungependa kifanyike ili kuboresha manufaa ya WMA kwenu? Je nini ungependa kifanyike ili kuboresha biashara za kiutalii katika eneo hili? Toeni sababu za majibu yenu. Je, ujangili upo katika maeneo yao? Unaongezeka au unapungua? Una maoni gani kuhusu ujangili? Kijiji kinafanya nini ili kuzuia ujangili? Je WMA imesaidia kupunguza ujangili? Toa sababu za majibu yenu.  
Je, unadhani ni hatari zipi za kijamii na kiuchumi zinazoweza kuhatarisha hali ya mali asili kwenye eneo lenu?  
Je, kuna miradi ipi au huduma zipi hapa kijijini ambazo zimetokana au zimetokana na kuwepo kwa WMA? Je, miradi hiyo ni ya kipato gani? Je, WMA zimeleta kipato cha kiasi gani? Je, kinatumika vipi?

#### **5. Mawazo ya jamii kuhusu jinsi ya kuleta maendeleo ya kijiji/jamii**

##### ***Muulize mhojiwa mambo yafuatayo:***

Jitihada zipi wanazifanya ili kuleta maendeleo hapo kijijini?  
Wanafanya nini au miradi gani ili kuondoa umaskini? Je, wao wako tayari kufanya nini na je, wangependa serikali au mashirika ya hiari na mengine yawasaidie nini? Je, wako tayari kushiriki kwenye miradi kama ya ujenzi wa miundombinu - barabara au miradi inayolenga kuleta maji safi kijijini? Wako tayari kushiriki vipi kwenye miradi hiyo?  
Je, wanafikiri wangependa waletewe miradi ipi ya maendeleo? Aeleze kwa kufuata kipaumbele.  
Je, katika hiyo miradi wanayoitaka, wao wako tayari kufanya nini na nini wanataka wasaidiwe?  
Kwa ujumla kijiji kinataka nini kwenye masuala ya maendeleo na wako tayari kuchangia nini? (Wape mifano ikiwezekana) Je, wako tayari kushiriki katika kutengeza barabara, kuchimba mitaro ya maji, kujenga mashule, kufyatua tofali au kusomba mchanga na mawe?

**Appendix 4**  
**Checklist for 5 WMA Studies**